



10-6-20-5M

PRESENTED TO *S. Z. A.*




The New York Academy of Medicine

By *The State Med. Society.*







Digitized by the Internet Archive  
in 2016 with funding from  
The National Endowment for the Humanities and the Arcadia Fund

1875  
1876  
1877  
1878  
1879  
1880  
1881  
1882  
1883  
1884  
1885  
1886  
1887  
1888  
1889  
1890  
1891  
1892  
1893  
1894  
1895  
1896  
1897  
1898  
1899  
1900



# The OHIO STATE MEDICAL JOURNAL

OWNED AND PUBLISHED MONTHLY BY  
THE OHIO STATE MEDICAL ASSOCIATION  
AS A MEDIUM OF SERVICE TO ITS MEMBERS

(1922) VOLUME XVIII (1922)

## —THE PURPOSE—

The purpose of this Association shall be to federate and bring into one compact organization the entire medical profession of the state of Ohio, and to unite with similar organizations in other states to form the American Medical Association; with a view to the extension of medical knowledge, and to the elevation of the standard of medical education, and to the enactment and the enforcement of just medical laws, to the promotion of friendly intercourse among physicians, and to the guarding and fostering of their material interests; and to the enlightenment and direction of public opinion to the great problems of state medicine; so that the profession shall become more capable and honorable within itself, and more useful to the public in the prevention and cure of disease, and in relieving and adding comfort to life.—Article 13, Constitution, Ohio State Medical Association.

THE N. Y. ACADEMY  
OF MEDICINE

MAR 24 1923

127994.  
LIBRARY

*From the Ohio State*

ORIGINAL CONTRIBUTIONS

Abdominal Operations, Care of Patients After. (A. H. Dunn)	5	Mental Depression, Autonomic Nervous System in. (H. D. McIntyre)	675
Actinotherapy in General Practice: Case Histories. (F. J. Kern)	286	Mother and Child, Conservation of. (Blanche Hopkins)	278
Angioneurotic Eruptions, On the So-called. (A. Ravogli)	839	Mother, A Precocious: Case Report. (M. F. Hussey)	689
Anesthesia, Local, Personal Experiences With Especially in Tonsillectomies. (C. A. Campbell)	426	Nervous Symptoms, Constitutional. (J. D. O'Brien)	281
Ano-Rectal Diseases, Historical Review of: Limitations and Technique of Local Anesthesia in Recto-Colonic Operations. (S. G. Gant)	733	Nursing Situation in Ohio. (C. S. Ordway and Chas. Louy)	338
Appendicitis, Acute. (C. D. Hoy)	173, 264	Nursing Course, Public Health, Features of in the Ohio State University, with Emphasis upon the School Nursing Project. (Norma Selbert)	781
Appendix, Intussusception of. With Report of a Case. (P. M. Spurney and D. M. Nyquist)	181	Obstetrics, Use of Forceps in. (A. H. Bill)	195
Aortic Arch, A Right. (Reed O. Brigham)	484	Obstetrics, Requisites of Modern, and the Professional Social and Moral Obligations of the Present Day Obstetricians. (W. D. Fullerton)	117
Argyria. (O. P. Kimball)	336	Obstetrical Situation, Problems of the Present. (W. W. Brand)	746
Arthritis, Chronic Infectious. (S. D. Foster)	543	Odors. (J. J. Sutter)	672
Asthma and Hay Fever, Diagnosis and Treatment of. (M. B. Cohen)	669	Parkinson's Disease as a Sequela to Lethargic Encephalitis. (H. H. Drysdale)	842
Asthma, Bronchial: Study of 40 Cases of Cutaneous Protein Tests: Associated Skin Condition and Results of Treatment. (G. L. Lambright)	275	Physician, Health Official and Cooperation. (M. F. Hussey)	545
Astigmatism, Methods of Determining, of the Crystalline Lens. (R. C. Hefebower)	623	Physician, Pioneer of Ohio. (D. Todd Gilliam)	511
Auricular Fibrillation, Observations on the Rational Use of Digitalis. (R. Dexter)	742	Pituitary Disease, Eye and Nasal Symptoms in, With Report of a Case of Acromegaly. (F. W. Alter)	550
Blood Typing. (H. R. Huston)	680	Placenta, Premature Separation of the Normally Implanted. (W. D. Fullerton)	595
Burns, Newer Methods in the Treatment of: With Report of Cases. (G. R. Micklethwaite)	198	Pneumothorax, Artificial, Differential Diagnosis and Treatment of Some Pulmonary Diseases with Special Reference to. (Louis Mark)	554
Cancer, Personal Observations Regarding the Newer Roentgen Technique for the Treatment of. (J. H. Schroeder)	345	Poisoning, Phenol and Cresol. (Raphael Isaacs)	558
Cancer of the Stomach. (F. E. Bunts)	140	Pregnancy, Heart Disease in. (W. G. Dice)	491
Cancer of the Stomach, Early Diagnosis of. (Jonathan Forman)	764	Pregnancy, Twin, Diagnosis of by Means of a New Stethoscope. (J. P. Gardiner)	125
Cardiac Arrhythmia. (J. J. Reynolds)	186	Presentation, Spontaneous Evolution in Transverse. (S. J. Goodman)	541
Cardiac Arrhythmias and Their Clinical Recognition. (R. S. Morris)	408	Ptyelitis in the Puerperium. (Andrews Rogers)	825
Cerebral Injuries, Diagnosis and Interpretation of Symptoms in. (J. E. Pirrung)	611	Renal Function in Clinical Medicine, Value of Tests for. (H. O. Mesenthal)	348
Cerebral Traumatism, Operability and Technique of Operation of. (T. S. Jackson)	614	Scalps, Wounds and Injuries of the: Their Complications and Treatment. (J. Edw. Pirrung)	93
Chorea, Treatment of by Intravenous Injections of Pure Protein. (E. G. Horton)	751	School Child—The Future Citizen. (P. B. Brockway)	106
Dacryocystitis: Etiology, Pathology, Treatment, Medical and Surgical. (C. S. Means)	682	Sinus, Lateral, Infection of. (E. W. Garrett)	37
Deformity, Prevention of. (C. H. Hyman)	333	Sinus Thrombosis, Report of a Case of Extensive Lateral: With Reference to Low Resection. (H. M. Goodyear)	40
Dermatoses of Present Day Interest. (J. W. Miller)	547	Sinuses, Nasal Accessory, Treatment of Disease of the. (Harold I. Lillie)	834
Dermatoses, Some New Occupation. (R. Ruedemann, Jr.)	618	Sinuses, Nasal Accessory, Some Physical Intra-Nasal Conditions Favoring Involvement of the. (M. Metzbaum)	837
Diagnosis, Gastro-Intestinal: Advantages of Present Day Methods as Seen by the Surgeon. (F. G. Leonard)	99	Spinal Fluid Examination, Value of. (C. E. Kiely)	339
Diarrhea-Colitis, Chronic, Classification and Surgical Treatment of. (S. G. Gant)	813	Stem Pessary. (A. F. Spurney and P. M. Spurney)	424
Drug Habits, Practical Points in the Treatment of. (E. E. Gaver)	620	Syphilis of the Aorta. (C. W. McGravan and E. Scott)	477
Encephalitis, Lethargic. (F. C. Wagenhals)	272	Syphilis, Comparative Values of Complement Fixation Methods in. (H. D. McIntyre, E. A. North and A. P. McIntyre)	17
Feeding of Infants, Based on Recent Experiences. (S. D. Giffen)	829	Syphilitic Patients, Neuro-, Intra-Spinous Treatment of. (Grant Marthens)	13
Fistula, Pleuro-Bronchial and Pleuro-Cutaneous. (J. A. Sherbondy)	739	Syphilis, Some Suggestions on the Relation of Congenital to Juvenile Delinquency. (H. H. Goddard)	193
Gall Bladder and Biliary Apparatus, Infections of. (Fred Fletcher)	661	Tachycardias of Neurotic Origin. (C. E. Kiely)	759
Gall Bladder and Pancreatic Disease, the Present Status of, as it Pertains to Etiology, Diagnosis and Treatment. (Kelley Hale)	665	Tonsil Instrument, New, and Method of Use. (T. E. Walker)	290
Granuloma Inguinale. (H. L. Claassen)	685	Tuberculosis, Ether in. (C. R. Coate)	503
Hare-Lip and Cleft Palate. (C. M. Clark)	497	Tuberculosis, Immunity With Reference to. (C. C. Kennedy)	189
Headaches. (C. H. Hay)	495	Tuberculosis, Rarity of Adult Contact. (S. A. Douglass)	501
Head Injuries Contrecoup Damage to the Brain in. (John A. Caldwell)	96	Typhoid Fever Epidemic, Medical and Public Health Phases of the Salem. (R. M. Schwartz)	122
Health Commissioner, Rural, and His Problems. (C. H. Skeen)	30	Typhoid Fever: Its Treatment and Mortality. (Howard Jones)	822
Health Department, Relationship of to the Medical Profession. (D. D. Shira)	283	Urological Surgery, Relation of Abdominal to. (F. C. Herrick)	26
Health Law in Lucas County, Working of the Hughes-Griswold. (Chas. Koenig)	108	Wassermann Reaction in Non-Syphilitic Patients: What It Conveys. (C. J. Broeman)	748
Health Nursing, Rural Public. (Celinda Dunbar)	33	AUTHORS OF CONTRIBUTIONS	
Health Public, Selling in a General Health District. (Arlington Ailes)	206	Ailes, Arlington	206
Heart Size in Relation to Thorax Size. (Alfred Friedlander and Samuel Brown)	103	Alter, F. W.	550
Hospital Standardization, Influence of on Preventive Medicine. (C. D. Selby)	754	Berghausen, Oscar	606
Industry, Medical Service in. (C. E. Ford)	412	Bizelow, L. L.	373
Infant Feeding, Simplified, by the Caloric Modification of Cow's Milk. (P. F. Southwick)	126	Bill, A. H.	195
Intestinal Obstruction, a Short Consideration of Some Phases of. (W. D. Haines)	819	Bowen, C. F.	60
Kidney Test, Original Investigation and Comparative Value of Indigo Carmine as a Functional. (C. M. Harpster)	200	Brand, W. W.	746
Kidney and Ureter, Case of Double: With Review of the Literature. (C. M. Harpster, T. H. Brown, and H. A. Delcher)	602	Brigham, R. O.	484
Labor, Management of the Third Stage of. (W. E. Duffee)	12	Brockway, P. B.	106
Lessons of the Past. (Frederick R. Green)	695	Broeman, C. J.	748
Malignancies, Superficial. (C. F. Bowen)	60	Brown, Samuel	103
Mal-Nutrition, Solving, Among School Children. (E. W. Schlemmer)	342	Brown, T. H.	602
Mastoiditis, Acute, Observations on. (S. S. Quittner)	405	Bunts, F. E.	140
Medical College and the Medical Profession. (H. Page)	64	Caldwell, John A.	96
Medical Economics—A Frank Study of the Financial and Business Aspects of the Practice of Medicine. (C. D. Selby)	213	Campbell, C. A.	426
Megacolon. (W. H. Fisher)	487	Claassen, H. L.	685
Meningeal Reactions, Significance of. (Oscar Berghausen)	606	Clark, C. M.	417
		Coate, C. R.	503
		Cohen, M. B.	669
		Delcher, H. A.	602
		Dexter, Richard	742
		Dice, W. G.	491
		Douglass, S. A.	501
		Drysdale, H. H.	842
		Duffee, W. E.	12
		Durbar, Celinda	33
		Dunn, A. H.	5
		Fisher, W. H.	487
		Fletcher, Fred	661
		Ford, C. E.	412
		Forman, Jonathan	764
		Foster, S. D.	542



Friedlander, Alfred	103
Fullerton, W. D.	117, 595
Gant, S. G.	733, 813
Gardiner, J. P.	125
Gardner, James A.	72
Garrett, E. W.	37
Gaver, E. E.	620
Giffen, S. D.	829
Gilliam, D. Todd	511
Goddard, H. H.	193
Goodman, S. J.	541
Goodyear, H. M.	40
Green, Frederick R.	693
Haines, W. D.	819
Hale, Kelley	665
Harpster, C. M.	200, 602
Hay, C. H.	495
Hefebower, R. C.	623
Herrick, F. C.	26
Hopkins, Blanche	278
Horton, E. G.	751
Hoy, C. D.	173, 264
Hussey, M. F.	545, 689
Huston, H. R.	680
Hyman, C. H.	333
Isaacs, Raphael	558
Jackson, T. S.	614
Jones, Howard	822
Kennedy, C. C.	189
Kern, F. J.	286
Kiely, C. E.	339, 759
Kimball, O. P.	336
Koenig, Chas.	108
Knapp, Harold J.	297
Lambright, G. L.	275
Leonard, F. G.	99
Lillie, H. I.	834
Louy, Chas.	338
Mark, Louis	551
Marthens, Grant	13
McGavran, C. W.	477
McIntyre, H. D.	17, 675
Means, C. S.	682
Metzenbaum, Myron	837
Micklethwaite, G. R.	198
Miller, J. W.	547
Morris, R. S.	408
Mosenthal, H. O.	318
North, E. A.	17
Nyquist, D. M.	181
O'Brien, J. D.	281
Orday, C. S.	338
Page, H.	64
Pirring, J. Edw.	93, 611
Quittner, S. S.	405
Ravogli, A.	839
Ruedemann, R., Jr.	618
Reynolds, J. J.	186
Rogers, Andrews	825
Schlemmer, E. W.	312
Schroeder, J. H.	345
Schwartz, R. M.	123
Scott, E.	477
Selbert, Norma	781
Selby, C. D.	213, 754
Sherbondy, J. A.	739
Shira, D. D.	283
Skeen, C. H.	30
Souther, C. T.	375
Southwick, P. F.	126
Spurney, A. F.	424
Spurney, P. M.	181, 424
Sutter, J. J.	672
Tucker, E. D.	778
Wagenhals, F. C.	272
Walker, T. E.	290

## ORGANIZATION

<b>American Medical Association—</b>	
Midwinter Annual Congress on Medical Education, Licensure, Public Health and Hospitals, 171, St. Louis Annual Meeting, 221, 366, 473, 507, Ohio's Part in the A. M. A., 473, 507, Ohio's Recommendations Effective	539
<b>Annual Address by the President, Wells Teachnor, M. D., Columbus</b>	429
<b>Annual Meeting, Ohio State Medical Association—</b>	
Miscellaneous, 169, 219, 263, 329, 355, 401, 447, Proposed Amendments to the By-laws of the Association, 220, Program of 76th Annual Meeting, 252, Election of Officers, Councilors and Committeemen, Action on Resolutions and Committee Reports Included in Official Sessions of House of Delegates, 434, Roll Call, House of Delegates, 441, Cincinnati Registration	443
<b>Committee, Ohio State Medical Association, list of</b>	435, 568
Auditing and Appropriations, Report	362
Control of Cancer, Report	371
Cancer Campaign, 60, 140.	
Crippled Children, Report	359
Hospital Standardization, Report	364
Medical Defense, Report	360
Medical Defense Plan, an Important Association Activity, Has Thoroughly Proved Its Value to the Membership, 627.	
Medical Economics, Report	369
Medical Education, Report	367
"Mental Hygiene" Lectures before District and Group Meetings, 694, 785.	

Public Policy and Legislation, Report	249
Ohio's Policy, 249. Reciprocal Duty of Profession and Public, 375. Primary Legislative Candidates, 475. Civic and Political Duty, 537. Anticipating Future Problems, 533. Medical Profession and the Public, 657. "Medical Men vs. Mothers," 700. "Now's the Time", 729. Another Honor, 730. Legislative Personnel, 812. "Whither Are We Drifting?" 812.	
Publication Committee, Report	368
<b>Council Meetings, Minutes of</b> —131, 300, 441, 567, Communication from Council to the House of Delegates, 251. Photograph of Council, 506.	788
<b>County Society and Academy Meetings, 50, 144, 228, 316, 378, 452, 526, 572, 636, 708, 769, 856. Roster of Officers</b>	164, 396, 588, 804
<b>District Society Meetings</b> —	232, 638, 708, 710, 785, 796, 858, 862
<b>Membership Records</b>	53, 353, 851

## GENERAL

<b>Abrams Hypothesis, 658. Miracle or Fake? 811. Misleading Abrams Publicity</b>	811
<b>Advertising vs. Education</b>	373
<b>American College of Surgeons—</b>	
Ohio-Michigan Fellows to Hold Joint Meeting, 156, 862	
Ohioans Elected to A. C. S. Fellowship	370
<b>American Public Health Association—</b>	
Life Saving or Public Health, 404. Fifty-first Annual Meeting in Cleveland, 704. Health Worker's Creed, 860. A. P. H. A. and Allied Bodies Considered Varied but Pertinent Subjects	880
<b>Anesthetists at Columbus, 786. Many Phases of Anesthesia Service Discussed at Joint Meeting of Special Societies</b>	866
<b>Anti-Vivisection—</b>	
Unwholesome Pity, 130. Anti-Vivisection Revival, 731. Anti-vivisectionists Routed	852
<b>Attorney General—</b>	
Hospitals Must Provide Schools, 57. Legal Opinion on Anesthesia Status, 332. What is "Skin"? 394. Legal Opinions of Interest	650
<b>Child Health Demonstration Conducted at Mansfield by National Child Health Council and Cooperating Agencies, 629. Interesting Ideas Propounded on Child Hygiene</b>	876
<b>Chiropractic—</b>	
Chiropractic "Crust", 2. Encouraging Court Action, 170. Anti-Cult Literature, 217. Chiropractic Incompetence, 218. Chiropractic Situation—Court Decision, 330. Enforce the Law, 331. Cured (?) Chiropractically, 376. Chiropractic Chicanery, 474. Where Education and Logic are Both Superfluous, 594. Quacks and Frauds, 660. What Is Chiropractic? 732. All Legal Technicalities Employed by Unlicensed Chiros Preparatory to Desperate Effort for Special Board	771
<b>Clinics—</b>	
Wertheim Moving Picture Clinic in Wapakoneta, 220. Third Annual Clinic Held at Lima Hospital, 458. Aims of Mobile Psychiatric Clinic of Bureau of Juvenile Research Explained, 578. Clinics, "Free" and "Pay", 810. The Pay Clinic—an Investigation and Recommendations on Policy by a Joint Committee	859
See State Department of Health.	
<b>Collection Agencies—</b>	
Experience, 582. Collecting Agencies	861
<b>Deaths—</b>	
47, 138, 238, 296, 386, 462, 510, 566, 646, 701, 785, 849	
<b>Distribution of Physicians in Ohio, Proportionate, by Population and Taxable Wealth, Rural and Urban, 773. Self Diagnosis and Specialization</b>	3
<b>Doctors' Exchange, Suggestions for the Operation of "Expert Testimony", Its Meaning and Purpose—Some Hints, Advice and Definitions by Well-Known Attorney</b>	784
<b>Faith Healing—</b>	
Christian Science Conviction, 221. "Religious Healing"	729
<b>Federal Congress—</b>	
Fighting Medicine's Cause, 2. Public Health and the Tariff, 540. Proposed Legislation Would Reward "Successful Cure", 724. Medical Chemicals and the New Federal Tariff	730
See Sheppard-Towner Maternity Act.	
<b>Food Handlers, Comprehensive Ordinance Governing, May Be Effective in Columbus</b>	653, 800
<b>Gorgas Memorial Institute of Tropical and Preventive Medicine</b>	53
<b>Health Activities—See State Department of Health.</b>	
<b>Health Insurance, State Medicine—</b>	
State Medicine in Ohio, 89. Ohio's Policy, 249. Medical Regulation Gone Mad, 295. Socialized Health Activities, 402. "Free Health" Buncombe, 732. "Whither Are We Drifting?"	812
<b>Hospitals—</b>	
Hospitals Must Provide Schools, 57. Court Decides Hospital Liability, 172. Terms Defined to Facilitate Work of Hospital Bureau, 384. University Trustees Reaffirm Stand for Pay Wards, 450. Army Hospital at Camp Sherman, 476. Valuable Data on Dispensary Service, 653. Miscellaneous Notes, 57, 166, 222, 306, 382, 450, 570, 632, 699, 792	864
See State Institutions.	
<b>Income Tax—</b>	
Income Tax Returns, 91. Physicians May Take Into Account Various Exemptions in Submitting Income Tax Returns	139, 218

Industrial Physicians Have Interesting Meeting in Cleveland	46	SmallAdvertisements—	49, 158, 221, 292, 372, 460, 524, 586, 632, 720, 787, 872
Medical Comment, Abstracts and Current Topics of Interest	310	State Board of Vocational Education—	Salvaging the Handicapped for Lives of Service—How You May Help Others to the "Better Ole", 293. State Census for the Disabled, Week of May 8th—
Mississippi Valley Tuberculosis Conference	775	State Department of Health—	Special Course for Health Commissioners Proposed by State Department of Health, 48. Division of Laboratories Does Large Amount of Work, 48. Tuberculosis Clinics Held with Cooperation of Local Physicians, 49. Drive on Registration of Births and Deaths, 49. Ohio Health Code Placed on Trial in Cuyahoga County, Upheld by Supreme Court, 70. Many Seek Admittance to Correspondence Study Course Given by State Department of Health for Health Commissioners, 150. Schick Test and Use of Toxin-Antitoxin Explained to Medical Societies and Health Commissioners, 154. Changes in Personnel of Health Departments, 160. Ohio Now Has Two Women Health Commissioners, 244. Ohio's Policy, 249. Lowest Death Rate, Highest Birth Rate; More Fatal Diphtheria, Less Communicable Diseases in Ohio, 304. Local Consolidations in Health Administration, 304. Tuberculosis and Cancer, 308. Praise Given Study Course for Health Commissioners, 305. "Crippled Children's Week" Forty Clinics Conducted in the State, 322. Conservation of Vision, 324. Terms Defined to Facilitate Work of Hospital Bureau, 334. Campaign of Tuberculosis Prevention Begun by State Department of Health with Demonstrations of Schick Test, 449. Diagnostic Clinic at Bellefontaine, 458. Ohio's Death Rate in 1921 Lowest in 13 Years, 468. Health Code a Legislative Issue, 540. Typhoid Fever at East Liverpool and Xenia, 562. Smallpox Film Available for Meetings, 571. Annual Conference of Health Commissioners and State Department in September, 576. Plans of Correspondence Study for Summer, 576. Value of Education of Public Demonstrated, 590. Health Service, 594. New Course for Nurses Planned, 635. Third Annual Conference of Health Commissioners with State Department of Health, 640. Medical Leadership, Public Health Activities and Professional Relations Discussed at Annual Conference of Health Commissioners, 691. Clinics, 772. Typhoid Fever Epidemics at Canton and Troy—
Narcotics—	878		782
National Board of Medical Examiners	70	See Occupational Diseases.	
New Books—	39, 95, 98, 137, 371, 398, 456, 466, 505, 566, 684, 703, 783	See Sheppard-Towner Act.	
News Notes—	44, 128, 246, 303, 398, 466, 505, 584, 652, 706, 806, 886	State Department of Welfare—See State Institutions.	
Nurses—		State Industrial Commission—	Workmen's Compensation—Occupational Diseases, 91. Ohio's Workmen's Compensation, 294. Administration of Workmen's Compensation, 474. Workmen's Compensation Developments, 538. Industrial Commission to Adopt Occupational Disease Code, 783. Term "Injury" in Ohio Workmen's Compensation Law Construed by Supreme Court—
Nursing Bodies Convene in Dayton for Joint Program, 470. Resolutions to Modify Laws Affecting Trained Nurses and Students for Nurses' Training Schools of Ohio, 380, 456. "Nurse Education" Report by Committee of Rockefeller Foundation Raises Interesting Question in Connection with Problems in Ohio, 634. New Course for Nurses Planned—	635	(See Occupational Diseases.)	855
Occupational Diseases—		State Institutions—	Medical Promotional System, 1. Medical Service in State Institutions, 90. Technicality Settled, 132. Data on State Hospital Population Shown by Comprehensive Charts, 222. Dr. Baehr Appointed to Medical Post, 232. Extension Program for State Hospitals Mapped Out by Welfare Department, 392. Dr. Goddard Resigns, 510. State-Wide Program on Mental Hygiene Contemplated in Conjunction with Bureau of Juvenile Research, 532. Methods of Discipline at Boys' School under Probe, 562. Aims of Mobile Psychiatric Clinic of Bureau of Juvenile Research Explained by Dr. Baehr, 578. Juvenile Research Staff, 582. Pay Patients in State Hospitals—A Correction, 599. State Institutions Show Increased Populations: Physicians Appointed, 702. Ohio's Feeble-Minded Problem, 703. Interesting Conclusions Drawn from Admissions to Columbus State Hospital, 786. Assistant Physicians Meet—
Occupational Diseases Reported to Division of Hygiene, 49. Occupational Disease Forms Ready, 59. Workmen's Compensation—Occupational Diseases Reported under Workmen's Compensation Act, 299. Workmen's Compensation Developments, 538. Industrial Commission to Adopt Occupational Disease Code	783	See Miscellaneous Hospital Notes.	864
Ohio Public Health Association—See Tuberculosis.		State Medical Board—	Examination Questions, 72, 520. Licenses Issued on Examination, 142, 565. Licenses Issued on Reciprocity, 142, 780. Illinois Scandal in Licensure, 538. Miscellaneous Activities—72, 142, 223, 398, 635, 712, 780
School Health Crusade Forms Basis of Hygiene Course Adopted by Department of Education	234	Tuberculosis—	Encouraging Returns from Tuberculosis Seal Sale, 156. Results of Tuberculosis Inquiry, 372. Tuberculosis Conference Acts to Join Forces with State Hospital Association, 571. Indigent Tuberculars Urged to Get Well at Home, 582. Value of Education of Public Demonstrated, 590. Anti-Tuberculosis Christmas Seal Campaign Under Way, 776. Anti-Tuberculosis Seals
Ohio Medical Golfing Association	261, 354, 660		868
Ohio Society for Clinical Laboratory Diagnosis	524	United States Public Health Service—	Health Exposition and Institute in Louisville, 68. Proposal to Place Reserve Corps on Civilian Status, 217. Health Service, 594. Public Health Service in Rural Health
Ohio Welfare Conference—			870
Health Topics Scheduled for Welfare Conference, 706. Enormous Costs for "Welfare", Dangers of Socialization, Problems in Taxation, Public Health and Child Hygiene, are Illustrated at Welfare Conference	853	United States Veterans' Bureau—	Medical Attention and Hospitalization on Large Scale Planned under Reorganized Veterans' Bureau, 58. Dr. Bland New Inspector for Bureau, 130. Veterans' Bureau Offers Special Post-Graduate Courses in Neuro-psychiatry and Tuberculosis—
Old Age Pension, Effort to Revive Proposal Expected	82		863
Physical Education—		Vaccination—	In the Wake of the Vaccinators, 659. Compulsory Vaccination Upheld by U. S. Supreme Court—
Minor Ailments and Physical Education, 3. Proportion of Physical Defects among College Students Presents Interesting Data for Consideration	78		874
Post-Graduate Lectures—		Workmen's Compensation—See State Industrial Commission.	
Medical Lectures Feature Ohio State University Commencement Events, 505. Post-Graduate Work in European Countries, 726. "Mental Hygiene" Lectures before District and Group Meetings, 694, 785. Second District Society Adds Laurels by Presenting Successful Fourth Annual Post-Graduate Course, 796. U. S. Veterans' Bureau Offers Special Courses in Neuro-Psychiatry and Tuberculosis	863		
Prohibition—			
Permits to Prescribe Intoxicants, 4. Willi-Campbell Anti-Beer Bill Emerges from Mass of Federal Legislation, 45. Prohibition Prescription Sentiment, 92. Restrictions—Plus, 250. Winding Red Tape, 595. More Teeth for Prohibition Enforcement, 595. "Premedicated" Alcohol, 332. Prompt Prohibition Applications Urged, 659. 1923 Prohibition Permits Should Be Secured Now, 777. Druggists on Treasury Department Alcoholic Decisions, 783. Prohibition and Narcotic Bureau? 786. The 1923 Prohibition Permits	868		
"Proprietary Medicines and the Doctor"—and Bottle Maker, 794. "Patent" Interests Busy Again	861		
Public Health, Counting the Cost of	714		
Miscellaneous Public Health Notes, 84, 135, 212, 326, 372, 433, 518, 561, 644, 690, 772, 852.			
Schools and Colleges—			
The Medical College and the Medical Profession, 54. Minor Ailments and Physical Education, 3. Proportion of Physical Defects among College Students Presents Interesting Data for Consideration, 78. Dr. Heuer Accepts Chair of Surgery, 138. Ohio—Medical Center, 170. Medical Schools and Medical Practice, 172. School Health Crusade Forms Basis of Hygiene Course Adopted by Department of Education, 234. University Trustees Reaffirm Stand for Pay Words, 450. Abolishment of Homeopathic College at Ohio State University, 476, 563. Medical Lectures Feature Commencement Events, 505. Proposed Medical Group, Western Reserve University, 633. Cincinnati University Honors Donors of Large Gifts to Medical Science, 654. Rockefeller Objects, 706. Physicians Appointed, 718. Features of the Public Health Nursing Course, Ohio State University, 781. Full-time Teachers in Medical Schools, 861. College of Pharmacy Proposed—	863		
Sheppard-Towner Maternity Act—			
Sheppard-Towner Maternity Bill Emerges from Mass of Federal Legislation, 45. Steps Taken for Placing in Operation in Ohio the Provisions of the Sheppard-Towner Maternity Legislation, 129. Infant Mortality, 295. Sheppard-Towner in Ohio, 474. "Maternity and Infancy", 540. Legality of Sheppard-Towner Act, 595. "As Goes Maine, etc.?" 595. Bay State Brings Legal Action, 700. "Medical Men vs. Mothers"	700		

# MEDICAL ECONOMICS

PUBLIC HEALTH ~ SOCIAL WELFARE *and* ORGANIZATION PROBLEMS  
WITH EDITORIAL COMMENT *by* D. K. M.

## 1922 Greetings

Considering the status of the professions and business generally, the physicians of Ohio, gratified with progress and service to humanity in the year just closed, face the new year under favorable auspices.

Through harmonious cooperation, the stress of new problems in recent times has been met with a high degree of success, but only by continued effectiveness in organization can the medical profession proceed with credit to itself and benefit to its membership.

The Ohio State Medical Association gains in strength and approaches its ideals in direct proportion to the manner in which its integral parts develop. The entire structure rests on the county societies and academies of medicine, functioning in unity.

The officers, Council and the committees of the Association are constantly planning extension of organization activities contingent on your support but designed for your benefit. This is *your Journal and your Association for service to you.*

The following has been suggested as a proper New Year's resolution:

"I will cooperate more fully than ever with my fellow members in the profession for the advancement of its ideals; my interest will be constant and as proof of my faith and purpose I will attend regularly the meetings of my local society and participate in its activities."

## Medical Promotional System

It has been correctly said that the public evaluates medical service very largely on the example set by the state in its recognition of, or inadequate compensation for members of the profession who are serving the state as public officials in the administration of state institutions.

Establishment of a promotional system in Ohio's state institutions, thus doing away with the practice of placing men at the head of such establishments, who never had any institutional experience, is a real necessity, in the opinion of State Director of Public Welfare MacAyeal, who properly declares that the state cannot afford "cheap service" when it comes to medical directorship.

Need of such a system is one of the outstanding facts that impressed MacAyeal in a per-

sonal investigating tour of the state's 25 institutions, with their total population of approximately 25,000, the director said.

Necessity of increasing the pay of assistants also is vital, he added.

"It ought to be that when a physician reaches the grade of first assistant, he should receive a salary somewhat close to that of the superintendent. This should be held out as an incentive to men entering institutional work, a goal for which they may strive. As it is, the common practice of assistants is to step out and get a job that pays them a little more, as soon as they get enough experience. The state loses them and the training it has given them."

There are just two things, the welfare director asserted, that forcibly impressed themselves on him again as the result of his survey, that institutions ought to do: Get under their care the persons that need correctional attention, and then turn them out, vastly improved over when they came in.

"That is not being done in Ohio," MacAyeal said. "We're just playing here; there is an absolute lack of remedial work."

Dr. MacAyeal, in order to overcome this objection, has prepared a list of employes of each institution, not in name, but as to the work of the position, giving the present wage and the proposed increase if the \$320,000 special fund appropriated for these purposes by the Legislature is made available by the state board of control.

It is said that even with the prevalence of unemployment there are many vacancies in the staffs of all institutions, and that it is impossible to secure help at the present scale of wages. This is said to be especially true of physicians and at least a score of appointments might be made in this line of duty alone if the proper men could be induced to accept the work.

## Enforcement vs. Legislation

"Our real need is more efficient administration and wiser enforcement of existing law rather than additional legislation."

Such is the text of a statement in a recent interview with the senior senator from Ohio in referring to pending legislation the purpose of which is to eliminate individual discretion and substitute restriction and restraint.

Just as a stormy sea of impractical and con-

ficting proposals has swamped Federal Congress, equally irrational conceptions are finding sponsorship in state legislatures, an example of which is found in Kentucky where a bill has been prepared to prohibit including in the list of books to be used in public schools those written by Darwin and other scientists supporting the theory of evolution, and banishing textbooks on zoology based on the scientific Darwinian conception.

The far-fetched theory on which this proposal is based assumes that American basic law prohibits the teaching of religion in the public schools, and that therefore it is unfair to permit the teaching of a theory subversive to any religion or at least to one in particular. Hence the proposal for a state enactment on the subject, assuming that evolutionary theory and atheism are synonymous expressions.

While it is obvious to an onlooker that there is already too much legislation, one must be thankful of the fact that all proposals and all bills introduced do not reach the stage of statutory enactment, although whims and visionary theories are the motive and motif in "much too much" legislation.

#### Fighting Medicine's Cause

"If we cannot turn a chloroform spray on the intermittent efforts of Congress to further abridge and regulate the privileges of medicine, and stop them, we can now at least voice our protest against them in the teeth of those who sponsor such unfriendly legislation—*today medicine has five physician members of the House of Representatives at Washington*. This is stated to be the largest representation in the lower law-making body of the nation that the medical profession has ever had," says a writer in the last issue of the Medical Pocket Quarterly.

The suggestion is then made that the medical profession in each state concentrate on plans to augment the number of physicians in the House of Representatives and the Senate, as a means of promoting constructive public health measures, and to counteract destructive proposals. It is pointed out that it is only a few months until the primaries for the congressional elections, and that right now efforts can be made which will result as a prophylactic against inimical legislation. The same principle is advocated even in greater measure for the attention of physicians in seeing to it that proper candidates are selected for the state legislature.

The writer concludes that with increased medical representation working from the inside, instead of the outside, the potential possibilities for constructive legislation favorable to public health and scientific medical service, as well as the power to abort and defeat injurious legislation, will be multiplied in the exact ratio to our membership.

The five physicians in Congress are Dr. John

W. Summers of Walla Walla, Wash., Dr. Ladislav Lazaro of Louisiana, Dr. Caleb R. Layton of Delaware, Dr. Archibald R. Olpp of New Jersey and Dr. John J. Kindred of Long Island City, New York.

Dr. Summers, Dr. Lazaro and Dr. Layton are former members of the House.

In the election landslide of last November, Doctors Olpp and Kindred joined their three professional colleagues, swelling the influence of medicine in the House by almost double its former strength.

In the U. S. Senate, Dr. Joseph France, of Maryland, represents the profession alone—the only physician in the upper branch of Congress.

#### Chiropractic "Crust"

An organization calling itself "The State Chiropractic Institute" located in Columbus, has been sending out to various physicians in Ohio, invitations to take "a two-weeks course of instruction for physicians exclusively in the technique of chiropractic adjustments."

Perhaps if you have not been "honored" by such an invitation, you will be interested in a sample of the presumptuous tone in which the invitation is extended. The following is an abstract:

"We believe that with the constant development of scientific research and continued observation of the results obtained, certain aspects of the old prejudices against Chiropractic treatment are rapidly breaking down and it is the sincere purpose of our institution to endeavor to impart the many virtues of Chiropractic treatment to the trained practitioner rather than have its uses, and abuses, fall into the hands of those unqualified professionally to administer them.

"There have been great strides made in this direction though, as yet, thousands of physicians are constantly beset with losses which insure to them by reason of their refusal, or neglect, to incorporate within their practice certain phases of Chiropractic treatment which, if adopted, would accrue to their benefit, both in their usefulness to their respective communities and in increased financial returns."

Apropos to the above, and in pointing out the menace which chiropractic holds toward preventive medicine and public welfare, a recent issue of the Bulletin published by the Federation of State Licensing Boards says in part:

"Through an organization—the Universal Chiropractors' Association—the violation of law is openly advocated; and a systematic propaganda is being carried on maligning the medical profession, and nation-wide efforts are being made to break down medical practice laws, by which those who do not have a thorough training in the fundamental sciences of medicine may

secure the unlimited right to treat the sick. Indeed without this propaganda chiropractic colleges could not be conducted as such highly profitable enterprises as the Palmer School of Chiropractic appears to be.

"According to the latest published announcement of the Palmer School of Chiropractic, a 'common school education' is all that is required for admission and the chiropractic course of instruction covers three terms of only six months each, which may be completed in a continuous session of eighteen months. In medical schools, by contrast, two years of work in a reputable college of arts and science now constitutes the minimum entrance requirement and the medical course covers four years of thirty-four to thirty-six weeks each, or a total of at least thirty-two months. The total hours of instruction in chiropractic is given as 4,103 1/2 class periods of thirty minutes each, or only 1,052 class hours—less than one-third of the instruction, therefore, which is required in the curriculum of medical schools.

"It has been claimed that there are 2,300 students in the Palmer School during the present session and that the fees charged range from \$300 to \$350 each. At this rate, the institution has secured an income for the present year of approximately \$700,000. Surely chiropractic is a profitable business—for the chiropractic school! To secure these enormous profits it was necessary for B. J. Palmer et al. to conduct their campaign for breaking down medical practice laws, otherwise their graduates who are poorly educated and untrained in reliable methods of treating the sick could not secure the legal right to prey on a sick and suffering humanity. In this connection, it is interesting to note the constitution and by-laws of the Universal Chiropractors' Association, another organization fostered by Palmer and his associates. It is well to become familiar with the various and pernicious activities and to understand the insidious methods employed by this group of would-be healers."

---

#### Self Diagnosis and Specialization

The problem of adequate distribution of medical service, the possibility of over-emphasis of some specialties, and the possible shortage of general practitioners and the development of group practice does not alone concern medical organization, but is being frequently discussed by many other agencies, including the public press.

While realizing the advantages and necessity of specialists in medicine, the leading editorial in the December 3 issue of Collier's portrays an interesting lay viewpoint on these questions. The writer points out that overspecialization often means that a patient discards his family physician or general practitioner altogether, and

in effect presumes to diagnose his own ailments. A part of this interesting editorial, including a characteristic dialogue is here reproduced:

"Why should I pay money to a general practitioner," asked Robinson, "when all that ails me is a headache and everybody knows that headaches come from eyestrain? I will go to an oculist."

"I suffer the same way you do," said Brown, "but headaches comes from indigestion, and I am going at once to the best stomach specialist in the city."

"Later—perhaps years later—after Robinson and Brown had each continued to have headaches that crippled their earning power and took most of the joy out of life, both of them came reluctantly to the conclusion that they had not been so smart after all. It has often proved a fact that Brown's headaches could be relieved quickly by Robinson's oculist, and that the doctor Robinson should have seen was Brown's stomach specialist. But both men were too dazzled by the 'specialist' notion to get themselves thoroughly examined and directed to the appropriate doctor at the start.

"It would surprise most people to know that many doctors, even now, would lose their practice if they dared to suggest to women patients that their self-diagnosis was inaccurate and that a complete examination was necessary. Mrs. Robinson and Mrs. Brown are as bad in this regard as their spouses.

"Many a specialist of imperfect vision and narrow mind contributed to this general state of affairs, but the greater cause was the too smart public, bent upon saving time and showing its own wisdom by self-diagnosis.

"There are very few diseases which can be wholly ascribed to hard luck and an evil destiny. Health is almost entirely a matter of what you do and of what surroundings you do it in. Bad health is a loss, but usually a preventable loss. All that the best physician can do is to point out the road to improvement. The patient can make it easy or hard for the doctor, depending on whether (1) he quits doctoring himself, (2) doesn't really 'enjoy bad health,' but has the will to be well, and (3) does what the doctor advises him to do."

---

#### Minor Ailments and Physical Education

That something is physically wrong with more than three-fourths of the first year and other new students at Ohio State University is the conclusion of a report recently prepared by Dr. John H. Nicholls, of the Department of Physical Education.

The report does not mean that the majority are really incapacitated physically or mentally, but that they have failed to take advantage of their physical possibilities. Only 18 per cent.

were found to be in "excellent" physical condition.

If as has been stated, 90 per cent. of all deaths can be traced to some simple infection or affliction which might have been prevented or readily corrected, then greater educational efforts should be made in the Universities, public schools, and otherwise to teach the value of thorough and frequent physical examination by competent physicians.

The public is and has a right to be interested in questions of health which can be stated in economic terms, the care of defectives in the United States alone costing \$100,000,000 a year. Many of those who become public charges are defectives through disease and the enormous cost of earning ability lost each year because of ill health is estimated as high as three billion dollars.

Obviously the medical profession itself cannot educate the entire public on these matters. It is the duty of public health officials and educational administrators to translate these facts into terms readily understood, thus resulting in proper recognition of medical science and a discrimination and disavowal of isms, fads, cults, and quackery, which are responsible in large measure for the delay in the proper treatment of physical afflictions.

---

#### "The Doctor"

The following item written by Dr. William Y. Ward, of Ivanhoe, Texas, has been published and recopied in a number of magazines recently. If the reader has not yet seen it, it may hold some interest.

"I am the custodian of health, that condition of mind and body essential to the adequate enjoyment of all life's blessings, of the food supplied by the farmer, the reading matter provided by the editor.

"I am the only servant of society who is expected to adhere to the twenty-four hour work day and the seven day work week. I am understood to be ready to answer all calls, regardless of hour or weather.

"I am the first to be summoned in serious illness or accident, and the last to be remunerated for my service.

"In war I am able to forestall the appalling loss of men from disease, much more decimating to armies than shot and shell. In peace I am still on military duty, although no politician suggests a bonus or advocates a pension.

"Each day upon the firing line of my profession I have coughed into my face the deadly germs of "flu," pneumonia and tuberculosis.

"I am with you in the hour of nativity; I minister to the ailments of your infancy and childhood; and, when the final battle with death has been lost, I am found at your bedside as you 'put out to sea.'

"I am an insignificant unit in the puny army

that is called upon to police the world of disease. Yet I am expected to appear in the sick-room with the smile and the message of gladness and good cheer.

"My competitors are as the sands of the sea. The patent-medicine man has a ready-to-take remedy for each particular ill, with many panaceas besides. The Christian Scientist attacks disease by giving it the cut direct, and by resolutely refusing to recognize its presence. Many of the mind-cure cults accuse me of gross materialism, while the chiropractor cannot understand why I do not 'cure' all forms of disease through the 'adjustment' of a vetebra.

"Notwithstanding all these impediments, when surgery is required, or epidemics are to be controlled, or when grave illness strikes your home, I am usually called.

"You have guessed what I am. Some call me 'doc'.

"I am the doctor."

---

#### Permits to Prescribe Intoxicants

The fiscal year for permits to prescribe intoxicants under the federal and state prohibition laws expired with the calendar year and physicians who had not renewed their permits or filed application for renewal with the federal prohibition director of Ohio prior to January 1st, are without authority to write further prescriptions.

New applicants for permits, viz., those who did not have such permits last year, and those who failed to file application for renewal of permit before January 1st, must await formal notification that the permit has been issued before writing prescriptions.

Holders of permits last year who filed application for renewal before January 1st, may continue under the old permits, pending formal notification that renewals have been granted.

The new address of Mr. J. E. Russell, federal prohibition director of Ohio, is the Gule Building, Fourth and Long Sts., Columbus.

The requirement that copy of the federal permit must be filed with the state prohibition commissioner, Mr. Don V. Parker, State House, Columbus, should be borne in mind by those receiving new permits or renewals.

For statutory regulations, federal and state, governing the prescribing of intoxicants see page 573 of the August *Journal*; on sherry wine regulations see page 730 of the November *Journal*; and on prohibition of beer see page 812 of the December *Journal* of 1921.

---

The function of medical education, the relation between the medical college and the practicing profession and the parallel interests involved are presented from a rather unusual viewpoint by Dr. Henry Page, dean of the College of Medicine, University of Cincinnati, in a paper in this issue which will undoubtedly be read with considerable interest.

# The Care of Patients After Abdominal Operations\*

By A. HENRY DUNN, M.D., Chillicothe

*Editor's Note.*—Dr. Dunn is undoubtedly right in his contention that more patients go about dreading surgery than are operated on because they fear the distress of the recovery period. At the present time there are few deaths on the table, but the mortality and morbidity of surgical procedures post-operatively is still prohibitive and out of all proportion to the dangers incident to the operation itself. It is for these reasons that post-operative care of patients, especially after abdominal operations, is so important. The newer physiological era of surgery is based on the wiping out of that opprobrious adage "the operation was a success but the patient died." Dr. Dunn covers in detail the factors influencing mortality and morbidity during the post-operative period and gives valuable advice regarding their prevention and treatment.

**T**HE SURGICAL service rendered a patient, logically divides itself into three important stages. (1) pre-operative, (2) operative and (3) post-operative.

It is safe to estimate that less than one per cent. of surgical mortality occurs in the operating room.

The post-operative then is the stage that probably deals with over ninety-nine per cent. of the mortality connected with surgery.

I will also hazard the observation that there are more surgical cases going about dreading surgery than there are operated on. The endured suffering and dread of surgery are out of proportion to the dangers incurred during operation. That at least a great part of the dread is due to the fear of post-operative suffering and discomfort must be conceded by the physician.

Thus in addition to the aim of the surgeon to decrease mortality and morbidity has been evolved the decision to attain these with the least suffering to the patient. In proportion as he attains both ends the surgeon's satisfaction in professional life becomes worth while.

## FACTORS INFLUENCING MORTALITY AND MORBIDITY

The mortality and complications during and after operations are diminishing at a rate parallel to the application of current progress in the allied sciences such as physiology, bacteriology, roentgenology, physiologic chemistry and pathology as found in the living.

Not infrequently a patient, who dies during or immediately after an operation, is one who, if thoroughly studied, should not have been operated upon at all, or at least not until a more prolonged and detailed study had been made of the patient as a whole.

The comprehensive conception of the patient's surgical endurance, if I may so call it, takes more than the viewpoint of a surgical operator. It takes that of an experienced clinician embodied in the surgeon who can utilize the blessings of the various laboratories, with the prejudices of none clouding his clinico-surgical experience. In other words, the point I wish to make clear is that though coordination of the internist, physi-

ologist and pathologist are paramount; the ultimate responsibility as to the patient's surgical endurance rests with the surgeon, who is also acquainted with the immediate and remote reactions following diverse operations.

With the exception of emergency surgery, each patient should go to the surgeon's place of work where pre-operative observation will result in both a wiser operative therapeutics and after-care. This is one way to obviate the creation of men who merely operate and their substitution for surgeons. One, who has operated "between trains out of town," must be impressed with the truth of Cabot's saying that, "There is a difference between an operator and a surgeon."

Frequently the after-care is rendered dangerous and some times results in a fatality because the proper observations were not made by the surgeon before the type of anesthesia was selected. The after-care of surgical cases, like the practice of medicine, has changed in the last 20 years from empiricism to a more logical and more scientific conception of the cause of symptoms manifested after operation.

This, like the reduction in mortality, has been due largely to the progress of the studies of pathology in the living; of the relation of symptoms to acidosis, shock, anoci-association, physiology of the gastro-intestinal tract and the nature of the peritoneum and its relation to infection and drainage.

Mention of this progress would be unfair without paying a just tribute to the splendid and original work of our own celebrated Ohio workers in this field, Fischer and Crile, whose attainments are of world-wide renown.

## NECESSITY OF SURGICAL EXPERIENCE AND JUDGMENT IN AFTER-CARE

After ascribing such importance to post-operative events, it is needless for me to state, how forcibly I wish to register my objection to the abandonment of the after-care of a patient entirely to one not versed in surgery.

The after-care often calls upon the knowledge of the surgeon's experience as to the exact picture of the suture line in a gastric or intestinal wound at different periods after operation. There are instances where one can only decide as to peristaltic management after a bowel obstruction

\*Read before the Surgical Section of the Ohio Medical Association, during the Diamond Jubilee Meeting, at Columbus, May 3-5, 1921.

or a peritonitis by picturing to himself the intestinal suture line twelve, twenty-four and seventy-two hours after operation. This requirement of a surgeon's decision often applies to postures, blood coagulants, administration of liquids or food and other management in the individual case.

#### THE NEWER CONCEPTS OF POST-OPERATIVE CURE

While perusing the literature of a quarter of a century ago one is struck with the advances we have made in the post-operative care of patients. To illustrate how matters have changed it is only necessary to compare past writings on the subject with the present literature.

Formerly discussion was principally on the careful consideration of hemorrhage, shock and suppuration. Progress in surgery has been so favorable as to render a lengthy discussion of these in our presentation as almost of more academic than practical value. To discuss hemorrhage in abdominal surgery would be inviting the advice of the profession that the surgeon finish his operation properly and obviate the discussion.

Severe shock too is becoming rarer in abdominal work as the surgeon learns to do his operations with the least trauma, a standardized technique and as much rapidity as is consistent with thoroughness. Two-stage operations, when one sitting is too severe, save many patients from undue shock. Though occasionally combatting shock is the determining factor in saving the patient's life, one should have very little shock, with proper haemostasis and proper estimation of the amount of trauma to which the patient is to be subjected.

The ordinary, slight shock is best met by the application of heat. Sometimes artificial solutions are indicated. If so the one that maintains the blood pressure the longest is a two per cent. bicarbonate of soda and six per cent. gum arabic solution, given intravenously. Should the blood pressure indicate a higher degree of shock the cause should be kept in mind. If due to loss of blood, which is usually the case, the best remedy is indirect transfusion with citrated blood or Kimptom tubes, both of which were found to be of extensive practical utility during the war. With the Moss method of determining the recipient's reaction, blood transfusion has become of great applicable value.

#### POSTURE

Posture of the patient bears a relation to drainage, hemorrhage, the formation of adhesions and the general comfort of the patient. Sometimes it is best to elevate the foot of the bed to prevent pelvic adhesions; at other times it is best to turn the patient on one side or the other for the same reason, if peritonization has been incomplete. Confinement in one position in the usual case is unnecessary. When one closes the

abdomen properly the patient may be turned gently on the side after twelve hours, unless there should be a posture preference for drainage purposes. Absolute quiet is only enforced when there is reason to fear hemorrhage. The Fowler position has been greatly exaggerated in many hospitals. Fowler himself moderately raised his patients twelve or fifteen inches, whereas many surgeons keep the patient in a sitting posture, resting on the ischia and coccyx, a position causing torture and sometimes pressure necrosis. This position is often erroneously called Fowler's position. The sitting posture is only indicated when pus is back of the ascending colon and apt to cause a subphrenic abscess by traveling upward through the loose cellular tissue.

#### BOWELS

Coincident with and following the wide use of phlebotomy, a calomel period became over-popular, as a result of which cathartics became as often abused as phlebotomy. Both the pre-operative and post-operative stage suffered from this abuse. Though this abuse dates as far back as Humoral pathology, yet even now patients are not infrequently purged for operation as a routine by some operators. In general however, the pendulum is swinging the other way and we are now reaching rationalism based on a better understanding of the difference between auto-toxaemia and acid toxaemia that is not necessarily connected with the bowels, and on the advantages of not disturbing nature's way of localizing infection through paralysis of the tunica muscularis of the intestinal canal.

To decide when to move the bowels after an operation one should recall recent work done to determine under pressure the bowel strength at the line of suture after an operation. This has been shown to be as strong the first day as the fourth, and weakest on the second and third day, again from the fourth day on, the suture line strengthens up to ten days. According to this conception the bowels should not be moved sooner than the fourth day after appendectomies and intestinal suture. Another reason why it is more rational to delay a cathartic until the fourth day is that increased peristalsis increases the danger of peritonitis, where there is infection in the abdomen or pelvis.

On the other hand some good authorities advocate early moving of the bowels for preventing adhesions. I believe the surgeon will do more for preventing adhesions by his technique in the matter of peritonization, substitution of rubber for gauze rolls and pads, gentleness and protection of the skin wound, than by early catharsis. We usually give peritonitis-free patients castor oil, one ounce on the fourth day and regulate the bowels by cascara tablets each night.

In cases least suspected of peritonitis we delay the cathartic, often for a week and I have yet to



see the deleterious effect from such delay, though the non-formation of adhesions, of course is, difficult to prove.

#### DIET

We give liquids and ice cream until the bowels move, then begin on soft diet, gradually reaching house diet in afebrile and extra-gastric cases on the second day after a thorough bowel movement with oil. Often peptic ulcer patients should be put on a Sippy regime of alkalies and small quantities of milk at short intervals.

Post-operative gastric cases should get a diet based on; *first*, physiologic study of stomach and the patient; *second*, the pathology present, and *third*, the particular operation done.

#### PROCTOCLYSIS

This method is especially used in peritonitis but is also indicated where fluids and alkalies are desired and the stomach is not available. Murphy was the pioneer in this procedure. Indeed nearly every method of proctoclysis is called the *Murphy drip* but not all are according to Murphy's method. There have been many additions and modifications in order to keep fluids at body heat and also to provide for the escape of gas from the intestines. Varying quantities of salt are used, but any quantity may be harmful since there are instances, notably in nephritis where salt is injurious, the kidneys not being able to take care of the extra amount of chlorides forced upon them. (Evans).

Glucose (three per cent.) and sodium bicarbonate (five per cent.) in solution have become the most popular substances used in this procedure. These cause no danger to kidneys and acidosis is counteracted. (Trout and Kausch). Some clinicians use plain tap water by the *Murphy drip* with as good results as those who suspend substances in solution.

The quantity used by Murphy in twenty-four hours was nine quarts. Very few of us can get this amount into a patient. Many times nearly all of the solution finds its way into the bed back of the patient. Indeed the average nurse will testify that the procedure has often been a failure. Frequently peristalsis is excited and the irritation of the patient is so great that it has an effect opposite to that for which it was originally intended.

I find that introduction of solution in small quantities at frequent intervals is more desirable in many cases. Still better is continuous hypodermoclysis with distilled sterile water, a method which is growing in popularity. Fischer's solution and gum arabic solution intravenously are widely used in many post-operative conditions; both often taking the place of the Murphy drip.

#### ALKALINIZATION

Anesthesia produces mild acidosis in critical cases, which the surgeon unfortunately meets

too often, and the incidence of acidosis may determine the fatal outcome. Hence alkalinization, pre-operative and post-operative, is often a great factor in the reduction of both mortality and morbidity.

The timely use of alkalies in many post-operative cases often miraculously transforms a semi-stuporous, toxic, restless patient with a brown dry tongue, to a comfortable, quiet and grateful state. An alkali is especially used with advantage if systemic deficiencies such as albuminuria or acid intoxication are known. When the patient has an acid breath, a dry tongue or deficient urinary output, an alkali is particularly valuable and we use it freely, not waiting for headache, drowsiness, nausea and other indications of acid intoxications.

After these general considerations let us proceed to consider some special post-operative complications.

#### POST-OPERATIVE RESPIRATORY DIFFICULTIES

Among the first difficulties we may meet after a laparotomy are those of respiration, which may be (1) local or (2) central. (1) Under local respiratory impediments we encounter such complications as swallowing of the tongue, faulty position of the patient, tight or faulty bandaging, and inspired vomitus or foreign body, such as blood or false teeth.

(2) Central respiratory difficulties are due to direct affection of the respiratory center of the medulla, usually because of too deep or uneven narcosis, or due to abnormalities that should have been tabulated before the operation. These will usually be encountered during the operation or within the first half-hour following the laparotomy. Treatment of respiratory difficulties obviously depends upon the cause and belongs more properly to the anesthetist's consideration.

#### POST-OPERATIVE NAUSEA AND VOMITING

The factors in the production of nausea are: (a) uneven or prolonged anesthesia; (b) trauma; (c) handling of the viscera; (d) acidosis from pre-operative starvation or purging and renal involvement; (e) or it may be a result of the head having been at too low a level, and according to Buxton, is then cerebral or cerebellar in origin.

Remembering these factors the remedial measures are obvious. Pre-anesthetic morphine and ethyl chloride save administering a good deal of unnecessary ether and so avoid nausea and I use both in my work. Elevation of the head and finally lavage of the stomach may be indicated to relieve nausea.

*Vomiting* after an operation is one of the important and frequent symptoms and deserves separate discussion.

There is the post-anesthetic vomiting due to the same causes as nausea. This may last

twelve or even twenty-four hours and is usually not severe, except that it increases intra-abdominal pressure, which, transmitted to the wound, causes marked suffering. Not a negligible factor is the patient's fear of bursting open the wound from strain on the abdomen. As a matter of fact I know of no patient that ever succeeded in opening his wound by straining. Though this is conceivable yet the fibers of the muscles of the abdomen in the usual wound are forced to closer approximation rather than separation.

After the initial post-anesthetic vomiting ceases, if there be a recurrence, it usually has grave significance and one should exclude ileus, acute dilatation of the stomach and peritonitic poisoning. These have been covered in dealing with the complications, each under a special caption. Gibbon suggests that a drainage tube may produce continued reflex vomiting which will cease on removal of the tube from the abdomen.

#### POST-OPERATIVE THIRST

Thirst can usually be prevented by ingestion of abundance of water up to an hour preceding the operation, except in gastric cases. We have a standing rule that every patient gets three glasses of tap water two hours before operation except in stomach cases with atony. Swabbing the throat and mouth with glycerine relieves thirst. Imbibing liberally of tap water as soon as awake, when the patient is thirsty, is practiced now regardless of whether a patient vomits or not, in extra-gastric cases. One of the preventatives of thirst is the leaving of salt water in the abdominal cavity, where there has been a great deal of bleeding or when the operation was unduly prolonged. The last time I saw Dr. Da Costa operate he left salt solution in the abdomen following appendectomies.

#### POST-OPERATIVE PAIN AND RESTLESSNESS

Although pain, after the first day, may be due to gas or inflammation, the movement of the diaphragm is probably responsible for more pain after abdominal than other operations. Pain may depend upon the sensitiveness of the wound from within, the viscera irritating the freshly made wound for a certain time following a laparotomy.

After remedying tight dressings, pins and twisted tubes, I wish to emphasize the proper use of morphine with all due respect to the surgeon who says he can get along without its use. The proper administration of morphine with a masterly hand, both pre-operatively and post-operatively is a blessing which most patients have a right to expect. There is no procedure, as there is no drug, that should be used as a routine without individualizing. On the other hand a surgeon who fears opiates in a suffering, nervous, restless patient, is not taking advantage

of what medicine has mastered and stood for since Hippocrates. The free use of morphine during the first three or four post-operative days if required, will not create a habitué, nor mask symptoms that a surgeon can not detect.

Unless there is a definite, systemic contra-indication, such as nephritis, morphinism, feeble old age or infancy, I do not see much room for omitting the use of morphine. When you, yourself, are the patient there will ever afterward be no doubt on this subject.

To be certain one deals with actual pain, a most important suggestion is to keep sympathetic relatives and friends from the room. This procedure is for the good of the patient as it will often obviate the use of opiates.

*Gas Pains.*—After the first day gas accumulation is probably the commonest source of pain. To try to control gas pains by the early use of laxatives is dangerous and adds fuel to the fire by further relaxing the gut instead of acting as an intestinal tonus to help expulsion. If the introduction of a rectal tube furnishes no relief, soap suds or other enemas may be used with excellent results. Pituirin in my experience has not been a success.

#### SUPPURATING WOUNDS

The treatment of suppurating wounds of all kinds and particularly the post-operative sort has undergone a great change.

The squeezing, pressing, flushing and cruel coaxing of wounds has been supplemented by action based upon the conception that it is best to give the tissues and body fluids a chance of defense against local and general action of supuration.

Watkins emphatically suggests that beyond ordinary cleanliness the abdominal surgeon would best leave suppurating post-operative wounds to their own defense for immunity. He puts on a boric acid dressing and changes it often enough to keep the wound clean. No matter what my views are on traumatic wounds, I am a strong supporter of the Watkins treatment in abdominal suppurating wounds.

If there be a great deal of odor I use a wet dressing of potassium permanganate instead of boric acid and change it often enough to keep the wound clean and odor-free. In infected wounds one would best leave the deep sutures for as long as three weeks, or longer if necessary for coaptation. In non-infected wound clips or superficial stitches are removed in a week and deep silk-worm sutures in two weeks.

#### ACUTE DILATATION OF THE STOMACH

This is distinctly a stomach malady. The intestines are found normal. Narcosis and laparotomies particularly predispose to stomach dilatation. Payer reported on the evidence of three hundred examinations under anesthesia, that distinct atony occurred in nearly every case; fur-

thermore that the paresis persisted for fourteen days.

Investigations do not substantiate what one would naturally be inclined to believe—that stomach operations would be the most frequent operations followed by acute dilatation. On the contrary acute dilatation of the stomach follows first in order pelvic, then biliary, then appendiceal and finally stomach operations and so on down to currtage of the uterus.

Authorities state that it does not matter what anesthesia is used, but practically speaking I know of no surgeon who had acute dilatation follow any of his local anesthetics.

Rarely this condition occurs even while the patient is being operated on. The largest number of dilatations occur between the second and third day following operation. Mayo Robson has reported one case occurring on the tenth day.

Patients with general visceroptosis are most apt to develop this complication.

There are many theories as to the direct cause. To my mind the most plausible is that paralysis of the stomach is due to disturbed innervation or toxic influence of the anesthesia on the muscle fibers of the stomach, plus aerophagia.

The symptoms are epigastric uneasiness becoming actual pain, anxious facial expression, fast pulse, thirst and often hiccough followed by vomiting free of retching and sometimes collapse. The introduction of the stomach tube brings up additional contents from a distended stomach, which causes epigastric bulging to collapse. The mortality rate of this complication used to be estimated from twenty-six to seventy-three per cent. but has fallen in recent years to less than ten per cent.

The greatest preventative measure is avoidance of pre-operative vigorous catharsis, especially in weak debilitated patients. After or even during the operation lavage with tap water is the great curative procedure and should be done every couple of hours when there is a suspicion of dilatation. The second most important procedure is the turning of the patient every hour on the face and from side to side. The thirst is controlled by hypodermoclysis and proctoclysis, the latter with alkali and glucose solutions. Recently I gave Fischer's solution by vein in two cases, with recovery of both patients. The most important factor in inviting recurrence is the too early administration of anything by mouth. Pituitrin is the drug most often used to combat the condition but my experience with it has been limited and not favorable.

#### HICCOUGHS

This is a clonic, involuntary contraction of the diaphragm. An inrush of air causes the characteristic noise. As a rule this is not of great moment if temporary and in non-infected cases. On the other hand it may be a sign of impending danger or by itself, may persist until exhaustion

sets in. The irritation from absorption of peritoneal toxins may stimulate the phrenic nerves or their origin and so cause hiccough. The frequent cause of hiccough is stimulation of the phrenic nerves through gastric branches of the vague. Most of the severe cases of peritonitic irritation do not develop hiccough, others do. *Hertzler claims when the diaphragm becomes involved there is hiccough.*

This condition not infrequently stops and returns in a few days when one thinks the patient is on the road to recovery. If this happens with peritonitis and in those who have had albumin before operation, it is usually a sign of the gravest importance. In two fatalities from peritonitis, occurring in my practice in the last six months, hiccough preceded delirium and unconsciousness, and continued after the patient was comatose for eighteen hours, the complication persisting almost until the last breath.

Relief in the form of elimination, based on the theory that it is due to retention of toxins in peritonitis, is hazardous, as one does not wish to cause increased paristalsis and spread the infection. It might be a profitable experiment to produce elimination by all channels in such cases, as in most cases, I doubt that one can do more damage. The condition of the patient may appear good, leading one to think the complication of no consequence, in the meanwhile treatment is omitted and the patient reaches the moribund state. I can safely state, as my experience, that if this complication develops after a soiled laparotomy, it is usually a sign of death.

I have tried belladonna and atropine and can recall two cases in which the remedy was efficacious. One patient was a child. But the question arises, after such recoveries, as to how much peritonitis actually was present in the recovered cases.

I think post-operative cases, on developing hiccoughs, should be put on a water diet, atropine a hundredth of a grain, Harrison drip and alkalies, both orally and by rectum. Hypodermoclysis or intravenous Fischer's solution, if the cause is traced to either peritonitis or the kidney, should be used early. Flexion of the thighs on the abdomen and such drugs as bromides, chloral mental, epinephrin and narcosis have been tried with success in some cases.

#### POST-OPERATIVE PERITONITIS

The rational conception of peritonitis, in the last fifteen years, has been a direct result of the more frequent application of surgery; in other words surgery has removed the abdominal wall from between the eyes and the pathology. Operations on conditions causing peritonitis make post-operative peritonitis the most frequent and most important pathologic condition we encounter after operations. The surest evidence for early inference of post-operative peritonitis is the knowledge of the intra-abdominal

condition. When one possesses the knowledge that there is possible beginning peritonitis he watches carefully for the least sign, and that after instituting treatment for peritonitis immediately following the operation.

If I were to tabulate the symptoms in order of importance I would name rigidity, abdominal discomfort, abnormal pulse and temperature, distention, pain, vomiting and later the pinched expression, cold clammy extremities, hiccough and delirium.

The success of the management of this condition depends on the proper understanding of (1) proper drainage; (2) the use of morphine; (3) management of acidosis by glucose, fluids and alkalis through the skin, rectum and vein; (4) proper posture and (5) the withholding of food.

#### POST-OPERATIVE SUB-DIAPHRAGMATIC ABSCESS

When this complication follows operations for rupture of the duodenum or gall-bladder, its presence may be more readily inferred. But when it follows, as it most frequently does, appendiceal operations, we often fail to diagnose the condition, even if we keep it in mind. There may be no local signs, but a hanging on of temperature and pulse for too long a time after a drained appendix; or there may be pain in the right side on deep inspiration plus signs of infection. Later polypnea may develop, and together with cough, is apt to lead to a diagnosis of an empyema or a pneumonia.

X-ray examination is of inestimable value in diagnosis. Recently I had obscure pus complicate a pus appendix. The X-ray plate revealed an effacement of the right diaphragmatic angle; it had the appearance of an empyema, but a needle did not reveal pus on multiple punctures. At this sitting the pus evidently was over the right lobe of the liver, as it emptied itself through a bronchus four days later. Late in some of these cases there may be a bulging or even superficial oedema, depending upon localization.

The diagnosis of this condition is usually difficult, but lavage leukocytosis, puncture and X-ray examination may help distinguish this condition from others. These cases may run a protracted course after operation. Judd reports one running a ten months course.

The treatment will depend upon location. The sitting posture after an infected appendix, accompanied by pus behind and to the outer side of the colon, will best prevent this complication, as pus often travels by continuity in loose tissue back of the peritoneum. This posture helps prevention even if spreading infection from the primary focus occurs by the lymphatics or blood. All three channels of infection have been demonstrated by good authorities. (Bernard, Lancer and Cosentino).

If one has the good fortune to diagnose the

condition by the aspirating needle, drainage may be instituted by following the needle under local infiltration. This drainage may be established through the sub-pleural region, through the loin or in the epigastrium.

Rupture may occur, as in the recent case mentioned, into a bronchus, but only very rarely into a hollow viscus. The usual case may exhaust the patient before the pus is exactly localized.

The mortality in these cases is very high. Not infrequently death occurs without the surgeon learning of the case. I saw a moribund patient, operated upon by another surgeon, who developed the complication after reaching home. The operator did not see the case after discharging the man as well. This suggests a rule never to discharge a patient from the hospital unless the temperature remains normal for a reasonable length of time.

#### POST-OPERATIVE ILEUS

This complication may occur immediately or may be delayed for several years after an operation. Delayed ileus belongs more properly to the discussion of intestinal obstruction. My discussion is limited to immediate ileus. This may be either (a) mechanical, (b) dynamic or only (c) pseudo-ileus. The life of the patient depends upon the promptness with which we distinguish between symptoms of ileus and those of other conditions. Many patients will show some symptoms simulating ileus during their post-operative recovery. Nature's way of localizing infection is by immobilization of the bowels.

For a few days after an operation, in the presence of infection, there is a distention of the bowel that may lead the inexperienced to suspect ileus but there is no vomiting, or increased thready pulse or other expression of a severe state. If there be a recurrence of vomiting after the initial post-anesthetic vomiting and distention it is best to be on the alert until the danger from this complication has been eliminated.

The dynamic form results usually from peritonitis encountered during operations as in appendectomy. This is a muscle paralysis without obstruction in the lumen of the gut.

As there is no difference in symptoms between true dynamic ileus and pseudo-ileus, except that one is temporary, this classification is purely arbitrary. The inability to move the bowels or pass gas, the distention, gas pains, nausea and vomiting are similar to that of true ileus.

Later the true dynamic ileus is accompanied by a pinched expression, fast pulse and respiration and so-called *slopping over* form of vomiting. A pain, excruciating in character, is characteristic of thrombosis or embolism of the mesenteric vessels and has sometimes been the diagnostic symptom of this dynamic form of ileus. (Bartlett).

The giving of an early enema is a helpful

diagnostic procedure as to whether the patient passes or does not pass gas.

The diagnosis of the exact anatomic form of mechanical ileus is rare but a diagnosis between a dynamic and mechanical ileus should be made and usually can be made only by the surgeon, who knows the exact conditions he encountered in the abdomen and what he did or left undone. In mechanical ileus the vomiting is projectile and the pain and tenderness more localized. Here pain and rigidity may predominate over distention and vomiting, if the obstruction is incomplete.

*Dynamic ileus* is treated according to cause. Usually the treatment of dynamic ileus is that of peritonitis, but if ileus is marked a loop of gut is delivered and drained. In case of a thrombophlebitis of the mesenteric vessels and early gangrene, resection may save the patient's life. Bartlett reports resection of two yards of intestine with recovery.

In the treatment of *mechanical ileus* one of two things can be done,—drainage of the bowel or removal of the cause. The procedure will depend on the knowledge of the recent pathology as seen in the abdomen, conditions of the patient and skill of the surgeon. Whatever be done should be accomplished preferably under local anesthesia. Lavage, remedying of dehydration and proper posture are valuable in all forms of ileus. The mortality in these cases is high. The cause of death is usually a chemical toxin developed from protein disintegration. I think that physiologic chemistry in the future may decrease mortality even more than surgery, unless additional progress in surgery be based on further work of physiologic chemistry.

#### POST-OPERATIVE PNEUMONIA

Recent efforts at prevention have diminished the mortality from this complication to a small item as compared to records of the past.

Pus cases are more apt to develop this complication than clean ones. The mortality is from twenty-five to seventy per cent. (Risley).

The mortality in the presence of pus is probably three times greater than in those free from pus, (Bartlett). The old and very young, of course, fare very poorly with pneumonia after laparotomy.

The greatest predisposing factor is ether, since pneumococci are not infrequently found in the respiratory tract of normal individuals.

Experiments by Chapman demonstrate that pneumonia can be induced in rabbits by injecting ether into the lungs. The mere inhalation of ether in thirty minutes produces râles, coryza and congestion of the bronchi and pulmonary tissue. Prevention of pneumonia, especially in the extremes of age, is more satisfactory than cure. As a preventative measure substitution for general anesthesia holds the lead. In bronchitis or other pulmonary pathology spinal and

local anesthesia are extensively practiced with excellent results.

The technique of various forms of regional anesthesia, was widely practiced since the war, are quite applicable in these cases.

I recently operated on an asthmatic, nervous woman, who had cardiac involvement with poor compensation, under local anesthesia. The only unpleasant effect during operation was the laughing of the patient which kept forcing out the intestines. The use of local anesthesia for major operations is becoming a daily practice in the operating room.

The management of post-operative pneumonia more properly belongs to the internist. The repeated changing of posture and the placing of the very aged in a wheel chair early, are very valuable preventatives to be constantly kept in mind. In the treatment of this complication there are probably no drugs more valuable than codeine and heroin often repeated, and forced fluids with digitalis on the least sign of circulatory embarrassment.

#### POST-OPERATIVE PHLEBITIS

It is Clark's argument that this is due to traumatism exerted upon the deep epigastric arteries during the course of an operation. The greatest number of phlebitic complications occur in clean cases. This condition follows laparotomy, but never a pelvic operation without a celeotomy.

*Symptoms* seldom appear before the eighth day and usually by the fifteenth day. The first sign of a phlebitis may be pain below or above the groin or an increase in diameter of the affected limb or more commonly both appear simultaneously. The temperature is usually normal. Occasionally it will rise. I had no rise in temperature over half a degree in my last few cases. There usually is a slight accentuation of pulse rate but it is not marked. The treatment is elevation of the limb, with application of hot water bottles, cotton bandaging and watching for gangrene in case of failure of collateral circulation. It is asserted that if the cases are not kept at rest for five weeks or more there is danger of pulmonary embolism. I have had no experience with gangrene nor pulmonary embolism in my cases. I usually keep my patients in bed three weeks.

#### PAROTITIS

This complication, though infrequent, is of serious importance. I had this complication recently follow a laparotomy for multiple bullet perforation of the intestine in a boy twelve years old. He recovered but was delirious and nearly succumbed to peritonitis.

I saw another case in France, following a gunshot wound of the abdomen with peritonitis and subsequent death. In both cases parotitis appeared over seven days following injury and operation. Neither patient had abscess formation though this is possible.

It is claimed that this complication more often follows pelvic operations. The other salivary glands may be effected, but the parotid is the one most often involved. Marked rise in temperature and pulse rate and swelling of the gland, direct one's attention to this complication. Both of my patients had delirium so that I can not say anything definite as to pain.

Prevention of this condition depends more or less upon keeping the mouth clean and stimulating salivation by allowing the chewing of gum. As chewing of gum also serves to aid the digestion of carbohydrates I think it may be used beneficially in the ordinary case, after an operation. The actual treatment is application early

of ice caps. Should suppuration occur, drainage may be instituted by opening the capsule, inserting a haemostat and withdrawing it open.

## REFERENCES

1. Hertzler: The Peritoneum. (C. V. Mosby).
2. Osler and McCrea: Principles and Practice of Medicine, Ninth Edition.
3. Harvey B. Stone: Surgery, Gyn. and Obst., May, 1921.
4. Lilliam K. P. Farrar: Surgery, Gyn. and Obst., April, 1921.
5. Louis Frank: Surgery, Gyn. and Obst., February, 1920.
6. Bartlett: After Treatment of Surgical Patients.
7. Warbasse: Surgical Treatment.
8. Crile and Lower: Anoci-Association.
9. G. W. Crile: Archives of Surgery, March, 1921.
10. Thomas J. Watkins: The Treatment of Suppurating Wounds Following Abdominal Section. Amer. Jour. of Obstetrics, October, 1920.
11. Keen's Surgery.
12. Moynihan: Abdominal Operations.

## The Management of the Third Stage of Labor\*

By WALTER E. DUFFEE, M.D., Columbus

*Editor's Note.*—DeLee states that accidents during the third stage of labor are responsible for more fatalities than those of the other two stages combined. He adds, also, that upon the proper conduct of the third stage depends the woman's freedom from post-partum hemorrhage and the smooth convalescence of the puerperium. For this reason the detailed management of the third stage, as worked out by the Department of Obstetrics of the Ohio State University, is of more than passing interest, on account of the excellent results obtained in 325 recorded cases, as reported herewith by Dr. Duffee.

**B**AUDELOQUE was the first to recognize that there are two distinct phases to the third stage of labor, that of *separation* and that of *expulsion*.

### GENERAL CONSIDERATIONS

John Harvey, in 1767, described two methods of separation of the placenta and advocated following the fundus of the uterus with the hand as the child was expelled. Later Schultz described the method which bears his name and attributed the placental separation to the formation of a retro-placental hemorrhage. Shortly afterward Mathews Duncan offered his opinion that the placenta separated edge first.

It seems that there has always been a tendency to devise some procedure that would hasten the delivery of the placenta and membranes. The older writers advised the use of sneezing powders and made traction upon the cord. Some advocated and practised manual removal as soon as the child was born. Credé, in 1865, offered a method to shorten the third stage based on early manipulation of the uterus. This method consists of a vigorous massage and expression with the first or second uterine contraction after the birth of the child.

It is quite evident that many of the methods offered for hastening the birth of the placenta and membranes have for their basis only the element of time saving. The accidents following attempts to deliver the placenta by traction on the cord were so numerous and their cause so

evident that this procedure is practically obsolete today. Active, or what sometimes amounted to even violent massage of the uterus, often caused partial separation of the placenta with its resulting hemorrhage. It also unnecessarily traumatized a uterus which in most instances would behave normally if let alone. Portions of the placenta were frequently left within the uterus following this procedure.

*DeLee states that accidents during the third stage are responsible for more fatalities than those of the other two stages combined. He adds that upon the proper conduct of the third stage depends the woman's freedom from post-partum hemorrhage and the smooth convalescence of the puerperium.*

Polak, in 1915, after a study of two thousand cases concluded that there is a normal mechanism of the third stage. He states that most of the accidents and complications are directly incident to attempts at expression before complete separation of the placenta has occurred.

### ROUTINE MANAGEMENT OF THE THIRD STAGE OF LABOR

Acting upon the knowledge that the third stage is of tremendous importance to the patient, having a direct bearing upon her complete and uncomplicated recovery from this confinement, and therefore also upon her future health, the Department of Obstetrics of the Ohio State University has formulated and followed a method of management of the third stage.

This method is based on the physiological separation of the placenta, no attempt being

\*Read before the Section on Obstetrics and Pediatrics of the Ohio State Medical Association, during the Diamond Jubilee Meeting, at Columbus, May 3-5, 1921.

made to hasten this separation, and strictest asepsis is maintained throughout.

The steps in the management are as follows:

1. The hand of an assistant follows down the fundus as the child is born and afterwards guards but does not massage the uterus.

2. After the cord is clamped and cut that portion of the cord without the vagina is laid across the groin of the mother.

3. No attempt is made to express the placenta until the signs of separation appear. These signs are rather definite and are: (a) A lengthening of the cord outside the vagina. (b) A distinct rising of the uterus in the abdomen, in most instances accompanied by a slight toppling to the right. (c) A change in the shape of the uterus, the change being from a globular to a pear shape and an antero-posterior flattening.

4. Upon the appearance of the signs of separation the uterus is pushed into the midline, grasped firmly and steady pressure made downward, not squeezing the uterus but using it as a piston to push the placenta ahead of it.

5. As the placenta appears at the outlet it is supported and lowered gently into a sterile basin.

6. The membranes are not twisted, but are delivered in much the same manner as one would remove gauze packing from an abdominal wound. That is, a fold of the membranes is picked up with a sterile forcep and gentle traction is made. If there is no resistance, traction is continued

until the membranes are delivered. If there is resistance, that fold is dropped and another tried, and so on until finally a portion is found that yields to gentle traction and the membranes are in this manner teased out.

7. All clots are expressed from the uterus.

8. The vulvae are cleansed and covered with dry sterile pad.

9. The vaginal canal is never invaded after delivery of the placenta unless absolutely necessary.

10. The placenta and membranes are carefully examined for missing portions.

#### ANALYSIS OF RESULTS

An analysis of 325 cases conducted under this management in the clinics of the Ohio State University show the following results:—

Longest third stage, 50 minutes.

Shortest third stage, 4 minutes.

Average third stage, 16 $\frac{3}{4}$  minutes.

Largest amount of hemorrhage, 39 ozs.

Smallest amount of hemorrhage, 3 oz.

Average amount of hemorrhage, 10  $\frac{8}{10}$  ozs.

There were no cases of post-partum hemorrhage.

There were no cases of retained portions of placenta or membranes requiring manual removal.

327 E. STATE ST.

## Intra-Spinous Treatment of Neuro-Syphilitic Patients\*

By GRANT MARTHENS, M.D., Dayton

*Editor's Note.*—In evaluating his studies, at the Dayton State Hospital, in the intra-spinous treatment of neuro-syphilis in patients, committed to the institution as end-products for custodial purposes only, and hence below par, Dr. Marthens concludes that all neuro-syphilitic patients should receive the benefits of this intensive method of therapy. He has found the incidence of improvements after such treatment greater than the ordinary remissions characteristic of paresis. He also notes that paretics show a greater degree of improvement after the administration of mercurialized serum than of fortified salvarsanized serum. Mercurialized serum, however, in his experience seems to be contra-indicated in tabo-paretics.

UPON THE REQUEST of Dr. Baber, of the Dayton State Hospital, I have been enabled to study and treat the patients, whose admission to the hospital were due to the ravages of syphilis, consequently, it must be borne in mind that in this series of cases the majority of patients are those, who were committed to the institution as an end-product for custodial purposes only, which means that the greater number were below par.

#### ROUTINE METHODS OF TREATMENT

Their histories were consulted and those having a positive blood Wassermann were the first to be treated. Later a Wassermann test was made on every patient in the hospital and is now included in the routine examination of all pa-

tients admitted. In all suspected cases provocative treatments are given and for three days afterwards Wassermann tests are made.

Before beginning treatment the patient is thoroughly examined, the blood pressure taken and a chemical and microscopical examination of the urine is made. He is sent to the various clinics for examination, and, if surgery is indicated, this is done when the written consent of a relative is obtained. At times we are handicapped by not having such permission. He is also referred to the dental department for careful examination, including radiographs and when able is given systematic exercise, including daily walks.

To avoid untoward reactions, the patient is given mercury and potassium iodide before the administration of arsphenamine.

The day before the arsphenamine treatment

\*Read before the Medical Section of the Ohio State Medical Association, during the Diamond Jubilee Meeting, at Columbus, May 3-5, 1921.

the patient is given magnesium sulphate in the morning and forty grains of sodium bicarbonate in divided doses throughout the day. The morning of the treatment the patient has no breakfast and is not permitted to eat until early evening.

After this preliminary treatment arsphenamine is given intravenously, starting with .3 gm. of the drug. If any reaction occurs, the patient who has had such reaction is given 15 m. of 1-1000 solution of adrenaline, subcutaneously.

If the .3 gm. solution causes no reaction and the urine remains normal, the following week a second treatment is given using .5 gm. of the drug. At present, a series of six intravenous treatments at weekly intervals is given. The urine is examined before and after each treatment. Every case cannot be given the larger dose and is continued on the same strength as the original solution.

The intravenous route in giving arsphenamine treatments is preferable, but in many of these cases it is utterly impossible to get into a vein due to a sclerotic condition, so often found in general paralysis, regardless of age. The clinic is too large to permit of the time to cut down and pick up such a vein.

In those cases, in which the vein cannot be used, deep intramuscular injections of arsphenamine were given. Regardless of careful technique, abscesses often developed, therefore, this method of giving the drug has been discontinued. The same condition developed after deep intramuscular injection of calxylate of mercury, so this method also has been eliminated. Consequently the following routine treatment has been adopted:—

*First:* Daily inunction of 33 1/3 per cent. mercurial ointment, 7½ grains to the dose, 30 doses.

*Second:* Potassium iodide, 15 m. three times a day, increasing dose one drop per day.

*Third:* Six intravenous injections of arsphenamine, beginning with .3 gm. intravenously and increasing to .5 gm. at weekly intervals.

The gravity form of administration is used in nearly all the cases, as the syringe method has not always been successful.

#### RECTAL USE OF ARSPHENAMINE

In cases in which the intravenous method cannot be used, the rectal method of administration has been apparently successful, for which the following is the technique:—

An aqueous solution composed of sodium hydroxide and arsphenamine is made the same as for the intravenous medication except that to each .5 gm. of arsphenamine, 30 cc. of water is added, instead of 150 cc. as in the intravenous administration.

The patient has the usual gastro-intestinal preparation, in addition, the lower bowel should be cleansed by an enema. A No. 20 F. catheter

is used and inserted high up. There has been no complaint of bowel irritability. At present this method in certain types of office work is used with good results. It is advisable to have the patient lie down for a half-hour afterwards. In the clinic the patient is kept in bed all day.

At first only a dose of .5 gm. of arsphenamine was used in the rectal treatment, later this was increased .5 gm. each week until 2 gm. were given at a treatment. Ninety-eight have been given.

Mehrtens, of San Francisco, uses neo-arsphenamine, increasing the dose gradually to 4 gm. by rectum. His conclusions are as follows:—

The absorption and distribution are controlled by the determination of the quantity of arsenic in the blood, urine and spinal fluids, after each method of administration.

*First:* Arsenic is absorbed in the blood after such injections, and larger quantities are eliminated in the urine than after ordinary intravenous injections of arsphenamine.

*Second:* Arsenic persists longer in the blood in perceptible quantities after the rectal method with large doses, than after ordinary intravenous methods.

*Third:* About equal concentrations in the spinal fluid are obtained by either method.

#### DURATION OF TREATMENT

The treatment, as described, continues for six weeks; the seventh week a spinal puncture is made and fluid withdrawn for laboratory examinations and a treatment given. Even though the tests are negative no harm has resulted from administering fortified salvarsanized serum. If the spinal tests prove negative treatment is discontinued for thirty days. A blood Wassermann is then made and if positive, treatment is resumed; if negative the patient is given a three months' rest. At the expiration of this time a second blood Wassermann is made and whether positive or negative, treatment is continued.

If the spinal fluid findings were positive, after some consideration as to the number of treatments and how often they should be given, it was decided to give a treatment of arsphenamine, either intravenously or by rectum every two weeks and the following day an intraspinal. If the laboratory findings become negative, the treatments are discontinued; otherwise a series of ten are given before the patient is given a rest.

If the slightest trace of albumin or sugar is present in the urine treatment is discontinued until this condition clears up.

#### INTRA-SPINAL TREATMENT

One-half hour after an intravenous injection has been given to the patient who is to receive a spinal treatment, blood is withdrawn from an arm vein into a sterile tube which has been rinsed in 0.85 salt solution to prevent haemolysis.

The blood is allowed to stand for one-half hour



at room temperature; then the clot is loosened from the tube by a sterile stirring rod. The tube is placed in an ice box for three or four hours after which the serum is poured off into a sterile centrifuge tube which also has been rinsed in sterile 0.85 saline solution. The serum is centrifuged for ten minutes, then the serum is poured into other tubes and centrifuged again for the same period of time. This method of pouring off the serum has been adopted instead of using a pipette and a centrifuge tube with a very pointed base is used.

After the second centrifuging the serum should be free of red cells. The serum is then poured into a test tube and the desired dose of salvarsan or mercury added. For the preparation of the fortified salvarsanized serum a solution of saline and salvarsan is made of which 1 cc. represents mg. 1 of the drug. The desired dose is added to about 10 cc. of serum. The minimum is mg. .1 increasing with each successive treatment from mg. .1 to 1/4, 1/3, .4, to mg. 5, the maximum dose. For mercurialized serum a solution of bichloride of mercury is prepared of which, each cc. represents gr. 1/100 of the drug. The desired dose, gr. 1/100 the minimum dose, or gr. 1/50 the maximum dose, is added to 12 cc. of serum together with .85 per cent. saline solution made with double distilled water. Thus the whole amount of fluid given equals about 30 cc. The serum is then inactivated at 57° C. for one-half hour and administered to the patient in less than one hour after inactivation.

At the beginning of the intravenous treatments, which are given on Monday mornings, seven patients had to be carried to the clinic, others had to be restrained in order to receive treatment. During the year 1,064 treatments have been given with no severe reactions and no deaths.

The next morning (Tuesday) intraspinal treatments are given. The lowest number of spinal treatments I have given in a morning is three and the highest twenty-five.

Before treatment, the blood pressure by the auscultatory method is taken. The patient lies on his right side, his knees drawn up, head bent, approximating the knees, hips slightly overlying the edge of the table so that the back presents a good curve. An attendant stands facing the patient with one arm around the patient's neck and the other behind his knees, which helps to maintain his position.

The back of the patient is exposed, painted with iodine, and sponged with alcohol. The cleansed area is protected by sterile towels, in fact, the same precautions are observed as for major operations.

Whenever possible the space just above the line drawn from the iliac spines is used. I have gone higher when it was impossible to get in below. After the needle is in, the spinal fluid pressure is noted; sufficient fluid is then with-

drawn for laboratory examinations which include cell count, globulin increase, colloidal gold and Wassermann tests.

After the spinal fluid has been obtained, a container is attached to the needle and about 30 cc. of fluid allowed to flow into it. The container is then disconnected; the fortified salvarsanized or mercurialized serum is added to the spinal fluid and thoroughly mixed, all air being expelled. The container is again connected with the needle and the fluid permitted to flow in slowly by gravity. The last few drops are washed in by a saline solution; the needle is withdrawn, and dressing applied. The blood pressure is again taken; the patient is put to bed; the first twenty-four hours without a pillow. At the end of forty-eight hours he is permitted to get up.

If he complains of pain, the foot of the bed is raised, which usually relieves this condition. A tabetic has more pain than a patient with any other form of late syphilis; the first spinal treatment causing the most suffering; in fact the patient is worse for a few days; after the second treatment reaction is less; and after the third treatment the discomfort is practically nil. During the year only two (2) hypodermics of morphia have been given for pain. In the evening some patients will have temperature of 100° to 101° F. by the next morning they are normal. Mercurialized serum will cause a higher temperature than the fortified serum.

Five hundred and thirty spinal treatments were given without serious reactions and no deaths; 460 were of fortified salvarsanized serum; 70 of mercurialized serum.

Cases of general paralysis and tabes have the greatest involvement of the spinal fluid. At some time the tabetics show a typical paretic curve in the colloidal gold test.

#### STATISTICAL DATA

One hundred and sixteen cases were treated, classified as follows:

Condition	Number
General Paralysis .....	59
Tabes dorsalis and pre-paresis.....	9
Cerebral spinal syphilis.....	30
Gumma of brain.....	1
Dementia Praecox with syphilis.....	4
Syphilis with morphia.....	2
Manic-depressive with syphilis.....	1
Syphilis with tuberculosis.....	3
A history of syphilis combined with trauma .....	2
Epilepsy with positive Wassermann .....	1
Acute exacerbation of chronic parenchymatous nephritis with mitral insufficiency, strongly positive Wassermann .....	1
Mitral insufficiency with strongly positive Wassermann .....	1
Hereditary syphilis with positive Wassermann .....	1
Ulcer of the leg with positive Wassermann .....	1

Sixteen patients died during the year, the cause of death being as follows:—

Cause of Death	Number
General paralysis .....	8
Gumma of brain.....	1
Results of appendectomy.....	1
Tabes and general paralysis.....	2
Tuberculosis .....	3
Chronic nephritis with mitral insufficiency .....	1

## RESULTS

At present there is not a case of general paralysis confined to bed in the Dayton State Hospital. Eight (five men and three women), whose clinical symptoms are much improved, are at home. Twelve have been home for thirty day periods and have returned in good condition. Those remaining in the hospital are able to do various kinds of work.

Four patients who were violent improved for a short time, both mentally and physically, but later relapsed and regardless of any treatment died.

Of the four others who died no method of treatment indicated improvement. On three were tried fortified salvarsanized serum, mercurialized serum and spinal drainage to no avail.

One of the early cases treated had a relapse during his second trial visit. On his return the fortified salvarsanized serum was discontinued and the mercurialized serum used. He has improved; and today is far better than at any previous time.

Encouraged by this result I used the mercurialized serum for a patient who had had the full series of treatments with little clinical improvement. By this process, he improved rapidly and was able to spend Christmas at home with his family.

If the condition of the patient is good after the course of ten treatments, and he has a home to which he may go, he is permitted to leave the hospital on trial visit for one month. At the expiration of the time he returns for an examination, and if still in good condition permission for a visit of three months is granted.

Of the fifty-nine cases of general paralysis treated throughout the year, fifty-one are living; none confined to bed; eight are home; twelve have had trial visits; and nine more will probably have permission to go home for a limited time.

All these patients have not had the series completed at the writing of this paper.

The following may be noted about the charts of nine patients diagnosed as paretics: In only one, No. 11, did the blood and spinal fluid tests become negative. The colloidal gold test was flat and remained so, the cell count negative, likewise the blood. The results came after intravenous, rectal and fourteen spinal treatments.

In No. 90, the colloidal gold curve became flat after the tenth spinal treatment, and in No. 3, after the eighth spinal treatment.

In No. 4, the typical paretic curve is improving with a normal cell count.

Of the nine cases, four are home, three may go shortly, leaving only two at the hospital.

These patients are in good physical condition.

The following may be observed about the series of charts of seven tabo-paretics. Of these patients four are home, two at the hospital, and one is dead.

No. 75 and 89 have been home since last fall. No. 89 recently returned. He is in good condition and his blood is still negative to the Wassermann. No. 75 has not, to date, returned for re-examination.

No. 9 and 99 were unable to walk and had to be carried to the clinic. No. 9 has been home for four months doing her own housework and seems in good condition.

No. 99 was home for a month and during that time contracted acute gonorrhoea. She returned with a double salpingitis. She had a stormy convalescence but has greatly improved and we hope to have an operation in the near future.

The next series of charts shows three cases of cerebro-spinal syphilis. These patients are at home; the blood and spinal fluid findings negative. The tests of twenty-seven others are also negative.

No. 85 is an interesting case of epilepsy with positive blood and spinal fluid findings. He has had no seizures in six months; general condition good; but laboratory findings, as to Wassermann and colloidal gold tests are unchanged. He is at home.

One factor to be guarded against is catarrhal jaundice. Seven of the older patients developed this condition during the year; fortunately all recovered. There seems to be no signal to indicate when jaundice may occur.

These patients are now receiving spinal treatments only once a month. If at any time there is a loss of weight it is better to discontinue treatments for at least a month. This is probably due to the patients becoming fast to the drugs used.

The laboratory findings are still positive in the patients who have shown the greatest clinical improvement. It is interesting to note that women patients respond more rapidly to intensive intra-spinal therapy than do men patients.

As soon as possible these patients are permitted to go home on trial visits which serve to renew hope and cooperation on their part.

## CONCLUSIONS

1. All cases of neurosyphilis should receive the benefits of intensive intra-spinal therapy.

2. The incidence of improvements after treatment is greater than the ordinary remissions characteristic of paresis.

3. Paretics show a greater degree of improvement after the administration of mercurialized serum than of fortified salvarsanized serum. Mercurialized serum seems to be contra-indicated in tabo-paretics.

# Comparative Values of the Complement Fixation Methods in Syphilis\*

By HOWARD D. MCINTYRE, M.D., EMERSON A. NORTH, M.D., and AURELIA P. MCINTYRE, A. B., Longview Hospital, Cincinnati

*Editor's Note.*—In the investigations of Drs. McIntyre and North, cholesterolized antigen, properly prepared and titrated, was found to yield from 10 to 15 per cent. more positive Wassermann reaction on luetic sera than does plain antigen. They consider it a perfectly safe antigen to employ in the Wassermann reaction with complement fixation in the ice box at 2° C. for a period not longer than 10 hours, observing certain precautions outlined in their paper. They have obtained but one positive reaction employing such method, in which the clinical findings, the history, or both, did not justify a diagnosis of lues. In their opinion also the Hecht-Gradwohl test, when positive in the temperate zone, is diagnostic of lues. It will yield 15 per cent. more positive reaction on luetic sera than does the classical Wassermann reaction. It may be employed in from 95 to 98 per cent. of fresh sera, not over 48 hours old, and it does not yield false positive results in tuberculosis.

IN 1898, Bordet discovered the hemolysins. Three years later, only nineteen years ago, he published the first account of complement fixation which later became known as the *Bordet-Gengou phenomenon*. Speaking in terms of the side-chain theory of Ehrlich, the phenomenon of complement fixation depends upon the fact that complement, a substance present in greater or less quantities in the serum of all animals, will be bound or fixed, in the presence of an antigen and its specific antibody or amboceptor, a more or less firm union of the three resulting.

## HISTORICAL EVOLUTION

Bordet's first experiments were carried out using the following reagents: As antigen, a suspension of bacillus pestis in normal sodium chloride solution, guinea pig's serum for complement. The two were placed in a test tube containing the serum from a horse which had been immunized against bacillus pestis. The three were incubated for one hour, after which the hemolytic system consisting of the serum of a guinea pig which had been immunized against rabbit's erythrocytes, and a quantity of rabbit's erythrocytes were added. As the complement had been fixed in the first incubation, no hemolysis resulted.

Bordet's work was soon corroborated by Ehrlich and Morgenroth. Widal and Lesourd about this time made use of the reaction in the diagnosis of typhoid using bacillus typhosus as antigen. This was the first practical use made of the reaction.

Although the work of Bordet and of Ehrlich coincided from an experimental standpoint, theoretically they held quite different views as to the underlying mechanism of the reaction of complement binding or fixation.

Bordet held and still holds that the antibody unites directly with the antigen and serves to sensitize it and prepare it for direct union with the complement as a mordant aids in the pene-

ration of a dyestuff. Mordants are substances which are capable of attaching themselves to the substance to be dyed and subsequently to the dye itself. Substances of this kind are tannic acid (for basic dyes) and colloidal hydroxides (for acid dyes) such as the hydroxides of aluminium, tin, iron, and chromium. For example, the cloth to be dyed is treated with aluminium sulphate and acquires either by absorption or feeble combination, or both, a certain amount of the hydroxide; the fabric is then boiled in water with an acid dye (say Turkey red or alizarine which is a very slightly soluble acid,  $(C_{14}H_8O_4)$ ) which unites with the hydroxide which has already united with the cloth. If we substitute the terms antigen for cloth, antibody for mordant, complement for dye, we can readily visualize in physico-chemical terms, Bordet's concept of the process of complement fixation.

Ehrlich, on the other hand, postulates the existence in cells of the body, of certain molecular groups which he calls receptors, which have the power to anchor or bind substances useful to them. Or the substance bound may be toxic to the cell and the cell may die or may be stimulated to the production of other receptors. These receptors, according to Weigert's law of overcompensation, *overproduction theory*, are produced in excess and thrown into the blood stream. Ehrlich believes that these receptors or amboceptors play an all important rôle in complement fixation. According to him, the complement does not unite directly with the antigen but indirectly through the medium of the amboceptor which possesses a cytophile group which unites it with the antigen and a complementophile group which unites it with the complement.

In 1905, Wassermann and Bruck found that extracts of bacteria could be used in place of bacterial emulsions such as Bordet had used, also that extracts of tissue rich in bacteria might be used as antigen. Wassermann made use of the reaction in the diagnosis of tuberculosis, using an antigen lung tissue from tuberculous patients.

\*Read before the Section of Nervous and Mental Diseases of the Ohio State Medical Association, during the Diamond Jubilee Meeting, at Columbus, May 3-5, 1921.

At this time the attention of the scientific world was drawn to syphilis, by the discovery of the spirocheta pallidum by Schaudinn and Hoffman. In cooperation with Neisser, Wassermann and Bruck, May 10, 1906, made use of the reaction working with the serum from luetic monkeys using extracts of condylomata, luetic placenta, and so forth; as antigens. Just fourteen days later, Detre published his paper. He performed the reaction on six luetic and four normal persons, using tonsillar exudate, extract of luetic papules and pancreas as antigens. He obtained two positive reactions from the six luetic persons and all negative reactions from the normals.

Wassermann's first work on two hundred and seventy-five sera from luetic patients showed only nineteen per cent. of positive reactions. This was due to the fact that elaborate controls and titrations now in use were lacking.

Following these pioneer papers many others appeared rapidly until the work done on serology has really assumed enormous proportions. At first the Wassermann reaction was thought to be specific, that is, that each antigen produced its specific amboceptor in the blood stream of an immunized animal. However, the side-chain theory which Ehrlich elaborated to substantiate this view received a rude jolt, when in 1906 Citron showed that an extract from normal human red blood cells constitutes a fairly good antigen yielding positive reactions in about 80 per cent. of luetic patients. In 1907, Weygandt obtained positive reactions on luetic sera using an extract of normal spleen as antigen. Müller and others used alcohol extract of guinea pig heart the same year. These results directed to the fact that the antigen was probably a lipoid, and following this conception much work was done by many observers using sodium glycocholate and taurocholate, cholesterol, lecithin, vaselin, and so forth as antigen.

The investigators were so numerous, the technique employed so different, the results so antagonistic and confusing, that the reaction fell into disrepute, its opponents claiming that it yielded positive reactions in tuberculosis, leprosy, scarlatina, in fact every infection besetting the human race. The painstaking efforts of honest workers, however, have shown pretty conclusively that we get little or no cross fixation in any diseases with the possible exception of frambesia (yaws) and leprosy. To this feature we will return later when we speak of our own experience with tuberculosis and other infections.

#### METHOD OF INVESTIGATION

Coming now to our own work, it is our intention to outline the clinical and laboratory conditions existing in our institution calling attention to certain features of the work which we think might render our report valuable to other workers. Although the number of sera examined

to date is not so great as from some of the larger laboratories of the country, we think that our results are fairly conclusive because of the following conditions existing.

(1) We have very close cooperation between the laboratory workers and the clinicians, the details of this paper could never have been worked out without the hearty cooperation of the clinical staff which involved much extra work on their part, such as frequent consultation, repeated physical examination, and clinical observation.

(2) We have the patients under observation for a considerable time, enabling us to arrive at more accurate clinical diagnoses than we could ever hope to do otherwise. In every doubtful case several blood examinations were made at different times.

(3) The sera to be examined are all drawn on the day to be examined, by the same persons, using as nearly as possible the same technique each time. Nearly all sera examined from our hospital are examined within the first twenty-four hours after being drawn.

Early in our work our laboratory procedure consisted in subjecting each serum examined to the so-called classical Wassermann, together with the Gradwohl<sup>1</sup> modification of the Hecht test, using an alcoholic extract of beef heart as antigen. We soon discovered, however, that these procedures at best yielded a rather low percentage of positive reactions in patients in whom we had no difficulty in finding the various clinical pictures of lues affecting the central nervous system. This was due to the facts that the patients were suffering from late lues, also nearly all of them had been subjected to vigorous treatment before being admitted to Longview.

After reviewing the various methods of complement fixation in lues, we decided to subject all sera to the following tests for the purpose of ascertaining which would be of the most value to us in our work.

(1) The Wassermann reaction, employing complement fixation in the water-bath at 37.5° C., using two antigens, one a plain alcoholic extract of beef heart properly titrated, the other the same extract reinforced with cholesterol, also properly titrated.

(2) The same technique as in (1) with the exception that complement fixation was carried out in the ice box at 2° C. for a period of ten hours, observing certain precautions to be alluded to later.

(3) The Gradwohl modification of the Hecht test with some slight alterations to be described.

If we investigate the results of other workers with the classical Wassermann with complement fixation in the water-bath, we find that the best figures give positive reactions in from 80 to 90 per cent. of primary lues. In secondary lues, Kolmer reports 100 per cent., Boas 100 per cent., Craig 96 per cent. positive reactions in the un-

treated cases. In untreated tertiary lues the reaction yields from 90 to 100 per cent. positive results, while in the treated cases of tertiary lues the percentage of positive reactions range from 65 to 75 per cent.

Turning now to the results of the classical Wassermann with complement fixation in the ice box, together with the use of cholesterolized antigen we find rather conflicting reports. So far as the writer can learn, Jacobstahl<sup>2</sup> (1910) was the first to employ this method, fixing the complement in the ice box at 4° C. for a period of one and one-half hours. McNeil<sup>3</sup> was the first American to employ the method.

Concerning cholesterolized antigen Owen and Martin<sup>4</sup> state "the published figures of positive reactions (with cholesterolized antigen) run as high as 10 to 20 per cent. in patients who do not have lues." This most decidedly does not coincide with our experience. We have never, except in one instance, to be discussed later, obtained a positive reaction using the cholesterolized antigen on any patient on whom the diagnosis of lues could not be made either from the clinical history, the physical findings, or both.

Ottenberg,<sup>5</sup> Smith and McNeil<sup>6</sup> state that the cholesterolized antigen cannot be used with safety in the Wassermann with complement fixation in the ice box. Our experience will not enable us to concur in this conclusion.

#### THE HECHT-GRADWOHL TEST

The principle upon which this reaction works, that is, making use of the native complement and hemolysins in the blood serum, was first suggested by Tschernogouboff who employed guinea pigs' erythrocytes in the performance of the reaction, neglecting, however, the quantitative relationships of the test. Hecht also made use of the test using sheep's erythrocytes. His technique, however, lay open to the same objections as that of Tschernogouboff. It remained for Gradwohl to place the test on a reliable basis.

We employ practically the same method as outlined by Gradwohl<sup>1</sup> with the exception that we use fewer tubes (five to be exact) in the determination of the hemolytic index; we use three units, two units, and one unit of antigen in the test tubes of the back row, also we add an amount of red cells in the last incubation equivalent to one-half the amount of the hemolytic index. These alterations were suggested by Kolmer of Philadelphia. We have, furthermore, employed three types of antigen in our work, (1) the acetone insoluble as originally used by Gradwohl, also (2) a plain alcoholic extract of beef heart, and (3) a cholesterolized extract. The acetone insoluble is the most satisfactory. It is, however, more difficult of preparation. (For proof of this see tables that follow.)

With his technique Gradwohl has obtained fifteen per cent. more positive reactions than with the classical Wassermann test. In his earlier

paper he regards this as the best check on the Wassermann reaction of Neisser, Bruck, and Wassermann. In a later paper he concludes that the Hecht-Gradwohl test is not only a check, but, if positive, is diagnostic of lues. He states that he has never obtained a positive Wassermann reaction with a negative Hecht-Gradwohl test on the same serum, also that a doubtful Wassermann test should be thrown out in the presence of a negative Hecht-Gradwohl reaction on the same serum. He finds that the Hecht-Gradwohl test can be performed on 98 per cent. of sera examined, his average hemolytic index is .5 cc.

In the main our results coincide with those of Gradwohl. However, we find that there are some sera which may show complete inhibition in the first two tubes containing antigen, with only a partial inhibition in the third, or only the first tube may show complete inhibition with partial or no inhibition in the last two antigen containing tubes, or all tubes containing antigen may show a partial inhibition, the control being clear. In this we are in agreement with A. J. Blavias.<sup>7</sup> We may say here that those sera showing partial inhibition, with very few exceptions, were found by extensive clinical observation to have come fromluetie patients. Furthermore, it is our opinion either with the Wassermann or Hecht-Gradwohl technique, if the technique has been accurate, sera showing partial inhibition should always be regarded with suspicion and it has been our experience that such sera were found on clinical observation to have come from patients with lues in one form or another. It is our custom to subject such sera to repeated examinations as it has been shown that the amount of antiluetic amboceptor in a patient's serum may vary from day to day in the same patient.

It has been our experience that the positive Wassermann reaction will give way to a negative Wassermann reaction under treatment, while the Hecht-Gradwohl test may remain strongly positive for some time afterward.

The reasons advanced as to why the Hecht-Gradwohl test is more sensitive than the Wassermann reaction are:

(1) There are two antiluetic amboceptors in serum fromluetie patients, one is destroyed by inactivation, or heating to 56° C. as in the Wassermann test. As the serum is not inactivated in the Hecht-Gradwohl test this difficulty is obviated.

(2) By making use of the native complement and antisheep amboceptor in the patient's serum we avoid the excess of antisheep amboceptor over the complement which may be so great as to throw a positive reaction of the negative side when the hemolytic system is added in the final step of the Wasserman reaction.

Concerning our Wassermann technique, without going into great detail we would like to emphasize a few points.

(1) Sera should be examined within the first twenty-four hours after being drawn.

(2) Complement should not be drawn from the guinea pig until needed for titration. It is the custom in our laboratory never to use complement after it has been drawn twelve hours.

(3) The concentration of cholesterin in the antigen should never exceed 0.4 per cent.

Regarding the Wassermann test with complement fixation in the ice box, we believe that the period of fixation should not exceed ten hours, neither should the temperature exceed 2° C. We use this procedure as it is the optimum time and temperature as worked out by Ruediger<sup>6</sup>.

The technique is the same as in the classical Wassermann test up to the point of complement fixation when the tubes are placed in the ice box for ten hours at 2° C. At the end of this time we again wash the cells if the supernatant fluid shows any tinge of red. We also titrate the complement and amboceptor once again to make sure that they have not changed in titer. Some workers have said that the reason the ice box method yields more positive reactions is that the complement deteriorated in the time allotted to this

TABLE I

Comparing	(1) the Wassermann reaction with complement fixation in the water-bath at 37.5° C.		
	(2) the Hecht-Gradwohl test, using the plain alcoholic extract of beef heart as antigen in 104 cases of lues involving the central nervous system.		
Results	(1) <i>The Wassermann test, complement fixation in the water-bath at 37.5° C.</i>		
		Number	Percentage
	Positive	51	49.03
	Borderline	7	6.73
	Negative	46	44.23
	(2) <i>The Hecht-Gradwohl test with plain antigen. Total number possible, 94.</i>		
		Number	Percentage
	Positive	56	59.57
	Borderline	5	5.21
	Negative	33	35.1
	Impossible	7	
			No.
	Sera negative to the Wassermann test, but positive to the Hecht-Gradwohl test.....		9
	Sera doubtful to the Wassermann test, but positive to the Hecht-Gradwohl test.....		6
	Sera positive to the Wassermann test, but impossible to the Hecht-Gradwohl test.....		7

method. This is not true in the light of our work.

Afer the tubes have been removed from the ice box it is well to warm them in the water-bath before adding the hemolytic system, as also suggested by Ruediger (loc. cit.).

The hemolytic system is added and the tubes returned to the water-bath at 37.5° C. for thirty

TABLE II

Comparing	(1) The Wassermann reaction with complement fixation in the water-bath at 37.5° C.		
	(2) The Hecht-Gradwohl reaction. (a) Plain antigen and (b) plain antigen reinforced with cholesterol was used in both tests in 60 cases of lues involving the central nervous system.		
Results	(1) <i>The Wassermann test, using plain antigen, complement fixation in the water-bath at 37.5° C.</i>		
		Number	Percentage
	Positive	22	36.66
	Borderline	4	6.66
	Negative	34	56.66
	(1') <i>The Wassermann test, using cholesterolized antigen, complement fixation in the water-bath at 37.5° C.</i>		
		Number	Percentage
	Positive	25	41.66
	Borderline	13	21.66
	Negative	22	36.66
	(2) <i>The Hecht-Gradwohl test, using plain antigen. Total number of cases possible, 55</i>		
		Number	Percentage
	Positive	28	50.9
	Borderline	3	5.45
	Impossible	5	
	Negative	24	43.62
	(2') <i>The Hecht-Gradwohl test, using cholesterolized antigen in the same cases.</i>		
		Number	Percentage
	Positive	37	67.2
	Borderline	3	5.4
	Impossible	5	
	Negative	15	18.4
			No.
	Sera negative to the Wassermann test, but positive to the Hecht-Gradwohl test with plain antigen .....		7
	Sera doubtful to the Wassermann test, but positive to the Hecht-Gradwohl test with plain antigen .....		5
	Sera negative to the Wassermann test, but positive to the Hecht-Gradwohl test with cholesterolized antigen .....		5
	Sera doubtful to the Wassermann test, but positive to the Hecht-Gradwohl test with cholesterolized antigen .....		11
	Sera positive to the Wassermann test, but impossible to the Hecht-Gradwohl test with both plain and cholesterolized antigen.....		4

minutes and read as before. We usually do two readings, one at the end of the last incubation, and one when all the cells in the tubes showing inhibition have settled out. The final reading is the one used for permanent record. We do not, however, consider a doubtful reaction with the ice box method as diagnostic of lues, but we do consider a reaction of the four-plus variety as diagnostic of lues. We have never (with one exception) obtained such a reaction in a person who was not a luetic, but we have obtained three

doubtful reactions with serum from patients in whom the diagnosis of lues could not be made.

RESULTS.

Following are some tables compiled from data derived from examinations of over one thousand sera from patients admitted to Longview Hospital, together with four hundred and ten serum examinations on patients undergoing treatment for lues at the State Reformatory for Women, at Marysville, Ohio. Luetic cases only are considered in the accompanying tables. The remainder of the sera were from normal persons, that is, normal so far as could be determined by serologic and clinical examination.

The total number of sera from which Table I is made is 901. Only luetic cases are included in the accompanying tables.

The low percentage of positive reactions obtained in this as well as in our other series is due to the fact that nearly 100 per cent. of all cases admitted to Longview Hospital have been subjected to long and vigorous treatment before the tests were performed. This fact accounts also for the considerable number of borderline or so-called doubtful reactions as serologic tests are less liable to be clear-cut positives or negatives in treated cases of lues than in untreated ones.

In Table II the percentage of positive reactions yielded by the Hecht-Gradwohl tests over the Wassermann test is 10. The Hecht-Gradwohl test helped to a diagnosis of lues in 15 cases out of 104 where the Wassermann test was doubtful or negative. On the other hand, the Wassermann test helped to a diagnosis in 7 cases of lues

TABLE III

Comparing (1) The Wassermann test with complement fixation in the water-bath for thirty minutes at 37.5° C.  
 (2) The Wassermann test with complement fixation in the ice box for ten hours at 2° C.  
 (3) The Hecht-Gradwohl test  
 (a) Plain alcoholic extract of beef heart and (b) the same extract reinforced with cholesterol constituted the antigens used in each test. Sera from 62 patients suffering with neurosyphilis in one form or another were subjected to the above tests. Sera from 319 nonluetic persons examined in the same series showed uniformly negative reactions to all tests.

Results

(1) *The Wassermann test with complement fixation at 37.5° C. for thirty minutes in the water-bath with plain antigen in 62 cases of lues.*

	Number	Percentage
Positive	17	27.41
Borderline	8	12.90
Negative	37	59.67

(1') *The Wassermann test with complement fixation at 37.5° C. with cholesterized antigen in 62 cases of lues.*

	Number	Percentage
Positive	23	37.09
Borderline	12	19.35
Negative	27	43.55

(3) *The Hecht-Gradwohl test with plain antigen. Total number of cases possible, 55.*

	Number	Percentage
Positive	25	45.45
Borderline	8	14.54
Impossible	7	
Negative	22	40.00

(3') *The Hecht-Gradwohl test with cholesterolized antigen in same cases.*

	Number	Percentage
Positive	32	58.18
Borderline	4	7.27
Impossible	7	
Negative	19	34.54

	No.
Sera negative to the water-bath Wassermann test using the plain antigen but positive to the Hecht-Gradwohl test using the plain antigen .....	5
Sera doubtful to the water-bath Wassermann test using plain antigen but positive to the Hecht-Gradwohl test using plain antigen .....	5
Sera negative to the water-bath Wassermann test but positive to the Hecht-Gradwohl test, cholesterolized antigen being used in both tests.....	4
Sera doubtful to the water-bath Wassermann test, using cholesterolized antigen but positive to the Hecht-Gradwohl test using the same antigen.....	10

(2) *The Wassermann test with complement fixation in the ice box at 2° C. for ten hours with plain antigen in 62 cases of lues.*

	Number	Percentage
Positive	53	85.48
Borderline	5	8.06
Negative	4	6.45

(2') *The Wassermann test with complement fixation in the ice box at 2° C. for ten hours with cholesterolized antigen in 62 cases of lues.*

	Number	Percentage
Positive	61	98.38
Borderline	0	
Negative	1	1.61

Twenty sera reacted negatively using two antigens in the Hecht-Gradwohl test, which yielded positive reactions to the Wassermann test, employing complement fixation in the ice box at 2° C. for a period of ten hours. Seven sera had no hemolytic index, hence the Hecht-Gradwohl test was not done. However, all of these sera showed a positive reaction to the Wassermann test employing complement fixation in the ice box.

in which the Hecht-Gradwohl test was impossible because of the absence of a hemolytic index.

In this series the Hecht-Gradwohl test, using the plain antigen, helped to a diagnosis of lues in twelve cases where the Wassermann test was either doubtful or negative. The Hecht-Gradwohl test, using cholesterolized antigen, helped to a dianosis of lues in sixteen cases where the Wassermann test was negative. On the other hand, the Wassermann test made a positive diagnosis in four cases where the Hecht-Gradwohl test was impossible.

The interesting point observed in this series is the high percentage of positive reactions obtained with the Wassermann test when complement fixation in the ice box is employed. Under these conditions the Wassermann reaction yielded positive reactions in twenty cases where the Hecht-Gradwohl test was negative, and a postive reaction in seven cases where the Hecht-Gradwohl was impossible. In other words, twenty-seven cases of lues out of the sixty-two in this series would have been undiagnosed serologically if reliance had been placed upon one test alone.

We must bear in mind, however, that this does not mean that the Hecht-Gradwohl test would not have been positive had complement fixation been carried out in the ice box. We are at present working on this phase of the work and our results so far show that if complement fixation in the Hecht-Gradwohl test is carried out in the ice box at 2° C. for ten hours the Wassermann and Hecht-Gradwohl tests agree in practically 100 per cent. of all cases. This feature will be dealt with in a future study.

TABLE IV

Comparing (1) The Wassermann reaction with complement fixation at 37.5° C. for 30 minutes.		
(2) The Wassermann reaction with complement fixation at 2° C. for 10 hours.		
(3) The Hecht-Gradwohl test. (a) Plain antigen and (b) cholesterolized antigen used in all tests in 20 cases of latent lues.		
Results	(1) <i>The water-bath Wassermann test using plain antigen.</i>	
	Number	Percentage
Positive	2	10
Borderline	1	5
Anticomplementary	0	
Negative	17	85
	(1') <i>The water-bath Wassermann test using cholesterolized antigen.</i>	
	Number	Percentage
Positive	2	10
Borderline	1	5
Anticomplementary	0	
Negative	17	85

(3)  
*The Hecht-Gradwohl test, plain antigen, 18 cases possible.*

	Number	Percentage
Positive	5	27.77
Borderline	1	5.55
Impossible	2	
Negative	12	66.66

(3')  
*The Hecht-Gradwohl test, cholesterolized antigen, 18 cases.*

	Number	Percentage
Positive	9	50
Borderline	0	
Impossible	2	
Negative	9	50

(2)  
*The ice-box Wassermann test, plain antigen, 19 cases possible.*

	Number	Percentage
Positive	15	78.95
Borderline	1	5.26
Anticomplementary	1	
Negative	3	15.79

(2')  
*The ice-box Wassermann test, cholesterolized antigen, 19 cases.*

	Number	Percentage
Positive	17	89.47
Borderline	1	5.26
Anticomplementary	1	
Negative	1	5.26

In many of these cases the diagnosis of lues was unsuspected but being led by the positive serology, the diagnosis was later established by history and close physical examination.

TABLE V

Comparing (1) The water-bath Wassermann test, using plain antigen in 145 cases of lues under treatment.		
(2) The Hecht-Gradwohl test, using plain antigen in 126 possible cases of lues under treatment.		
Results	(1) <i>The water-bath Wassermann test in 145 cases of treated lues.</i>	
	Number	Percentage
Positive	9	6.0
Borderline	3	2.06
Negative	123	91.72
	(2) <i>The Hecht-Gradwohl, plain antigen, 126 cases possible, treated lues.</i>	
	Number	Percentage
Positive	26	20.63
Borderline	4	3.17
Impossible	19	
Negative	96	76.19

The Hecht-Gradwohl test yielded 14 per cent. more positive reactions in this series of treated cases than did the Wassermann test.

TABLE VI

Comparing (1) The Wassermann test, complement fixation in the water-bath at 37.5° C. for 30 minutes.		
--	--	--



- (2) The Wassermann test, complement fixation in the ice box at 2° C. for 10 hours.
- (3) The Hecht-Gradwohl test.
  - (a) Plain antigen and (b) cholesterolized antigen used in all tests of 157 cases of lues under treatment.

Results

(1)  
*The water-bath Wassermann test using plain antigen in 157 cases.*

	Number	Percentage
Positive	12	7.64
Borderline	5	3.18
Negative	140	89.17

(1')  
*The water-bath Wassermann test using cholesterolized antigen.*

	Number	Percentage
Positive	17	10.82
Borderline	15	9.55
Negative	125	79.61

(3)  
*The Hecht-Gradwohl test using plain antigen, 128 cases possible.*

	Number	Percentage
Positive	25	19.53
Borderline	3	2.34
Impossible	29	
Negative	100	78.12

(3')  
*The Hecht-Gradwohl test using cholesterolized antigen in 128 cases.*

	Number	Percentage
Positive	36	28.12
Borderline	14	10.93
Impossible	29	
Negative	78	60.93

(2)  
*The ice-box Wassermann test, plain antigen in 157 cases.*

	Number	Percentage
Positive	69	43.94
Borderline	18	11.46
Negative	70	44.58

(2')  
*The ice-box Wassermann test, cholesterolized antigen in 157 cases.*

	Number	Percentage
Positive	83	52.86
Borderline	17	10.82
Negative	57	36.30

The data in Table VII serves to show that even using the acetone-insoluble antigen in the Hecht-Gradwohl test does not yield as high a percentage of positive reactions as does the Wassermann reaction employing complement fixation in the ice-box. However, this does not in any way militate against the earlier conclusions of Gradwohl, neither does it detract in the slightest degree from the efficiency of his test. We may repeat here that when the two tests are carried out with complement fixation in the ice chest in both, the results agree in about 100 per cent. of the cases.

Our tables serve to show that methods of complement fixation in the ice chest are superior to methods of complement fixation in the water-

bath. Why is this so? We may begin our answer to this question by stating that when a serologist uses one method of complement fixation in lues he neglects the quantitative relationship of the Wassermann reaction. It is true that in the untreated secondary cases, or in cases of lues reacting strongly to the germ of syphilis, the original Wassermann technique will yield positive reactions in about 100 per cent, even though the weakest antigen, such as the plain alcoholic extract of beef heart, is used. In latent lues, treated lues and lues involving the nervous system such a procedure will yield at best a low percentage of positive reactions, whereas the more delicate methods will yield a much higher percentage of positive reactions. It is just as important, and infinitely more difficult, to establish a diagnosis in the latent types of lues as in the frank types, hence the need of more delicate reactions such as the Hecht-Gradwohl test and ice box fixation tests.

TABLE VII

Comparing (1) The water-bath Wassermann test, using plain and cholesterolized antigen.

(2) The ice-box Wassermann test, using plain and cholesterolized antigen.

(3) The Hecht-Weinberg-Gradwohl test, using the cholesterolized and the acetone insoluble antigen.

Of three hundred sera thus examined twenty-two were from patients suffering with neurosyphilis, seventy-seven were from cases of lues under treatment, the remainder were negative both clinically and serologically.

(1)  
*The water-bath Wassermann test using plain antigen.*

	Number	Percentage
Positive	13	59.09
Borderline	2	9.09
Negative	7	31.81

(1')  
*The water-bath Wassermann test using cholesterolized antigen.*

	Number	Percentage
Positive	16	72.72
Borderline	2	9.09
Negative	4	18.18

(2)  
*The ice-box Wassermann test using plain antigen.*

	Number	Percentage
Positive	21	95.45
Borderline	1	4.54
Negative	0	

(2')  
*The ice-box Wassermann test using cholesterolized antigen.*

	Number	Percentage
Positive	22	100
Borderline	0	
Negative	0	

(3)  
*The Hecht-Gradwohl test, cholesterolized antigen in 21 possible cases.*

	Number	Percentage
Positive	15	71.42
Borderline	3	14.28
Impossible	1	
Negative	3	14.28

(3')

*The Hecht-Gradwohl test, acetone-insoluble antigen in 21 possible cases.*

	Number	Percentage
Positive	17	80.95
Borderline	3	14.28
Impossible	1	
Negative	1	4.76

Results in seventy-seven cases of treated lues.

(1)  
*The water-bath Wassermann test, plain antigen, 77 cases.*

	Number	Percentage
Positive	1	1.29
Borderline	3	3.89
Negative	73	94.81

(1')

*The water-bath Wassermann test, cholesterolized antigen.*

	Number	Percentage
Positive	7	9.09
Borderline	2	2.59
Negative	68	88.31

(2)  
*The ice-box Wassermann test, plain antigen, 77 cases.*

	Number	Percentage
Positive	22	28.57
Borderline	10	12.98
Negative	45	58.44

(2')

*The ice-box Wassermann test, cholesterolized antigen.*

	Number	Percentage
Positive	36	46.75
Borderline	5	6.49
Negative	36	46.75

(3)  
*The Hecht-Gradwohl test, cholesterolized antigen, 68 cases possible.*

	Number	Percentage
Positive	6	8.82
Borderline	16	23.53
Impossible	9	
Negative	46	67.64

(3')

*The Hecht-Gradwohl test, acetone-insoluble antigen, 68 cases.*

	Number	Percentage
Positive	16	23.53
Borderline	9	13.23
Impossible	9	
Negative	43	63.23

The main reason why the ice box method of fixation is superior to the water-bath method is that the former test will detect the antiluetic reacting substances in the blood stream in higher dilutions than will the latter. To prove this one has but to perform the following simple experiment.

The serum used in this experiment yielded the following results when subjected to our routine tests using .1 c.c. of serum:

Water-bath Wassermann test	Results
Plain antigen .....	++++
Cholesterolized antigen .....	++++
Ice box Wassermann test	
Plain antigen .....	++++
Cholesterolized antigen .....	++++
Hecht-Gradwohl test	
Plain antigen .....	Positive (a+b+c+d-)
Cholesterolized Antigen .....	Positive (a+b+c+d-)
Acetone Insular antigen .....	Positive (a+b+c+d-)

It will be readily seen that this serum contains a high concentration of the reacting substances of lues.

This serum was diluted as indicated in the diagram in two sets of tubes and the Wassermann reaction employing water-bath fixation was performed on one set of tubes; the ice chest method of fixation was performed using the other set. Plain and cholesterolized antigens were used. The results of the water bath fixation are recorded in the upper portion of the tube in the diagram, the results of the ice chest fixation in the lower. It is readily seen that the ice box fixation method using cholesterolized antigen yields a ++++ reaction in a higher dilution than does either the plain antigen in the ice chest or both the antigens in the water-bath. (Note results in the set of tubes containing. 008 c.c. of patient's serum.)

One finds that when working with sera which react strongly to the original Wassermann test complement fixation takes place with great rapidity whereas with serums containing less of the reacting substances complement fixation takes place much more slowly. In this respect complement fixation follows the laws of adsorption, a point in favor of Bordet's theory concerning the phenomenon. This fact also points to an explanation of why the longer period of ice box fixation method using cholesterolized antigen yields a ++++ reaction in a higher period of complement fixation in the water-bath. The main reason why long periods of fixation cannot be carried out in the water-bath is that complement deteriorates rapidly in the water-bath.

#### SUMMARY

1. Cholesterolized antigen properly prepared and titrated yields from 10 to 15 per cent. more positive Wassermann reactions on luetic sera than does the plain antigen. We consider it a perfectly safe antigen to employ in the Wassermann reaction with complement fixation in the ice box at 2° C. for a period not longer than ten hours observing the precautions outlined in this paper. We have obtained but one positive reaction employing such methods in which the clinical findings, the history, or both, did not justify a diagnosis of lues. We may say here that we still have this patient under observation and there is a great possibility which may be later established that this patient has had lues.

2. The Hecht-Gradwohl test when positive in the temperate zone is diagnostic of lues. It will

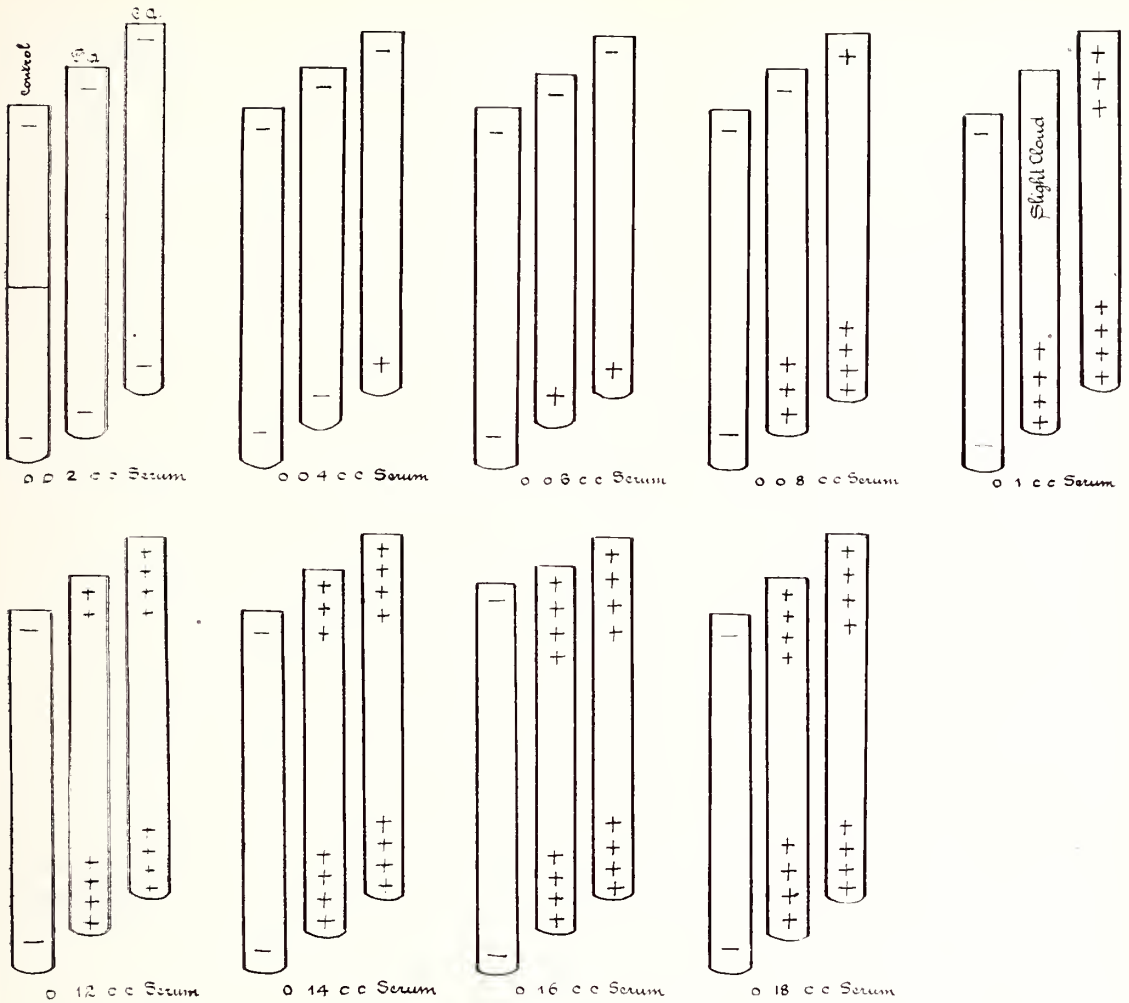


FIGURE 1

yield 15 per cent. more positive reactions on luetic sera than does the classical Wassermann reaction. It may be employed in from 95 to 98 per cent. of fresh sera (not over forty-eight hours old). It *does not* yield false positive results in tuberculosis.

The Wassermann test employing complement fixation in the ice box at 2° C. will yield a much higher percentage of positive reactions than does the Hecht-Gradwohl test employing fixation in the water-bath. With complement fixation under the same conditions, however, the tests practically agree.

The three serologic reactions appear in the serum and disappear under treatment in the following order:

The ice box Wassermann reaction is the first to appear positive, the Hecht-Gradwohl test follows, the water-bath Wassermann reaction appearing last. Under treatment the water-bath Wassermann reaction disappears first, the Hecht-Gradwohl reaction next, the ice box Wassermann reaction last.

REFERENCES.

1. Gradwohl, R. B. H.: Jour. Am. Med. Assn., 1914, p. 240; *ibid.*, 1917, lxxviii, pp. 514-20.
2. Jacobstahl: München. Med. Wechschr., 1910, lvii, p. 689.
3. McNeil: Collected Studies of Bureau of Laboratories, Dept. Health, New York, 1912-13, vii, p. 325.
4. Owen and Martin: Jour. Lab. and Clin. Med., Jan., 1920, p. 232.
5. Ottenberg: Arch. Int. Med., 1917, xix, p. 457.
6. Smith and McNeil: Jour. Immunology, 1916, ii, p. 75.
7. Blaivas, A. J.: Jour. Lab and Clin. Med., Jan., 1920, 224-252.
8. Ruediger: Jour. Infect. Dis., 1918, xxii, p. 173.

The Ohio Medical Products Company is a new corporation organized for the manufacture of pharmaceuticals for physicians' use. A complete laboratory has been installed and a full line of physicians' supplies are carried in stock. Mr. E. F. Knapp is the general manager.

CORRECTION

In the December, 1921, issue of *The Journal*, Dr. Robert Carothers, Cincinnati, was erroneously named as the discussant of Dr. Walter G. Stern's paper on "The Treatment of Simple Compound Fractures." The discussion was by Dr. Ralph G. Carothers, Cincinnati, son of the former.

# The Relation of Abdominal to Urological Surgery\*

By FREDERICK C. HERRICK, M.D., Cleveland

*Editor's Note.*—In view of the fact that so many apparently abdominal, surgical conditions may be confused with kidney diseases, it is very necessary that the general surgeon should have rather an extended knowledge of urology and especially of the technique of making urological examinations. Thus appendicitis may be confused with pyelitis; and neither condition be relieved until the pyelitis has been treated and the appendix removed. Infections in the abdomen may set up kidney complications and rare discretion is required to differentiate and handle both conditions with recovery of the patient. Perhaps there is more difficult problem in surgery and urology than evaluating the protein manifestations of renal ptosis. Until such a time as the book on urology makes kidney diseases a part of general surgery, Dr. Herrick pleads that general surgeons will take guidance from those who are developing the specialty of urology.

**A** DISCUSSION, at this time, of some of the problems arising from the intimate association between urologic and abdominal surgery, seems especially opportune, because of the difficulties and errors in diagnosis between renal and abdominal conditions, as well as on account of the rapid development of urology and the wide use of the cystoscope. These problems between diseases of the genito-urinary tract and abdomen, are apparent to all, but to the abdominal surgeon with experience in urologic diagnosis, they are clear cut, often crucial for the patient's welfare and for the most part capable of being solved before operation.

## THE NECESSITY OF THE SURGEON BEING ABLE TO DIAGNOSE KIDNEY DISEASES

From this viewpoint, I have been forced to the belief that an abdominal surgeon should have a first hand knowledge of the theory and technique of urologic examinations and diagnosis. We presuppose that he already has the same knowledge regarding surgical diseases of the stomach, gall-bladder and abdominal organs which he is called upon to treat.

The fact that the kidney is not an abdominal organ seems to relieve it of suspicion in problems of abdominal disease. It must, however, be considered as symptomatically an abdominal organ, since the differentiation involves careful observation and examination, best carried out by one skilled in both types of disease. My reasons for this belief may be placed under three heads.

(1) The surgeon must never permit himself to be relegated to the sphere of a mere technician. This danger, we know, has existed, due largely to the rapid perfection of surgical technique, and perhaps is not entirely past, although many, who are operators by choice, have turned to the paths of a broader surgical science. Operative surgery is purely mechanical but when, where and why to operate is the duty belonging to a broader man than a technician. Thus a full appreciation of the *rationale* of a urological diagnosis places the surgeon on the same ground, from which it

is already granted he must handle abdominal disease.

(2) The best definition of the ideal surgeon appears to be, *the ideal internist who has mastered surgical technique; he who has mastered the principles of internal medicine and surgical technique.* He should know, so far as the science of medicine has advanced, the etiology, clinical course, diagnosis, and pathology of all disease which he treats surgically. His treatment then assumes a medico-surgical aspect which ensures the best modern results. He does not wish to give his time to carrying out detailed medical treatment of surgical diseases but he must be familiar with it, know when to advise it; and when he returns a duodenal ulcer to the practitioner he must suggest such treatment as his observation and knowledge of the case would warrant. We have passed from the lamented and now ridiculous appearing belief, that we can cure a duodenal ulcer by a mechanical procedure and must recognize that medical care is essential and that surgery is often but an incident in its treatment. How many surgical *technicians* have turned loose their ulcer cases without further attention.

Likewise the treatment of a large percentage of surgical infections of the kidney, begins and ends with the alimentary tract and with a conception of internal disease. Pyelitis, being 98 per cent. of colon bacillus origin, must be treated, *first* by attention to the source of the organism, *second* by correction of certain mechanical factors, which render the kidney more liable to attack. This sounds like a truism and yet the voluminous literature and problems of cause and treatment under discussion, often ignore this demand. An infected appendix or gall-bladder is often a source of a pyelitis, as cases to be cited later will show, as well as colitis and chronic constipation.

Mechanical obstruction to the renal outlet by pressure, inflammation or ptosis furnish the local trauma favoring active infection. Other factors may operate etiologically, such as the general and local individual resistance but these are within the bounds of individual adaptability, if the source of the infection and mechanics of the kidney drainage are corrected. The surgeon,

\*Read before the Surgical Section of the Ohio State Medical Association, during the Diamond Jubilee Meeting, at Columbus, May 3-5, 1921.

therefore, who knows the complete cycle of the disease he treats is best prepared to meet the surgical problems it presents and is in a position to furnish evidence on undecided points in the disease cycle.

Closely akin to the above are the problems offered by abdominal ptoses. These are completely bound up between internal medicine and the mechanics which belongs to surgery. Here and there certain mechanical factors may be judiciously corrected, so as to favor normal function when such is disturbed, but it requires a mechanic with an internist's training to solve such problems.

(3) From the great field of routine clinical diagnosis, we can demonstrate how necessary it is for the abdominal surgeon to be familiar with surgical disease and technique of the urinary tract and to understand the unsettled problems of etiology.

#### ILLUSTRATIVE CASE REPORT—PYELITIS AND APPENDICITIS

A case of pyelitis associated with appendicitis is illustrative.

CASE.—A single woman, aged 51, was seen October 10, 1919. One month previously she had an attack of moderate epigastric pain at two o'clock in the morning. It became more severe, was not referred and one day later localized to the left of the mid-line well below the navel. She vomited. One month later when first seen, these abdominal symptoms had subsided and there was marked increased frequency of urination, pyuria, bacilluria and a culture of colon bacillus from the bladder and both kidneys. The usual treatments for a pyelitis were carried out with complete temporary relief. A year later she had another acute attack of the epigastric pain while out of town. Twenty-four hours later on her return the appendix was ruptured. Operation and drainage resulted in recovery during which time she had a moderate recurrence of her pyelitis which ceased spontaneously. She has had none since.

This case leaves no doubt but that the source of the pyelitis was the infected appendix.

Similar cases have come under my observation when the appendix or gall-bladder have been the source of an infection resulting in a pyelitis which promptly disappeared, either spontaneously or following treatment, after removal of the seat of infection. It seems, therefore, as expressed several years ago, that many cases of pyelitis, with its secondary effects of dilation of the renal pelvis and ureteral stricture, cannot be satisfactorily treated until we recognize the self-evident fact that the infection comes from some focus in the intestinal tract; which, being removed, the pyelitis spontaneously disappears or does so after treatment. Much of the difference of opinion regarding pyelitis is the result of a limited specialist's view. The broader training of

a urologist is emphasized and the theory supported that from general medicine or surgery to a speciality makes better men than when they go directly into specialism from college or hospital.

From a general surgical training and practice to special work in urology is of greatest value because it also further develops an abdominal surgeon and makes for excellent special work in urology.

#### COLITIS AND PYELITIS

CASE 2.—Another case of great interest along etiological lines was that of a fellow surgeon, aged 41, who had a severe protracted case of muco-membranous colitis. During this condition he had a severe acute double pyelitis, which was greatly relieved by local treatment but not entirely so until the colitis was relieved by voluminous colonic lavage according to the method of Bastedo.

If under conditions similar to the foregoing *i. e.*, a repeated supply of infection, the mechanical factor is added, resulting in some form of ureteral obstruction by renal ptosis, ureteral kink, inflammatory swelling, the condition persists in spite of all treatment until the *mechanics* is corrected.

#### DIFFICULTY IN DIAGNOSING OBSTRUCTIVE PYELITIS

These cases of successive reinfection of the mechanically disturbed renal pelvis, finally becoming chronic with periodic, partial or complete ureteral obstruction, result in dilation of the renal pelvis, a condition which, both while developing and later, is very troublesome to the diagnostician. It is so frequently confused with appendicitis, gall-bladder and pelvic disease and these organs are so accessible and constantly within the surgeon's attention, and a failure to appreciate its abdominal symptoms, leads to frequent error in diagnosis.

In 1916, on looking up my cases of pyelitis and early partial obstruction to the ureter, I found that 38 per cent. had been operated on a wrong diagnosis. Substantially the same experiences have been recorded by Fowler, Braasch, Buerger and others.

The pain may be superficial or deep, may be localized anywhere from the flank to the iliac fossae (easily confused with appendicitis), to the pelvis or bladder, (confused with pelvic inflammatory disease), to the epigastrium or down the thigh, front or back. I have not found a case in which the pain was referred to the chest.

The severity of the pain may vary from a dull ache to a violent colic, to all appearances of stone origin. And in passing, I may note the fixed but false belief that violent renal colic with red cells in the urine means stone. This symptom means *ureteral obstruction only*, for Bevan long ago emphasized the fact that it is the intrarenal tension which causes the pain and not the stone's passage. This may result from any ob-

structing factor, be it stone, blood, pus, or most commonly, inflammatory swelling, with or without a ureteral kind. A stone has been the least common cause of renal colic in the author's experience, and this conclusion has been reached:—

(1) After observations of about 200 cases of surgical renal disease;

(2) After careful attention to search for a stone in all cases of renal colic; and

(3) After clearly demonstrating by X-ray or at operation or by both, an ureteral obstruction, with a history of recurrent pain and in many cases, relief by proper surgical measures. When due to obstruction from ptosis over a band the patient may find his own temporary relief by a posture favoring ascent of the kidney.

#### ILLUSTRATIVE CASES

CASE 3.—A case in point is that of a young man of 25 years, who had left flank pain over a period of six years; at first of a dull aching, then epigastric—and finally violent renal colic character. When X-ray examination for stone was negative, he was discharged by his consultant as having passed a calculus. His colic recurred, and when a pyelography showed a ureteral obstruction, with a large pelvic dilation. His trouble was on the left side, which no doubt saved his appendix. I have seen one case, however, in which the appendix was removed for left-sided, low-down renal colic.

CASE 4.—A recent case was that of a strapping young man of 22 years, who during the war had his appendix removed for right fossa pain. His pain promptly recurred. Proper diagnostic procedures showed a low kidney, pyelectasis, and a functional capacity one-ninth that of the opposite side. A nephropexy has given complete relief.

#### KIDNEY HYPERESTHESIA AND APPENDICITIS

In the diagnosis of appendicitis, we place great reliance on abdominal palpation. A patient who presents tenderness and muscle spasm at McBurney's point, with right fossa or epigastric pain, is quite likely to lose his or her appendix. Cutaneous hyperesthesia, due to disease in the right kidney, may closely simulate this condition. The cutaneous hyperesthesia, in the classical description of Henry Head, resulting from kidney disease, extends from the navel, two-thirds way to the symphysis and obliquely up and around to the last dorsal and first two lumbar spines. Within this area are what Head called maximal points of sensitiveness. One of these closely corresponds to McBurney's point and when pressed upon or sometimes even touched, immediately elicits a complaint of pain by the patient and muscle spasm even to a board-like rigidity. This cutaneous hyperesthesia is not always present unfortunately, depending somewhat on temperament or individual sensitiveness, but when it is present, it is of great value as a diagnostic sign

and is, I believe, in most cases, the chief source of error.

CASE 5.—A female patient, 27 years of age, with three children living and well and having had no serious illnesses began to have, about a year previous to consultation, slight pain in the upper right abdomen. This continued off and on for nine months, when she had a severe attack of pain in the right fossa and epigastrium with vomiting. Two days previous to admission she had a similar attack when her family physician sent her in for an appendectomy. She had marked tenderness and muscular rigidity at McBurney's point, a leucocytosis of twenty thousand, a urine with no albumin and a very few white blood cells. A confirmatory diagnosis of appendicitis was made by the resident.

On further examination, however, the tenderness was shown to be entirely superficial and confined to Head's 10th and 11th zones, referring to the kidney. The examining hand having pressed by this cutaneous hyperesthesia, there was no deep tenderness and the muscles slightly relaxed from their tonicity. Now the kidney region was found to be the seat of real deep tenderness and gross percussion posteriorly gave pain. A high flank appendix might be considered.

The condition was one of pyonephrosis; the ureter was blocked resulting in a practically normal urine on one specimen only being examined. I have found it necessary to request several specimens of urine in a number of cases since a blocking of the ureter prevents the pyuria or, if the blocking is relieved, a complete emptying of the pelvis on one or two urinations, may be followed by nearly normal urine. A catheterization of the ureters proved the diagnosis in this case and a nephrectomy was done with excellent results. Here the cutaneous hyperesthesia was the misleading factor.

#### RENAL PTOSIS

As already mentioned, the cases of varying degree of renal ptosis furnish problems to the abdominal surgeon, in the solution of which a urologic training is necessary. A slender sallow complexioned woman comes complaining of symptoms recognized as due to a movable kidney. The following questions must promptly be decided:—

(1) Is she of that congenital build described by Harris, Walkow and Dilitzin and others which renders unusual renal mobility certain?

(2) What other abdominal organs are likewise abnormally mobile?

(3) Are the symptoms complained of due solely to the renal mobility and ureteral obstruction?

(4) Is a renal infection present, of intestinal origin, which is favored by the mobility and in turn by increasing the kidney weight, favors its ptosis?

These cases furnish a multitude of symptoms from neuresthenia to the results of mechanical distortion, which act in a vicious circle so that the highest type of medical and surgical consultation is required. The surgeon must understand renal mechanics and infections in order to furnish his opinion. I think it safe to say that of all abnormally movable abdominal organs, the kidney has given best results by surgical fixation. Other mechanical measures with muscle development and posture are essential but the surgeon, and it is he who most commonly handles these cases, must have the general view and not that of an urologist alone.

#### PYELOGRAPHY AND THE DIAGNOSIS OF ABDOMINAL TUMORS

In the diagnosis of abdominal tumors, a pyelography with a coin over the tumor has shown the tumor in several cases to be independent of the kidney. There is at present no more accurate method. A cold abscess, closely walled off in the flank next the spine, has been differentiated from the kidney. The treatment of such a condition is crucial upon accurate diagnosis as X-ray of the spine is often negative. A tumor of the adrenal body pushing down the kidney was proved by pyelography. A gall-bladder has been differentiated from the kidney by the same means. Likewise a tumor, actually within the kidney, has been so proved by the characteristic pyelography.

#### LOW RENAL OUTPUT

The foregoing clinical discussion has been confined to the kidney. Another group of problems involving the urinary system and general surgeon is illustrated by the following.

CASE 6.—A male, aged 56 years, rather poorly nourished and anaemic, had a large, left-upper quadrant, abdominal tumor. Catheterization showed it to be of renal origin. Its removal was indicated but an enlarged prostate and a thalein output of 20 per cent. showed the danger of surgical interference. A retention catheter was placed in the bladder for ten days which resulted in a marked increase in the thalein output and general improvement. The patient was then transfused and the tumor removed with recovery.

The same problem of lowered renal output due to enlarged prostate has been encountered as a complication in gall-bladder surgery. It may be the deciding factor for the patient's welfare.

#### CONCLUSIONS

From the standpoint of the urologist the problem is much simpler. We have found in the development of our specialties two reasons for their existence:—

1. The development of the anatomy, physiology and clinical course of diseases involving any part of the body. This demands research and is the chief reason for a specialty. In this sense spe-

cialism may be said to be based on an effort to improve scientific ignorance. Until the field of urology is conquered it will probably remain among a group especially interested in its problems. When *the* book of urology has been written it will become a part of general surgery.

2. In order to do the volume of clinical work demanded in large communities, special consultants and technicians in urology would seem to be necessary. Such men had best come from general surgery into urology or be under the direct advice of general surgeons who are familiar with urologic problems and technical phases of urologic examinations.

During this period of development of urology the profession should insist on a broad medical and surgical training for urologists and that the general surgeon should know a great deal about urology and should keep up-to-date in methods of diagnosis and treatment evolved by the specialists in urology.

ROSE BLDG.

---

#### NEW AND NON-OFFICIAL REMEDIES

During November the following articles were accepted by the Council on Pharmacy and Chemistry for inclusion in New and Non-official Remedies: G. W. Carrick Co.—Amylzyme Capsules. Merck and Co.—Bromipin 10 per cent.; Iodipin 10 per cent. Tablets. Powers-Weightman-Rosengarten Co.—Theobromine-P. W. R. Schering and Glatz—Xeroform S. and G. E. R. Squibb and Sons—Diphtheria Immunity Test (Schick Test), Squibb; Diphtheria Toxin-Antitoxin Mixture, Squibb.

Eastman Barium Sulphate for Roentgenology.—A brand of barium sulphate for Roentgen-Ray work—N. N. R. (See New and Non-official Remedies 1921, p. 58). Eastman Kodak Company, Rochester, N. Y.

Kalmerid Germicidal Tablets Potassium Mercuric Iodid.—Each tablets contains mercuric iodid 0.29 gm., potassium iodid 0.58 gm., ammonium chlorid 0.12 gm., eosin "Y" 0.0005 gm., and yields, when dissolved in water, potassium mercuric iodid 0.5 gm., with an excess of potassium iodid. For a discussion of the actions and uses of potassium mercuric iodid, see New and Non-official Remedies 1921, p. 198. Davis and Geck, Inc., Brooklyn, N. Y.—(Jour. A. M. A., Nov. 12, 1921, p. 1573).

Iodipin 10 per cent.—An iodine addition product of sesame oil containing from 9.8 to 11.2 per cent. of iodine in organic combination. It acts in the system similarly to the inorganic iodids. It is not broken up in the stomach, but a portion of the iodine is split off when it enters the intestines; the remaining compound is readily absorbed, and, as in the case of other fats is largely deposited in the tissues, where it is slowly split up. Because of this behavior, the action of iodipin 10 per cent. is exerted more slowly than that of the inorganic iodids. The dose is from 4 to 16 cc. (1 to 4 fluid drams) three or four times a day. Iodipin is not marketed as such, but in the form of iodipin tablets 8 grains. Merck and Co., New York.—(Jour. A. M. A., Nov. 19, 1921, p. 1655).

# The Rural Health Commissioner and His Problems\*

By C. H. SKEEN, M.D., Napoleon

*Editor's Note.*—In view of the fact that urban life is now healthier than rural the health commissioner in the country districts has been put on his mettle to restore the prestige of rural health. To begin with funds for the purpose are woefully deficient and not apt to be more generous until country tax payers realize that rural health more than pays for itself. No adequate centralization of schools has yet replaced the time honored Little Red School House and there has been a lack of instruction to make teachers competent in co-operating with health officers in eliminating communicable diseases. Typhoid is still all too prevalent in the country and it is difficult in the extreme to prevent contamination of water supplies. It is equally difficult to impress families and doctors with the advantages of strict isolation and quarantine in suppressing epidemic diseases. It would appear that the health commissioner must for the time being play a protean role of family doctor, priest, lawyer, plumber and wet nurse.

**E**ACH OF US who assumed, some eighteen months ago, the task of furnishing better Public Health Service to a rural county has met, and is still meeting, problems which are baffling largely because they are new. Not so much the problems themselves are new but that it is difficult to meet them in a strange environment. Public health problems have, we assume, been much the same since the days when the first men began to form tribes and huddle together for protection from their common enemies. In all probability the first chief issued more or less crude sanitary orders; we know that Moses did, and the Old Testament is replete with passages regulating sanitation. But, granted that the rulers of every age since this old earth cooled off sufficiently to allow animals to live upon its surface, have had their difficulties and their problems in protecting the people from their own ignorance and sloth, he, whose work it is to administer the health laws in a rural community in this day and age, has found himself in possession of a man's sized job.

## CITY VS. RURAL HEALTH

The time has passed when the city man was less healthy than the farmer, the pendulum has swung far since the day when the country lad, living in the midst of plenty, with all of God's great outdoors as his playhouse, and with the bounty of nature providing the best of everything for his development, stood head and shoulders above the city boy. Now the city boy and girl, thanks almost entirely to the work of public health agencies, voluntary and official, come closer to the normal than their poor country cousins. Observation and compiled statistics have shown us that the child of the city, instead of deserving sympathy, should excite the envy of his less fortunate rural neighbors.

As with the school child, so it is with the entire population of the rural districts. Grasping the opportunities presented by improved health methods has brought about the change in the balance which formerly existed between the city

and country child, and likewise improved and diversified public health methods in the cities have made them healthier and better places in which to live than our villages or even our farms.

It must be the aim of every rural Commissioner of Health to restore the balance between country and city, to bring back the good old days when the rural population was better mentally, morally and physically than that of the city, to so improve rural conditions that the city man, visiting the village of his birth, need not shudder at the lack of sanitation and wonder if he is to return with a case of typhoid.

## DEFICIENT FUNDS FOR HEALTH WORK

With such a program before him, the average commissioner armed with a paltry appropriation of \$10,000 or so, must feel like David when he faced Goliath with only a sling and a bag of pebbles. The work of establishing and maintaining improved health conditions in our rural counties is of major importance and to insure success in our program we should have sufficient funds to provide the very best there is in the way of professional service. To do this work thoroughly we must have men at the helm who are well trained in preventive medicine—and the services of such men cannot be secured for the amount of money which the average rural county can pay under the present laws. It will be fifty years or more, unless we have some radical change in Ohio's tax laws, before local communities will be sufficiently educated to grant enough funds for our work. The processes of education are slow, especially so in the country, and it will be many years before the most fundamental facts of modern health teaching penetrate the amazingly thick skull of the community consciousness of our villages and townships. The rural public is extremely slow to learn. Without doubt the small town and the farm have given the world some of its greatest men and women but there seems to be something about the mere close proximity to the soil which tends to retard the acceptance of new beliefs, new methods. The average village of today is many years behind the city and its people cling tenaciously to the theory that it is best

\*Read before the Section on Hygiene and Sanitary Science of the Ohio State Medical Association, during the Diamond Jubilee Meeting, at Columbus, May 3-5, 1921.



to leave well enough alone; if a condition has always existed ergo it must always exist. Human contacts are scattering and, no matter how long it takes to disseminate the truth, somehow or other falsehoods seem to spread like wildfire.

The press in our smaller counties is almost unanimously in favor of movements which tend in any way to improve rural conditions but its usefulness is undermined by small circulation and by the fact that publication is almost always weekly. The general public when not actively hostile is always suspicious of innovations, and the modern health department is so different from the old that it does not know quite what stand it should take. The usual result is almost utter indifference on the part of the general public, negative support by those who really should be most interested in health reforms, and loud and vociferous complaints by those who complain about anything and everything.

Our voluntary agencies are somewhat like the general public; they have gone along in the same old path for so long that they are as yet quite undecided whether or not the new system of things is to their advantage. The commissioner and the voluntary agency can be of immense value to each other when some true basis of co-operation and understanding has been reached. Time alone can bring this about, until it arrives we shall have frequent differences and the highest efficiency will not be attained.

#### LACK OF HEALTH WORK CO-OPERATION IN THE SCHOOLS

The first place to which the Commissioner of Health would turn in his search for moral support is the school. Tremendous advances have been made along every line of pedagogy; the County Boards of Education have been urging needed reforms for years, hygiene and sanitation are being taught in many of our high schools and surely in the schools he will find support. But what does he find? The average country school house, with its tightly closed, often nailed, windows, common towel and drinking cup, ill fitting seats, "fogged" blackboards and filthy toilets within a few feet of the school and well, all of which should have been legislated out of existence long since. It is a breeding place for every germ that grows, the greatest stumbling block in our march toward better conditions. *No one of us can feel that he has done his full duty until the Little Red School House on the Hill has given way to the Centralized School, with all that it implies. The movement toward centralization is bitterly opposed in some quarters but it must succeed if we are to materially reduce the incidence of childhood diseases.*

The physical property of the school is, all too often, not the only objectionable feature. The teacher should be our most valuable ally; we all complain at times of the failure of the phy-

sician to report cases of communicable diseases but such complaining is a sad commentary on the present state of efficiency of our health departments. When we shall have attained to a workable degree of efficiency we shall call the family physician and report more cases than he reports to us. To do so we must have either such staffs that it will be possible to see each school child at least once a week or we must secure prompt reports from the teachers. If our school teachers could be brought to realize that locating and isolating the first case early means nipping a possible epidemic in the bud they would be more assiduous in notifying us of the child who is drowsy in school, the youngster with a suspicious cough, or the little fellow who stays away for several days without an excuse.

A very recent survey of twenty-five schools selected at random in Henry County discloses the interesting fact that only fifty, or 8.7 per cent. of five hundred and seventy-two pupils have been vaccinated against smallpox. Sixteen of these five hundred and seventy-two admit having had smallpox, while one hundred and seventy-three have had chickenpox. It is impossible to state the proportion of those whose cases were diagnosed chickenpox, mostly by consultation with the family *doctor book* in reality had variola, but I should imagine that twenty per cent. would not be greatly out of the way, especially since Henry County has suffered a smallpox epidemic within the past five years. The results of this survey are tabulated as follows:

COMMUNICABLE DISEASES IN SCHOOL CHILDREN		
Number of schools visited.....	25	
Protected by vaccination.....	50	
Total number of pupils.....	572	
HAVE HAD		
Variola .....	16	2.7
Varicella .....	173	30.2
Measles .....	272	47.4
Pertussis .....	272	47.4
Scarlatina .....	42	7.3
Diphtheria .....	18	3.1

This survey, which closely approximates the average morbidity in rural school districts, brings out vividly a number of facts, the chief of which is that there are hundreds of cases of communicable disease yearly of which we never hear. We know that we could reduce this number very materially if the teachers were but on their toes and eager to report the first case in each instance. It shows further that our bulwark against smallpox, which must have its foundation in the schools is rapidly disintegrating. The teachers in these twenty-five schools must stand convicted of negligence when it is proved that they have failed to urge vaccination upon their pupils. But the efforts of the cultists against vaccination, combined with those very human failings, procrastination and absolute cowardice where physical pain is concerned, have been so successful that I doubt if

the teachers would show any higher percentage of vaccination than do the children.

Aside from communicable diseases in our schools one cannot believe that the actual physical conditions in many of them would be as they are if those who are paid to educate our children were even remotely cognizant of the first principles of hygiene. The health commissioner is, of course, a crank on such *new fangled* ideas as ventilation, individual towels and drinking cups and, as such, his statements are to be generously discounted but if the teacher in each school were to go to her board of education and demand much needed reforms she could quickly bring them about. With every school teacher co-operating with us the number of our problems would be greatly reduced and the goal would be brought very much nearer attainment.

#### TYPHOID FEVER, A RURAL DISEASE

Among communicable diseases which attack adults largely, typhoid fever is pre-eminently a rural disease. Almost all diseases, not excluding venereal, have practically as high an incidence in the country as in the city but typhoid is from its very nature a rural disease. A morbidity rate of 2.5 is required of a city before it is placed in the *preferred list* but in Henry County during 1920 we had reports on thirty-five cases, with eight deaths, a morbidity rate of 150 per 100,000 and a mortality rate of .348 per thousand or twenty-two deaths per hundred cases. While the death rate from typhoid for the entire registration area during 1919 was only 9.2 per 100,000, our county produced a rate of 34.8, almost four times as great as that for the entire registration area, and yet no one was in the least perturbed except the Health Commissioner! I have been assured that this was not an unusually bad year for typhoid and on my first admission to the county I was told that there was no typhoid problem with which to deal.

Fighting typhoid is not spectacular; little praise can be expected by the man who succeeds in reducing the typhoid rate in his county. Its reduction means diligent and painstaking application of the laws of sanitation and in no line of endeavor is the health worker so bitterly opposed as in the attempt to force people to live semi-decently. Such opposition, however, is to be expected and the reduction of the rate of incidence of this disease is certainly an aim well worth the best efforts of us all. To meet the enemy half way we must abolish outdoor toilets wherever possible, do away with fly breeding places and get rid of the colon infested wells which abound in practically all of our villages. It is a fact which well illustrates the perversity of human nature that even in those of our villages which supply pure water and have sewerage facilities we still find an abundance of outdoor toilets, almost always only a very short distance away from dug wells and cisterns. In ad-

dition to these measures we must, if we are to cope intelligently with our problems, devise some method of milk control and a laboratory by the use of which prompt diagnoses may be made. The Widal test is a very valuable diagnostic aid, largely because the serum can be preserved indefinitely in dried form, but in order to secure the best results we must be able to do blood cultures. So much depends upon an early diagnosis in typhoid that we can hardly overestimate the results which will accrue from this one measure alone.

#### PROBLEMS OF ISOLATION AND QUARANTINE

All of us realize that if we could control intra-family infections, which give us at least forty per cent. of our cases of communicable disease, we should be able to show a marked reduction in morbidity when the balance is struck at the end of the year. It is upon the measure of our success or failure with the control of communicable disease that our usefulness will be judged, and here we have a large field of endeavor lying largely undeveloped. With smallpox, typhoid and diphtheria we have specific preventive agents and the question as to whether or not there are to be other cases in other members of the family depends largely upon the decision of those members. However, with many other diseases, especially tuberculosis and scarlet fever, we have as yet no protective agent and, in the last analysis, the family nurse controls our results with these diseases. Nothing is more disheartening than to see a case of scarlet fever removed from isolation too soon, another member of the family infected, and another thirty day siege started. Sad experience has convinced at least one Commissioner of my acquaintance that it does not pay to release a case of scarlet fever, even after the end of the thirty day period, unless the nose and throat are absolutely normal. There are some who feel that the thirty days of isolation is too long a period but he who goes over his records carefully cannot help being convinced that if anything is to be done with the time of quarantine it should be lengthened.

Scarlet fever is especially interesting because it so well demonstrates the fact that the old beliefs die hard. I think it has been well established for a long time that the scale does not carry the infective agent and yet all of our laymen, and, alas, many of our physicians still adhere to the belief that when the desquamation is complete all danger is ended and, in place of accepting the perfectly logical hypothesis that scarlet fever is spread by carriers just as is diphtheria, they insist on tracing the infection back through the years to the time when some child had scarlet fever in the neighborhood. This belief in the spread of infection by scales has done more toward retarding the advance of our knowledge of scarlatina than any other factor. But, in the last analysis, the health worker is but reaping the results of the sins of his fathers; I can well

remember the unique explanation offered some years ago in an Eastern city when an outbreak of scarlet fever visited it. It was finally determined that the cause of the epidemic was scales exposed during the re-excitation of a sewer which had been laid down some thirty years before, during an epidemic!

#### ENLARGING SCOPE OF THE HEALTH COMMISSIONER'S WORK

The rural health commissioner is peculiar in that, in an age of specialization, he must become each day more generalized. Despite the fact that the whole trend of modern medicine is toward concentration upon one particular line of endeavor he must emulate the old family doctor who is so well characterized by Sinclair Lewis as "family physician, priest, lawyer, plumber, and wet nurse." He must be an executive, sanitary engineer, epidemiologist, laboratory technician, director of nurses, publicity agent, statistician and other things too numerous to mention. Like mother, his work is never done; there is never a time when he can close his desk and say, "Well, that's all; must see if we can get up a foresome." His greatest danger is that he will become so entangled in details that he will lose his vision of the really big things for which he is working. To offset this tendency to get so close to the job that he doesn't know anything about it there should be arranged more frequently conferences at which he may meet others whose problems are

similar to his, and he should make it his business to take short vacations at frequent intervals. Only by getting away from his work can he gain the proper perspective.

No matter how small the budget with which he works the rural health commissioner should provide himself with a laboratory and a respectable set of offices. The laboratory is an urgent necessity especially in those counties far removed from cities; without it no intelligent milk or water control can be attempted and on these and early diagnostic methods depends our success in combating the enemy. The offices should be presentable and businesslike because most of our people judge largely by appearances and a work as important as ours deserve fit housing. Above all, it seems to me important to have one's offices away from the Court House for reasons readily understood by those who have been quartered there.

In closing I should like to make a plea for closer team work between the various rural commissioners and indeed between all the health officials in the state. We have rigorously refrained in the past from all political activities, and quite rightly so in local politics, but it seems to me that we should so band ourselves together as to present a united front against those who would tear down what we have worked so hard to build. In union there is strength, and the movement for better health in Ohio certainly needs strength now.

## Rural Public Health Nursing\*

By CELINDA DUNBAR, R. N., Chillicothe

*Editor's Note.*—Undoubtedly, as Miss Dunbar expresses it, public health nurses are helping to erect and inscribe the milestones of public health that are based on unselfish deeds and humanitarian service. The problems, still besetting public health nurses, are many, varied and difficult and they need the support and co-operation, not only of their health departments, but also of the profession and their communities. Some of the work they are accomplishing, in relieving the indigent and in caring for the unfortunate during epidemics, is worthy of the highest praise. In fulfilling their duties as nurses, they have many opportunities of disclosing hidden diseases and referring such patients for medical care. Infantile ophthalmia and trachoma are pertinent instances. Public health nurses may also achieve splendid community results in the teaching of public health in their daily rounds.

**P**UBLIC HEALTH NURSING is one of the most important factors in promoting health in any locality, whether it be a rural community or a city of several thousand. The public health nurse is not a liability but an asset to the community that employs her.

Only a decade ago the rural public health nurse was almost unknown. A few small cities and towns were fortunate enough to secure the services of a public health nurse. Through the funds raised by the sale of the Red Cross Seals the nurse was hired for a month or perhaps two

or three according to how successful the campaign had been. As soon as a nurse arrived in a community she became very busy trying to educate the people to know the value of a permanent health organization and the value and need of continuing the rural public health nursing service. No man running for office, regardless of its importance, has ever worked as tirelessly as these women, the pioneer nurses in their fields. What has been the result of their unselfish service? Public health organizations are springing up everywhere. Their work has proved worth while and the seed they sowed fell not on barren ground, but found root on fertile soil where it is beginning to bear fruit, and it is still in the beginning but the outlook is bright and there is

\*Read before the Section on Hygiene and Sanitary Science of the Ohio State Medical Association, during the Diamond Jubilee Meeting at Columbus, May 3-5, 1921.

no end to the possibilities before those now engaged in this work.

#### MILESTONES IN PUBLIC HEALTH

When the people of a community are convinced of the need of a public health organization, they have laid the foundation for their first milestone. These milestones are not hewn out of granite or marble, and engraved with an instrument of steel, instead, they are made of unselfish deeds, marked with letters of gold, chiseled by those who have faith and hope in, and charity for their fellow man. The nurse is only the instrument by which these milestones can be raised, and she needs the strongest co-operation to help her engrave these milestones as each year is passed.

The visiting nurses employed in the cities may wonder what a public health nurse could find to do in a rural community. It is true we haven't the slums, the factories or the foreign element to deal with as in the cities, but nevertheless we have our local problems and our work never lacks variety. We, as public health nurses should always remember that individuals are cases unto themselves and if their standards were our standards we would not be needed in this work. Try to think of them not as cases but as individuals thrust there by circumstances over which they have had no control, "Rome wasn't built in a day", neither can we perfect our public health work in a day. It will take months and even years to see permanent results of the public health work we are doing, but we must not grow weary and faint by the wayside.

#### PROBLEMS OF THE PUBLIC HEALTH NURSE

Sometimes it seems, that in order to handle all the problems that come to her, a public health nurse should be endowed with the wisdom of Solomon, the strength of Sampson, the age of Methuselah and the patience of Job.

I hear you ask, what are her problems? They are her every-day work and without these her work would grow monotonous. Some of these problems are easily solved while others are as much of a *bugbear* as fractions were to her during her school days. What a sigh of relief went up when a problem in fractions, algebra, or geometry was solved, the same kind of a sigh is given now when she has solved a hard problem in the nursing field. It makes her feel the work is worth while and it gives her the very tonic needed to keep her plodding on.

In the following I will try and paint for you a few word pictures of some of the homes we have visited and cases we have handled during the past two years.

The outline for our first picture was found when called to a feeding case twelve miles into the country. The infant's mother who was 26 years of age had the mentality of a ten year old child and the father was little better. Neither could read or write, you can therefore see the difficulty in teaching the mother to measure

feedings or to know the time to give the baby her bottle. The baby was six weeks old when we found her and because a freak of nature had deprived her of her mother's milk she had been fed only on oatmeal water as a neighbor had advised. She was mal-nourished and had a purple color over the entire body. Our first feeding was partly upset and eaten by rats. The mother had very few cooking utensils, no wash tub and an old leaky bucket in which she had to carry all the water used; this water had to be carried from a neighbor's one-half mile distant. The landlord was interviewed and cooperated to the extent of supplying a new zinc tub, a five gallon jar in which to keep the feedings and some rat poisoning. A sufficient number of nursing bottles were furnished by the Welfare Association. The husband earned \$1.50 per day including his house rent, but most of his money was spent in a pool-room. After our interest in this family the neighbors became interested and the woman is no longer discontented because of loneliness. The baby's fingernails soon became pink, her eyes bright. Now she is gaining daily and we feel much good has been accomplished since our first visit to this crying, hysterical, half-witted mother and her child, who soon would have starved to death.

Now picture with me, if you can, a prominent city street, a millionaire's home and a little dark, green hovel all within a stone's throw of each other. The nurse, upon entering this hovel, found the rooms so dark she had to stand still for a few minutes until her eyes could become accustomed to the darkness. When she was able to distinguish the different objects in the room, she saw an old woman lying on an old wire cot and covered with a lot of filthy rags. After a thorough search an old iron bedstead and mattress were unearthed; sheets from our loan cupboard were used and within a very short time the bed was made, the patient bathed, two large bedsores dressed and the patient made as comfortable as possible until she died a few days later.

Even though this home was sad and gloom seemed to be in every corner of this little house, the nurse couldn't help but see the funny side of some things that happened. While taking the medical history of this patient, the nurse asked the daughter her mother's age. The daughter said, "Well mother was twenty-two years old during the Civil War, and if you know how long ago that has been you can get her age." Then the nurse asked the daughter's age and she was told, "I don't know where the family Bible is but if you will add 22 and 37 together it will give you my age." She was taken at her word but we haven't been able to figure out why the addition of those two figures would give us her age.

#### OPHTHALMIA NEONATORUM

"Good-morning John, how are you this morning?" and smiles and coos greet you. John is

now a bouncing, cooing, blue-eyed baby boy about one year old. These eyes might have been blind and John being cared for in an institution instead of having the doors of a good home thrown open to him and finding a real father and mother. When John was a wee infant just a few days old he developed an inflammation of the eyes that the physician diagnosed as ophthalmia neonatorum. The physician used a prophylactic in wee John's eyes at birth but in spite of this ophthalmia developed. The mother tried using slippery elm poultices and breast milk, but as the eyes continued to grow worse *in spite of her treatment* she decided to call the physician, who in turn notified the public health nurse. The curtain is raised, the nurse enters and this is what she finds; two very small dirty rooms, an infant born into poverty and disgrace. Wasn't that enough without being blind? The infant's mother was living on the bounty of friends, and too ill to give the baby much attention. With the physician's and mother's consent, we had the mother admitted to the infirmary, where she died three weeks later. The baby was taken to the detention home and the services of a special nurse were secured. The nurse's salary was paid by the State Department of Health. Another eyesight was saved through the co-operation of the physician, the State Department of Health and the Public Health Nurse.

#### THE INFLUENZA EPIDEMIC

"There is a Reaper whose name is Death,  
And with his sickle keen,  
He reaps the bearded grain at a breath  
And the flowers that grow between."

Did Longfellow live through some terrible epidemic? One could imagine that he had by the above lines; for how easily they could be applied to our influenza epidemic, which took both the flowers and bearded grain at a breath.

We were beginning to think this terrible plague was letting up and we could have a breathing spell, when the phone rang and another family ill with influenza was reported to us. This case was to be found 13 miles in the country. Even though they were in the country and hard to reach, we must try and gain the victory over the *Grim Reaper*. After we had driven the 13 miles and walked about three-fourths of a mile over mud roads, we came to the home of the family for whom we were looking. Upon entering the house our hearts almost failed us, seven members of the family were ill and in bed with their clothes on. No pillows, covers, sheets, night-clothes, or even a basin in which to give them a bath. The kitchen table was in this room and covered with dirty dishes. We started a fire, heated water, and while one of us washed the dishes and moved the table back to the kitchen, the other two took charge of the patients, taking their temperatures, washing their hands and combing their hair, making them as comfortable as possible until the following morning.

Then how thankful we were for our loan cupboard. We loaded the automobile with blankets, sheets, pillows, night-gowns, towels, soap and even wash basins. Upon investigation we found the family cupboard like Old Mother Hubbard's, bare. Nothing in the house to eat. Groceries were supplied, and besides these we took them two quarts of milk and a gallon of vegetable soup daily. These were possibly the worst conditions we found among the many influenza cases handled. The feeling of satisfaction was great at the successful closing of this case and it made us realize more than ever the great need of public health nursing in the rural districts.

#### A TRACHOMA SURVEY

During the fall of 1919, at the beginning of our regular routine school inspection, three active cases of trachoma were discovered among the children in one room. As these were among the first one hundred school children examined we decided something should be done immediately. We appealed to the State Department of Health, and through its co-operation we were able to make a survey of the entire county, visiting 139 schools in twenty-four days. This meant many hours of hard driving over country roads.

The trachoma clinic which was held at the Welfare House, January 17 and 18, 1920, was the outcome of this survey. During these three days we made 91 examinations and 40 patients were operated. It was necessary to keep these patients twenty-four hours, and in many cases transportation had to be furnished to and from the clinic.

The conditions found, while making the trachoma survey, were certainly a revelation. The prevalence of illiteracy throughout the county was appalling. We often read articles on *How a Nurse can Help the Foreigner to become a Better American Citizen*. In considering the foreigner, I am afraid we are forgetting our own native-born Americans; for it is just as essential to have them loyal Americans as any foreigner from over the seas. We, as public health nurses, have a very important task before us trying to help these unfortunate citizens who have been victims of circumstances.

#### COOPERATION OF PHYSICIANS

After twelve years of hard work, the majority of the physicians in the community in which I am interested have learned the value of public nursing service. They ask our help and advice about indigent cases and frequently refer patients to our care. These physicians give their very best service when we ask for their assistance in treating patients. Through this splendid cooperation, we are able to care for patients that would otherwise go untreated. Whenever patients can pay for services rendered, they are encouraged to do so, regardless of how small the fee. Their self-respect has been preserved, and independence not weakened. They have ac-

cepted services not as charity, but as a right, for they have paid for the service, even though the amount paid was far below its true value. A public health nurse should never foster charity of the *Lady Bountiful* type. This type of charity does far more harm than good. For after persons' independence and self respect are gone, it is almost a hopeless task to reclaim them.

#### TEACHING PUBLIC HEALTH

Strong cooperation always spells *success* in any public health work. After the birth of a health organization, the next step is to secure the services of a public health nurse. From the time the nurse enters a community she fosters this cooperation. "*Education, Prevention, and Cooperation*" should be the slogan of every public health nurse. The public may be educated through different channels. One plan which presented itself to our community last fall was used during the *Farmers' Fall Festival*. A combined booth with the Board of Health and the Welfare Association was planned and carried out successfully. We were also asked to take part in one of the parades. We realized this was a big opportunity to gain the cooperation of the teachers of the public schools to make our part of the parade a success. The teachers were loyal supporters and promised to carry out any plans that we might suggest. They said, "You direct and we will do the work." But direct what? It seemed we were lost to ideas; not an inspiration would come to us. Finally, when we had almost given up in despair, there came to us through the mail a book of illustrated "Health Jingles." This pamphlet gave us our first inspiration and afterward others just came tumbling in. Five floats were outlined and successfully carried out by the five different schools. Each float illustrated some phase of our work such as: (1) the value of school inspection, (2) care of the teeth, (3) cleanliness, (4) a balanced diet and last but not least (5) the value of teaching domestic and household arts.

The following poem which is typical of every public health nurse's experience in the rural districts, was written by a doctor as a tribute to a county public health nurse:

#### THE CONVERSION OF "DOC" MCGEE

When first she came, sometime ago,  
Of course folks didn't really know  
Just what and how sich nurses do,  
Exceptin' maybe jist a few.

For instance, Deacon Ezra Frost  
Allowed 'twas so much money lost.  
"Hard cash fer jist a passin' fad,  
A wicked waste—too bad, too bad."

Miss Gabble said as how she knew  
An interestin' thing or two.  
"I don't speak names, but jest you mind  
Somebody's got an ax to grind."

Josiah Hinkson sort o' laughed  
An' guessed it was a doctor's graft  
The way them nurses go about  
Proclaimin', "Git yer tonsils out."

One day I asked old Doc McGee  
To let us in on his idee,  
And, sakes alive but he was sore!  
He cussed a streak and walked the floor.

"What I advise will be ignored;  
She'll drive about in that new Ford,  
Directin' what to drink and eat.  
She'll boost fer milk and knock on meat."

She'll weigh the kids and scan their tongues,  
Most likely listen to their lungs;  
She'll plant a lot of fool idees  
About consumption, Bright's Disease,  
Arthritis, rickets, mumps and flu,  
And no doubt tell 'em what to do."

At last old Doc, he sez, sez he,  
"By heck! she can't dictate to me."

One day when passin' old Doc's door  
I noticed there at least a score  
Of people waitin' for their turn.  
It made me curious to learn  
What caused the run on nux and squills  
And other cures for human ills.

Just then Jo Hinkson's wife and four  
Of Jo's five kids came through the door,  
Sleeves rolled up and left arm bare,  
And so were others waitin' there.  
It sure was old Doc's busy day,  
Some sixty odd or more, they say.

Next day I met Doc on the street,  
Sez he, "I've got some crow to eat."  
He told me then about the case  
Of smallpox down at Jones' place.

The nurse had found the kid in school,  
"By heck!" says Doc, "She sure was cool.  
By exercise of common sense  
She saved this town a big expense,  
A smallpox epidemic, too,  
By knowin' what and how to do."

She took him home—just round the block  
And told the folks to send for Doc.  
"She didn't tell 'em what it wuz,  
(They say a real nurse seldom does).

"You see," said Doc, "our schools ain't closed,  
We vaccinated all exposed.  
It's better, don't you see, by far  
To know right where them youngsters are."

Two years ago no decent home  
Would be without a fine-tooth comb,  
A box of ointment fer the itch,  
And earache drops, clove oil and sich.

But since she got 'em doin' chores  
And brushin' teeth and keepin' scores,  
They don't have lice nor seven year itch,  
And school goes on without a hitch.

That Elkins boy they called a fool,  
Who used to run away from school,  
Since fixin' up his throat and eyes  
They say that boy is a surprise.

She's been with us a year or more  
And if you want to hear a roar,  
Just criticize the County Board  
For paying upkeep of her Ford;  
Or say, as once did Deacon Frost,  
That "nurse's pay is money lost."

## Infection of the Lateral Sinus\*

By E. W. GARRETT, M.D., Cleveland

*Editor's Note.*—In the experience of Dr. Garrett the diagnosis of lateral sinusitis has often been difficult to make, not only on account of the absence of definite localized signs and symptoms, but more especially because of the presence of infection elsewhere in the body. He has found the stereoscopic radiograph helpful, as it shows definitely the degree and extent of the pathological process in the mastoid. In addition to this it may reveal necrosis of the sinus wall and even thrombosis. Early operative interference is essential for rapid recovery as well as for the prevention of complicating infections. In severe cases the transfusion of blood seems to aid materially in increasing the patient's resistance and determining recovery.

**T**HE LOCATION of the sigmoid portion of the lateral sinus along the inner wall of the mastoid bone, predisposes it to infections of otitic origin. The infection usually takes place by direct extension from an infected mastoid, either acute or chronic.

### SYMPTOMS OF LATERAL SINUS INFECTION

The symptoms of lateral sinusitis vary and often do not follow the so-called *typical-case* of the textbook. Early diagnosis, so essential for successful treatment, is often difficult to make. Many deaths are no doubt caused by waiting for the typical signs and symptoms to develop.

Usually we have the signs of a purulent otitis media and mastoiditis, although the otitis media may have been slight. Tenderness or swelling in the region of the mastoid emissary vein is often present. Swelling and tenderness along the jugular are mentioned by some authors and are probably due to inflamed lymph nodes rather than to a jugular phlebitis.

The temperature chart is of great help especially if the picture presented is that of a sudden rise from three to five degrees and then a sudden drop. Sometimes it remains high with variations. The rise may or may not be preceded by a chill. The absence of a true chill is common. The appearance of the patient is characteristic. He appears anxious and depressed during the height of the fever followed by a feeling of well being and cheerfulness after the fever has subsided. There are cases where there is little if any rise of temperature but these are not common.

The pulse rate, as a rule, follows the rise in temperature. Headache or a feeling of pressure is often mentioned but is not considered of much diagnostic value. Optic neuritis is reported to be present in a small proportion of cases but as it occurs in meningitis and brain abscess its value in diagnosis is limited.

### DIAGNOSTIC AIDS

In the majority of cases we have found the streptococcus to be the cause. Other organisms less frequently present as a causative factor are the straphylococcus and pneumococcus.

There has been much discussion as to the value of blood cultures. A positive culture indicates infection and is of great value in diagnosis but a negative result does not exclude infection. This is true with any infection accompanied by bacteriemia, such as erysipelas, meningitis, pneumonia, tonsillitis and acute endocarditis.

We consider the stereo-radiographs of the mastoid very valuable aids in all cases of mastoiditis.

The stereo-graphs show distinctly the anatomical structure of the mastoid, enabling one to see whether the mastoid cells extend forward into the zygoma or up above the root of the zygoma and also to determine exactly the extent of the mastoid cells. They show whether the mastoid is of the pneumatic or sclerotic type and also show the position of the antrum and the sinus, so that the operator knows, before beginning his work, whether the sinus is forward, close to the auditory canal, or whether it is well toward the posterior, allowing plenty of working space. The condition of the cells and the wall separating them are all clearly shown and one can determine whether the cell walls have already begun to break down. Necrotic areas over the sinus, or in the tegmen can often be distinctly outlined. The antrum shows quite clearly, and if it contains a cholesteatomatous mass, the shadow cast by the mass is distinctly darker than that of an inflamed or normal antrum. Often the cholesteatoma can be plainly defined in the picture.

In other words when the surgeon begins his operation he has very definite knowledge in regard to the pathological condition in the mastoid; the size of the field of operation and whether it is necessary to use extreme caution over necrotic areas.

Dr. Ralph Butler, of Philadelphia, reports a case in which he had been able to see distinctly a clot in the sigmoid sinus. In our work we have not reached such definite conclusions as this in regard to the conditions in the sinus, but we have noticed that in those cases, in which it has been necessary to do a sinus operation, that the shadow cast by the sinus is darker than the shadow of a sinus which is not inflamed, and it seems to us quite reasonable to suppose that a sinus containing a clot will show a darker shadow in the picture than a sinus containing fluid blood.

\*Read before the Eye, Ear, Nose and Throat Section of the Ohio State Medical Association, during the Diamond Jubilee Meeting, at Columbus, May 3-5, 1921.

## RULING OUT OTHER INFECTIONS—CASE REPORT

Each patient requires careful study. The help of the internist is invaluable in ruling out other infections, which may arise simultaneously with the sinusitis, and thus greatly complicate the situation. The following case is an illustration of such a complication.

CASE 1.—A boy, aged eight years, was brought into Lakeside Hospital from the Fresh Air Camp, where he had been under observation for possible pulmonary tuberculosis. His right ear had been discharging for ten days and on admission he complained of some pain in and behind the ear. He also complained of headache but this was not constant. His temperature was 104° and his pulse rate 120. The discharge from the ear was purulent and profuse. The posterior superior canal wall was prolapsed and there was acute mastoid tenderness but no oedema.

A stereoscopic X-ray of the right mastoid showed an involvement of the whole mastoid. Practically no cells were visible, indicating that the cell walls had all become necrotic and broken down. The shadow of the sinus was darker than the average and should make one suspicious of a sinus thrombosis.

He was scheduled for a simple mastoid operation the following day. Soon after the ear examination the patient complained of abdominal pain followed by vomiting. This pain increased during the night and vomiting occurred several times. Examination the following morning by the resident surgeon revealed an acute appendicitis and he advised immediate operation. It was therefore decided to remove the appendix and to postpone the mastoid operation. An acutely inflamed appendix was removed. His abdominal pain subsided but the ear symptoms grew more severe. The temperature had fallen to 100°, but two days later again rose to 104°. There was more pronounced prolapse of the canal wall and more profuse discharge from the ear. A mastoid operation seemed imperative and was performed two days after the appendectomy. The mastoid cells and antrum were filled with pus. The cells and the antrum were all carefully opened. The bony wall of the sinus appeared normal and was not removed. The cavity was packed wide open with iodoform gauze.

For four days following this operation the patient's condition did not improve. The temperature remained between 102° and 104°. He was occasionally delirious but there was no sign of meningial involvement. He had a slight cough and examination of the lungs revealed only bronchial râles. The abdominal wound had healed. The discharge from the ear was decreasing. The blood culture was negative.

On the fifth day after the mastoid operation it was decided to explore the lateral sinus for possible infection. The internal jugular was first ligated and cut between ligatures. The mastoid cavity was then unpacked and the bony wall of

the sinus removed from the knee to the lower end. The sinus wall was greatly thickened and of a grayish-yellow color. On making a longitudinal incision through the wall there was no bleeding. A solid infected thrombus was found completely occluding the lumen reaching from the jugular bulb to about 4 cm. posterior to the knee of the sinus. After free bleeding was obtained from the posterior end the wound was packed with plain gauze.

For the next four days his condition did not improve, although he seemed brighter, his temperature was of the typical septic type running from 99° to 104° and 105° daily.

On the fifth day after the sinus operation a blood transfusion was done, his father being the donor, and 300 cc. of whole blood were transferred. From this time on he made marked and fairly rapid improvement and in ten days his temperature was normal. He was discharged from the hospital two months after admission.

This case is unusual on account of the presence of both appendicitis and mastoiditis at the same time and a lateral sinus thrombosis without typical symptoms. There were no chills, no sudden rise and fall in temperature, and negative blood culture. The picture was also somewhat distorted by the appendicitis. In spite of the fact that the sinus symptoms were obscure and that the bony covering of the sinus appeared normal, the infection had probably started in the sinus before his admission to the hospital. His toxæmia was profound and we feel that we are justified in attributing his recovery to a great extent to the blood transfusion.

## PROGNOSIS

The prognosis in these cases is hard to determine as the virulence and duration of the infection, the resistance of the patient and the method of treatment modify the results greatly. Complications such as septicaemia, meningitis, brain abscess and cardiac lesions are the cause of death.

## ADVANTAGES OF EARLY OPERATION—CASE REPORT

Early operation is conducive to rapid recovery. A case presenting symptoms of lateral sinus infection of a severe type which responded readily to early radical operative measures illustrates this point.

CASE 2.—A woman, aged 26 years, was admitted to the hospital with the following history. The right ear had been discharging for two years. Following a profuse discharge for one month the area over the mastoid became swollen and tender and two days later she had several chills accompanied by nausea and vomiting. She was then sent in to the hospital.

Examination revealed a well nourished woman, appearing acutely ill and complaining of severe pain in the right mastoid region. Temperature 103.6, pulse rate 120. The right auricle was



pushed forward by the swelling and there was distinct tenderness over the mastoid and especially over the emissary vein. The swelling extended below the ear and it was difficult to determine whether or not the tenderness in this region was due to involvement of the jugular. The canal was filled with foul smelling pus and the wall was prolapsed obstructing a view of the drum membrane.

The stereograph of the right mastoid showed a rather large *pneumatic* mastoid, in which the cells inferiorly were confluent, showing that the cell walls had been partially destroyed by the infection in the mastoid. Just below and posterior to the knee of the sinus there was a dull area indicating that the bone of the sinus in this region was thin or necrotic. The left mastoid was normal.

The night after admission to the hospital she had another severe chill followed by temperature of 104° and a drop to 99.5°. A diagnosis of acute lateral sinusitis, secondary to the mastoiditis, was made. The case appeared so typical that the internal jugular was first ligated and cut before proceeding with the mastoid. There was much pus and destruction of cells in the mastoid bone and a necrotic area was found extending over the lower part of the bony wall of the sinus, at the point shown by the shadow in the X-ray. The sinus was uncovered as far as the knee. Its wall was somewhat thickened and of a bluish gray color. A longitudinal incision was made in the sinus wall and free bleeding occurred from both ends. No thrombus was seen but the sinus wall was thickened and inflamed and probably held a small mural thrombus.

For the following three days the patient was more comfortable although she still complained of headache. Her temperature fluctuated from 101° to 104°. On the fourth day after operation a transfusion of 650 cc. of whole blood was given, her husband being the donor. Her temperature varied from normal to 104° for three days and then remained normal. From then on her recovery was uneventful.

#### LIGATING THE JUGULAR VEIN

Ligating the jugular before uncovering the sinus is not the classical method of procedure, but from the symptoms so typical of sinus infection and the presence of the shadow in the radio-graph indicating a necrosis over the wall of the sigmoid this procedure was deemed justifiable.

In doubtful cases the exploration of the sinus before ligating the jugular is the only logical method and is generally adhered to. Resection of the jugular is only indicated in a very small percentage of cases; *namely*, those showing that an infective thrombus has extended below the point chosen for ligation.

The jugular is usually cut between ligatures but there is no reason why in cases, where the infection is not far advanced, the ligation alone

is not sufficient. Chances of infecting the neck wound are lessened if the jugular is not cut.

Transfusion of blood has been used extensively by the surgical staff at Lakeside Hospital with good results in cases of severe infection, septicaemia, tuberculosis, osteomyelitis, secondary anaemia, and hemorrhage. During the past year transfusion has been done in several cases of severe mastoid and sinus infection. As results have apparently been good we are hopeful of much help from this procedure in the future.

#### SUMMARY

1. The diagnosis of lateral sinusitis is often difficult to make due, *first*, to the absence of definite signs and symptoms and, *second*, to the presence of infection elsewhere in the body.
2. The stereoscopic radiograph is helpful as it shows definitely the degree and extent of the pathological process in the mastoid. In addition to this it may reveal necrosis of the sinus wall and even thrombosis.
3. Early operative interference is essential for rapid recovery and for the prevention of complicating infections.
4. The transfusion of blood probably aids materially in these cases by increasing the patient's resistance.

422 OSBORN BLDG.

---

#### New Books

*The Glands Regulating Personality.* A study of the glands of internal secretion to the types of human nature. By Louis Berman, M.D., Associate in Biological Chemistry, Columbia University; Physician to the special Health Clinic, Lenox Hill Hospital. The Macmillan Company, New York.

*Handbook of Electrotherapy* for practitioners and students, by Burton Baker Grover, M.D., president of the Western Electro Therapeutic Association; Fellow of the American Electro Therapeutic Association; member of the Radiological Society of North America, American Medical Association, Medical Society of Missouri Valley, Colorado State Medical Society, El Paso County Medical Society, Colorado Springs Club, etc. Illustrated with 103 engravings in the text and 6 plates of 12 charts. F. A. Davis Company, publishers, Philadelphia, Pennsylvania. Price \$4.00 net.

*Vice and Health, Problems—Solutions*, by John Clarence Funk, M.A., LL.B., Director, Bureau of Protective Social Measures, Pennsylvania State Health Department; Scientific Assistant, U. S. Public Health Service; formerly U. S. Navy Law Enforcement Representative; Vice-Agent, U. S. Department of Justice; Office of Naval Intelligence. J. B. Lippincott Co., Philadelphia and London; 174 pages. Price \$1.15.

# Report of a Case of Extensive Lateral Sinus Thrombosis: With Reference to Low Resection\*

By HENRY M. GOODYEAR, M.D., Cincinnati

*Editor's Note.*—The case, reported by Dr. Goodyear, not only details the course of a desperate and fatal lateral sinus thrombosis, but also shows clearly why in an extensive thrombosis, with distinct involvement of the jugular in the neck, it is not safe to leave a non-functional and often an infected portion of this vessel above the sub-clavian. Hence also the interest that attaches to Dr. Goodyear's description of the method of low resection employed.

**B**Y WAY of introduction I wish to state that I first saw this patient, a soldier, in consultation at Ft. Thomas, Ky., and am greatly indebted to Lt. Col. Wallace De Witt and Major W. L. Kline for their untiring interest and constant support in our endeavor to save his life.

To Lt. Virgil E. Cornell, I am indebted for the pathological findings and an outline of the clinical history.

## ABSTRACT OF CLINICAL RECORD

Patient was admitted March 31, 1920. Born, in Kentucky; age 21; white; carpenter, soldier; tropical service, Mexican border, nine months. Habits, used alcohol in moderation.

*Family History.*—Father died of "abscess in ear" at 48. Mother died at 46 of pulmonary tuberculosis. Three brothers are living and well. One brother died at the age of 26 of pulmonary tuberculosis. Three sisters are living and well. None dead. No history of cancer or nervous affections.

*Patient's History.*—Whooping cough in childhood; measles ten years ago; mumps in March, 1919; tonsillectomy in 1918; fracture of the left wrist in 1916; gunshot wound of right shoulder and back, accidental, prior to enlistment. Denies syphilis and gonorrhoea.

*Present Illness.*—Has had acute coryza, and moderate sore throat for several days. Acute severe pain in left ear, which began four hours prior to admission to hospital. Previous ear trouble. Patient states that following measles ten years ago, there developed an intermittent discharge from left ear which continued for five years. There was no further noticeable trouble until two years ago, when patient had an acute otitis media of the left ear, and drum was incised. Discharge ceased after one week and there was no further disturbance until present illness.

*Condition on Admission.*—Pain in left ear. Duration four hours. General condition good.

*Diagnosis on Admission.*—Otitis media, acute, suppurative, left.

*Treatment and Course.*—March 31st, admitted with constant pain in left ear, and patient suffering acutely. Left ear, drum intact, red and

bulging. Incised under local anesthesia, followed by a moderate quantity of pus discharge. Usual cleaning of the exterior canal, with hot sodium bicarbonate irrigations every four hours.

The temperature which was normal on admission, remained normal for ten days when it rose to 100.4 (April 10th.) There was an increase in the pus discharge, and the temperature rose slightly each afternoon from normal in the morning. On April 19th, there was some pain in left side of face and over top of head.

April 23rd. Temperature rose to 104°.

April 27th. Tenderness over left side of neck with enlargement of cervical glands. No mastoid tenderness, no pain in the ear.

April 29th. On the evening of this day the writer saw the patient for the first time. The patient looked septic. Temperature during the previous three days had risen suddenly several times to 103° or 104°, with chills or chilly sensations.

The blood count showed 29,000 whites; polymorphonuclears, 91 per cent. Blood culture taken 72 hours before was negative. Cultures from ear showed staphylococcus aureus and albus. Respirations were not high and there was no pain in the chest or abdomen. Urine showed slight trace of albumen, and a few granular casts.

*Examination.*—Ear showed no tenderness on movement of the external ear. No mastoid tenderness, nor had there been the slightest tenderness at any time previous.

Rather a profuse yellow discharge was present, draining from a small opening in the posterior one-half of the drum. There was no sagging of the canal wall.

Neck, left side, swollen and tender.

X-ray examination, April 21st, showed small cells with evidence of sclerosis in the left mastoid area.

*Diagnosis.*—Mastoiditis, acute suppurative, left; lateral sinus thrombosis, left; extension beyond the mastoid area producing neck infection, left.

April 30th. Temperature normal, white count dropped from 29,000 to 13,500, 89 per cent. polymorphonuclears. Patient felt unusually well and resumed operation.

Simple mastoid operation with usual curved incision. Cortex very thick and sclerotic, with marked sclerosis of the entire mastoid, except a small tract extending directly from the antrum

\*Reported in brief to the Academy of Medicine, Cincinnati, Ohio.

to the mastoid tip, where a large cell was found filled with pus.

From this cell apparently there had been an extension into the neck, resulting in a beginning Bezold abscess. From this large cell there was also an easy exposure of the lateral sinus.

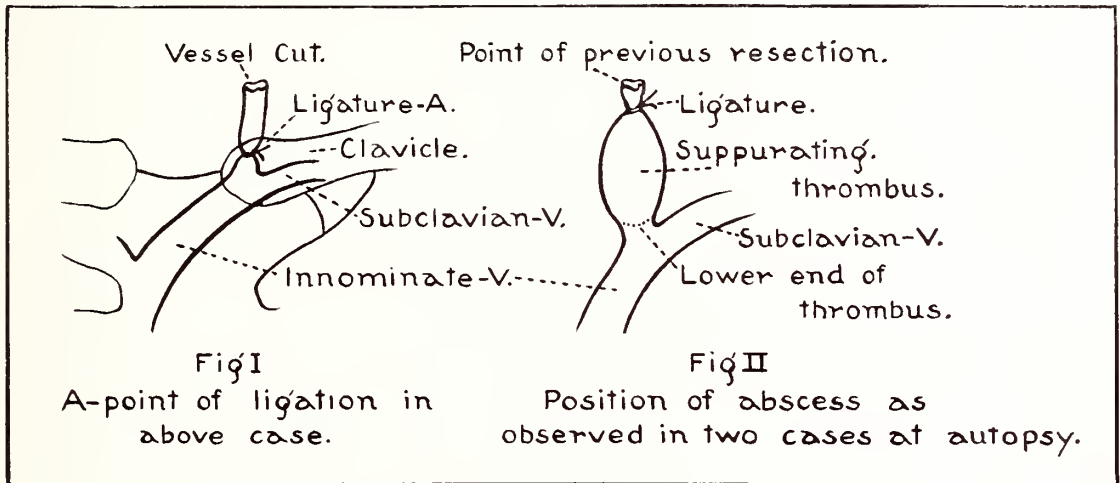
The lateral sinus was uncovered from the knee down to a point near the bulb where a small gray area, showed that there was a change in the sinus wall, the remainder of the exposed sinus was smooth, glistening, and apparently normal.

With the findings of the Bezold extension, which infection, in the soft tissues of the neck could well account for the intermittent temperature and chills, and in the presence of a widely

Thrombosis extended into the superior petrosal, and considerable manipulation was necessary to produce an expulsion of the clot, which was followed by free bleeding. The sinus was then laid open to the torcula and a well formed thrombus was found, expelled, and free bleeding obtained.

Small gauze sinus plugs were placed between the dura and bone at the torcula end to control hemorrhage.

The wound was irrigated, swabbed with tr. of iodine, and closed with mattress sutures from the knee to a point one and a half inch from the torcula. The mastoid was packed and the upper one third sutured. The neck wound was closed with guta percha drains in upper and lower angles.



exposed sinus of normal appearance, with the exception of a small grayish area near the bulb, it was decided to put the patient back to bed for 48 hours and watch for further indications of a sinus thrombosis.

The temperature rose with chills in the following two days and a lateral sinus operation was performed.

The left external jugular was ligated, and cut, and the left sterno-cleido mastoid muscle split from the mastoid tip down to the clavicle. The internal jugular was found to be swollen to twice its normal size in the upper portion. A dissection was made down under the clavicle and ligation of the internal made at its junction with the subclavian vein.

The entire vessel was then resected to a point well above the facial, and found to be completely thrombosed in its upper portion, with beginning suppuration.

Using a rongeur the sinus was then uncovered back to the torcula, over which half of the occipital prominence was removed.

Beginning down toward the bulb the sinus was laid open and its lateral wall removed. The thrombus was well organized but showed no gross necrosis, and was probably of recent origin in the upper portion of the sinus.

The time of the operation was an hour and twenty minutes.

The patient left the table *in extremis*. The pallor was marked; the skin cold and clammy; the pulse was rapid and almost imperceptible. Camphorated oil and strychnine were administered and 500 cc. of normal saline given subcutaneously and repeated in four hours. There was a marked chill lasting for fifteen minutes, followed by a rise of temperature.

On the following day the patient showed a splendid reaction.

Three days after operation, however, the temperature rose to 103° and from that time until death, fifteen days after the sinus operation, the temperature was high each day. The wound was dressed daily, and showed no signs of extending infection.

With the high temperature and rapid respiration a pneumonia was suspected.

#### NOTES FOLLOWING OPERATION ON MAY 3RD

May 4.—Resting quietly; shows splendid reaction.

May 7.—Bladder irrigation with 1-1000 pot. permanganate, 300 cc. to relieve pain and irritation.

May 8.—Patient's temperature high but seems to be recovering as well as possible.

May 9.—Had severe chill with respirations at 36; temp. reaching 104.4° at 3:45 P. M.

May 11.—Had slight chill with some nausea and pain through chest and abdomen. Patient can not be moved well for thorough chest examination; suspect pneumonic condition.

May 12.—Had severe pain in cardiac region; exam. slight roughening of valvular movement.

May 13.—Resp. about 40. Pulse good at 100-116. Mentally seems perfectly clear.

May 14.—Pulse weaker at 120; resp. up to 50. Seems to be resting quietly; temp. constantly high—around 104°. Resp. reached 60.

May 15.—Patient drowsy but can be aroused; mind clear. Temp. 104°—constantly. Resp. high; pulse 104-116. Growing weaker. Later temp. reached 106°.

May 16.—Not able to take much nourishment. Pulse very weak; condition worse.

May 17.—Temp. constantly ranging from 104-106°. Moribund condition.

May 18.—Perspired profusely at midnight; temp. 106.6°. Pulse 132. Resp. 30. Gradually all condition growing worse.

May 18.—Pronounced dead at 9:20 P. M.

Resumé of Temperature Variations.—One admission temp. was 97.0; remained subnormal or normal until April tenth when it rose to 100.4; from this time until the 23rd of April it remained down in the A. M. and rose slightly in the P. M. On April 23rd, it reached 104° in the P. M. and varied between normal and 104.6° until operation on the 29th. The following day it remained normal until 8 P. M. when it rose suddenly to 103. This was the day of the mastoid operation, April 30th. On the first of May it was normal in the A. M., but rose in the P. M. to 103.4°. On the second it reached 105° falling to subnormal in the morning of the third. Operated second time and temperature rose to 103.4°, remained normal on the fourth until evening when it rose slightly and fell to normal again on the morning of the sixth. From this time on his temperature was almost constantly between 104 and 105°.

#### LABORATORY FINDINGS

March 31.—Blood count; W. B. C. 11,500; Polys. 89% (Z o s. 2%), S. M. 15%, L. M. 2%.

April 1.—Urine, amber, clear, acid, s. g. 1023. Alb. trace. sugar neg., no casts, many pus cells.

April 21.—Radiographic Report. — Mastoid cells, left, show small cells and sclerosis.

April 25.—Blood count, 12,300; Polys. 87%; S. M. 13%.

April 26.—Feces, no ova found. Urine, amber, cloudy, acid, s. g. 1023, alb. pos., sugar neg. few hyaline and several granular casts present.

April 29.—Culture from auditory canal, staphylococcus aureus and albus present. Blood culture, no growth in 72 hours. Blood count,

W. B. C. 29,000; Polys. 91%; S. N. 6%, L. M. 1%, myelocytes.

April 30.—Blood count, W. B. C. 13,000; Polys. 89% (Z o S. 1%) S. M. 11%.

May 3.—Urine amber, cloudy, s. g. 1023, alb. and sugar neg.; no casts, occasional pus cells. Blood count, W. B. C. 17,650; Polys. 89%. S. E. 10%. Trans. 1%.

May 5.—Urine amber, slightly cloudy, acid s. g. 1023, alb. trace, sugar neg.; occasional pus cells, hyaline, granular and epithelial casts.

May 12.—Urine amber, slightly cloudy, acid, s. g. 1023, alb. pos., sugar neg., very few pus cells, numerous granular and hyaline casts.

#### INTERESTING FINDINGS AT AUTOPSY

The old neck and mastoid wound was opened, and carefully examined. It was entirely clean with no evidence of surface or deep infection. On opening the wound farther into the base of the neck it was found that the internal jugular had been ligated at its junction with the subclavian vein. The vessel showed a perfect closure, with the intima smooth and glistening to the point of ligation.

Upon posting the head the left lateral sinus was found to have been opened to the torcula, and its outer wall removed, to near this point. The dura mater showed a good reaction, and the inner side of the dura over this area presented no pathological changes. The intima of the torcula was smooth and glistening.

On removal of the dura the pia presented a very slight silvery, gray appearance throughout, but especially noticeable across the sulci. No evidence of brain abscess was found.

*Thorax.*—There were evident areas of hypostatis pneumonia, but no true pneumonia. Throughout both lungs were numerous millet seed size hard nodules, probably representing the healed state of an extensive tuberculosis. The mitral valves showed an endocarditis, of an acute vegetative type. All other valves were negative.

*Abdomen.*—A large abscess two inches wide and two inches deep was found on the anterior surface of the spleen. The abscess had ruptured into the peritoneal cavity, through a mass of adhesions between the diaphragm, spleen, splenic flexure of the colon, stomach, and small intestines. There was a tranverse wall of adhesions which formed the base of the pocket, preventing extension downward below the tenth rib.

There was also a small abscess on the posterior surface of the spleen. A prominent white infarct was revealed in the cortex of the right kidney.

#### COMMENT

Of the deaths following lateral sinus thrombosis a comparatively small number have been studied and reported as to pathological findings at autopsy. Of special interest are the gross findings in the region of the lateral sinus and the internal jugular vein to determine some of the

important factors in the extent and technic of the operation.

The above case presented a picture of the common complications which may intercede lateral sinus thrombosis; acute vegetative endocarditis; infarct of the kidney; and splenic abscess; the later probably having been the immediate cause of death.

At the time this patient was brought to operation a diagnosis of an acute mastoiditis and lateral sinus thrombosis had been made, but upon finding a beginning Bezold abscess, with rather wide involvement of the tissues of the neck; the widely uncovered lateral sinus being normal in appearance save for a small gray area in the wall near the bulb, the lateral sinus was not opened at this time. If the sinus had been opened in the region of the mastoid cavity on this day, I doubt if a thrombus would have been demonstrated in this area, as on operation three days later, it was evident that the greatest reaction and suppuration had taken place below the jugular bulb, while in the mastoid area toward the torcula the thrombus was well formed but showed no gross evidence of long standing, or suppuration.

Also was noted the marked change in the appearance of the sinus, not only over the previously uncovered vessel, but that further uncovered toward the torcula, showed none of the normal characteristic blue glistening sinus, as demonstrated in the mastoid area at the first operation.

The splenic abscess was not diagnosed antimortem. It would be of interest to know if fluoroscopic examination, or roentgenogram would demonstrate this lesion. This is the second abscess on the anterior surface of the spleen which I have seen in the past two years as complications of lateral sinus thrombosis. These abscesses are well walled off and a question of operation and drainage through the abdominal wall arises.

A point that has interested me is the almost constant finding of an area of pachymeningitis externa corresponding to the area of dura separated from the bone during operation. Thus I believe care should be taken to separate as little dura as possible beyond that immediately over the course of the sinus.

The most difficult area of the sinus to uncover is in the region of the knee, and few instruments surpass the dull end of a Dunning submucous elevator, in separating the dura from the bone, ahead of the rongeur in this area. Beyond the knee an ordinary bull-dog rongeur is a safe and rapid cutter, without previous separation of the dura by any other instrument. This point can be beautifully demonstrated, not only on the living subject but on the cadaver.

From the knee of the sinus posteriorly the vessel is distinctly a triangle with the base external. Postmortem it has been my observation in several cases that the area of healed sinus in this

region occurs by apposition of the superior and inferior walls, or the sides of the triangle. On a fresh brain, with dura attached, it can be demonstrated that this represents the natural closure of the collapsed vessel. Advantage of this point should be taken by placing the haemostatic gauze rolls parallel to the course of the sinus.

Small plugs, made by rolling gauze bandage tightly, approximately  $\frac{1}{4}$  inch in diameter, cut in sections  $\frac{1}{2}$  inch in length are ideal for stopping the hemorrhage from the distal end of the open sinus. Plain or iodoform gauze may be used, and none should be placed directly in the sinus, as possible infection may thus be carried into the vessel and cause an extension of the thrombus toward the torcula at a later date. Two or three plugs carefully placed between the dura and bone, and *parallel to the course of the sinus*, for reasons stated above, will be as effective as a large mass of gauze packed in this region, causing considerable pressure on the brain, with a possible simulation of the symptoms of brain tumor.

The question arises as to whether this undue pressure does not aggravate the marked eye changes, sometimes noted following operation, with swelling of the optic disc and even bilateral atrophy as occurred in one of our cases where the operator, in his anxiety, inserted a large mass of gauze.

As previously stated the internal jugular was approached by splitting the sterno-cleido—mastoid muscle, instead of going in medially to its border.

The muscle splitting operation offers the most direct route and a decided advantage over an approach anterior to the muscle.

*First*, after incising the outer layer of the deep fascia of the neck and splitting the muscle with a Mayo's scissors, the inner sheath of the muscle is easily opened, and the internal jugular comes prominently into view.

*Second*, with this incision drainage following ligation is direct to the vessel without any sharp bends in the drain as must occur by the anterior route.

*Third*, it is the only practical route for a resection as low as the subclavian vein.

Following the operation the split muscle fibers fall naturally into apposition producing no deformity.

By the anterior route, it will be noted that the deep fascia splits well toward the midline of the neck to enclose the sterno-cleido mastoid muscle. To avoid opening this sheath, the incision must be made so near the midline of the neck, that considerable retraction of the muscle is necessary to expose the diseased vessel, and drainage, if necessary later must be made by drains directed backward to the jugular area. Thus they are distorted and unsatisfactory drainage usually results.

The method of dealing with the infected jugu-

lar will vary with the extent of the infection. If the infection is well located in the mastoid area, or perhaps even into the bulb, cases usually do well with a simple ligation, or better two ligatures placed one half inch apart, the blood being striped from this area before the second ligation is drawn taut.

There is probably little advantage in merely cutting the vessel between these ligatures.

In the above case the infection had definitely extended below the bulb and the vessel was resected down to the subclavian vein. This is, indeed, a low ligation and I was only convinced that it was the proper procedure after having seen two lateral sinus cases at post-mortem, in which was strikingly demonstrated a thrombus with abscess in the area of the vessel between the origin of the subclavian vein and the lower end of the resected vessel, (as per diagram, Fig. 2).

It would be interesting to know if a thrombus can ever extend below the origin of the subclavian. In the literature I am unable to find the report of any such case, and I believe that the current in this vessel is sufficiently strong to carry away any extension below its mouth, caus-

ing death of the patient by general sepsis or embolus, before a thrombus could form so near the heart as the innominate vein.

Thus upon exposing the internal jugular, which shows a redness, swelling, or beginning suppuration in its upper portion; the only positive, or, apparently positive, means of annihilating further extension downward is to remove all the vessel down to the subclavian. This is not a rational procedure as any vessel that may be left above this point, is no longer functional and can only serve as a possible source of further infection.

If the sterno-cleido-mastoid muscle is split down to the clavicle, when retracted, it is easy to bluntly dissect out the jugular down to the subclavian, which vessel joins the internal jugular at the sternal end of the clavicle.

I realize that so low a resection is not necessary in the majority of cases, but in an extensive thrombosis, with distinct involvement of the jugular in the neck it is not safe to leave a non-functional, and often an infected portion of the internal jugular vein above the junction of this vessel with the subclavian.

8 EAST EIGHTH STREET.



## NEWS NOTES of OHIO

*Cleveland*—Dr. George W. Crile has been nominated a brigadier general in the Medical Reserve Corps of the United States Army. In the same list of nominations Dr. Charles Mayo of Rochester and other surgeons who served in the Medical Corps during the World War are named.

*Lancaster*—When the coupe which he was driving was hit by a street car, November 26, Dr. George W. Beery sustained painful injuries, including several broken ribs and cuts and bruises.

*East Palestine*—Venison steak from deer shot in the Canadian woods was the piece de resistance at a dinner at which Dr. P. C. Hartford was host here recently. Guests were physicians from nearby cities.

*Huron*—Dr. W. H. Pollock was slightly injured and his automobile demonished when it was struck by a traction car, November 29.

*Columbus*—Dr. A. Livingston Stage was installed as worshipful master of Columbus Lodge No. 30, F. and A. M., for the coming year, at the annual dinner dance given by the lodge New Year's eve.

*Urbana*—Dr. Robert Henderson is the mayor-elect of this city. Dr. Henderson recently filed a statement showing the expenses of his campaign to have been \$135.00.

*Lancaster*—Enroute home from Columbus,

where Mrs. Illes had undergone a minor operation, the automobile of Dr. B. G. Illes was struck and overturned in November by a large motor truck. Dr. Illes was severely injured, being rendered unconscious for a time, but Mrs. Illes was not seriously injured.

*Dayton*—In view of the success of the Fidelity-Medical Building as exclusive office quarters for physicians and dentists, erection of a similar building on the site of the Dayton City Club is contemplated.

*Portsmouth*—Dr. Gilbert R. Micklethwait's resignation as city physician became effective January 1.

*Cleveland*—The fourth Hanna lecture was delivered at the Cleveland Medical Library, November 21, by Robert McCarrison, M. D., D. Sc., LL. D., F. R. C. P., honorary surgeon to the Viceroy of India, Lieut. Col., Indian Medical Service. The subject was "Faulty Food in Relation to Endocrine Disorders."

*Columbus*—Dr. Winfield Scott Hall, dean of Northwestern Medical School, delivered a number of addresses here December 14-15, under the auspices of the Y. M. C. A.

*Cincinnati*—Dr. H. H. Wiggers was elected president of the Southern Homeopathic Medical Association at the annual meeting of the society here recently.

*Columbus*—Dr. Chandler P. Robbins, Lieut. Col., M. C., U. S. A., assumed his duties in December as depot surgeon at the Columbus Barracks.

*Senecaville*—Dr. V. H. Danford has moved from this village to Henry, West Virginia.

## Sheppard-Towner Maternity Bill and the Willis-Campbell Anti-Beer Bill Emerge from Mass of Federal Legislation

The final enactment of the Sheppard-Towner maternity bill, and the Willis-Campbell anti-beer bill, on being signed by the President, has concluded an eventful Congressional history on these measures. These two enactments and four other measures having medical aspect, had been passed by the sixty-seventh Congress up to the middle of December, out of a total of 143 bills and resolutions dealing with some phase of public health and medical service.

The confusion and slowness of legislative procedure is further realized when it is learned that over 13,000 bills and resolutions have already been introduced and by far the greater majority of them are still pending.

The other so-called public health measures in addition to the two just mentioned, which have been enacted into law are: The creation of the United States Veterans' Bureau; the continuation of the interdepartmental social hygiene board under the general deficiency bill, and provision for tobacco for ex-service hospital patients.

Ohio is the first state to take advantage of the Sheppard-Towner bill, Governor Davis having formally communicated acceptance of the provisions of the act to the federal government early in December. The State Department of Health, which already supervises the functioning of a bureau of child hygiene, will be the agency for carrying out the work.

Although the members of the medical profession are familiar with the history and general provisions of the measure, it may be well, in view of its recent enactment, to review the high points. This bill which passed the Senate on July 22 was enacted by the House on November 19, with amendments. These amendments were concurred in by the Senate on November 21, and the bill was signed by the President on November 23. The measure may be summarized as follows:

(a) Subject to qualifications \$1,000,000 is to be given to the states for the fiscal year ending July 30, 1922, and \$1,000,000 annually thereafter, for five years. Deducting administrative expense and the sum given outright, \$710,000 remains as the amount allotted to states on a population basis; this proportion to be matched dollar for dollar by each state in order to obtain the grant.

(b) A board of maternity and infant hygiene is created, consisting of the Chief of the Children's Bureau of the Department of Labor, the Surgeon General of the United States Public Health Service, and the United States Commissioner of Education.

(c) The Children's Bureau is charged with the administration of the act and its chief is named as executive officer. This bureau makes the apportionments to the various states. The bureau of child hygiene in the various state health departments is empowered to administer the act in each state.

(d) State agencies are required to report

concerning their plans and operations to the Children's Bureau. Authority is given to the Bureau to withhold certificates of payment of federal funds if states do not comply with the conditions of this law.

(e) Officials and agents of the several states are restricted from entering homes or taking charge of children over the objection of their parents.

(f) The appropriation is limited to five years and a definite amount of \$10,000 for the first year and \$5,000 annually thereafter is given outright to each state. A Board of Maternity and Infant Hygiene with definite duties is created instead of an advisory committee. The amount for administrative expenses for the Children's Bureau is increased from 3 to 5 per cent. of the appropriation. Appeal to the President if certification by the Board is withheld is provided for.

This is the measure of which Miss Alice Robertson, the only woman member of Congress, declares: "It will not help the mothers of America one bit, but will give a lot of jobs for others in the bureaus at Washington."

\* \* \*

By the adoption of a conference report on the so-called anti-beer bill forbidding the manufacture and sale of medicinal beer, additional restrictions surround the discretionary judgment of the physician in his ministrations in the sick room. These provisions may be briefly summarized as follows:

(a) The bill prohibits the prescribing of beer or malt liquors for medicinal purposes.

(b) Not more than one-fourth gallon of vinous liquor, or vinous or spiritous liquor separately or in the aggregate containing more than one-half pint of alcohol may be prescribed in ten days.

(c) Physicians are limited to 100 prescriptions in ninety days unless extraordinary reason is presented.

(d) The commissioner may cancel or require change of permits to manufacture patent medicines and preparations used as a beverage even if they are unfit for beverage use, or require the formula for making extracts to be changed, or may cancel the permit, if it appears to the commissioner that the sale or use of such articles is substantially increased by reason of their use for beverage purposes.

(e) Importation of spiritous or vinous liquor is prohibited until the amount on hand shall not be sufficient to supply the current need for non-beverage purposes.

(f) Spiritous liquors exported in the original packages may be reimported in such packages for redeposit in the distillery warehouse from which originally removed.

(g) The courts of Hawaii and the Virgin Islands are given jurisdiction to enforce the National Prohibition Act.

(h) Regulations to carry this act into effect are authorized.

(i) Revenue laws relating to the manufacture, taxation of and traffic in liquor shall remain in effect when not in conflict with the national prohibition act; and the prohibition taxes and tax penalties provided in the national prohibition

act shall be collected in the same manner as other taxes on liquor.

(j) Taxes on liquor stolen or destroyed shall not be collected from the owner if the loss or theft did not occur as a result of his negligence, connivance, collusion or fraud on the part of the owner or person legally accountable for the same.

(k) Private residences may not be searched without a search warrant. Officers who without cause and maliciously search any place without a search warrant are penalized. Persons who impersone officers enforcing the prohibition act are heavily penalized.

\* \* \*

Governmental supervision in the function of health administration is further exemplified in the measure recently introduced (H. R. 9237) for an appropriation of \$25,000,000 to the United States Veterans' Bureau for medical and hospital supplies. A sum of \$40,000,000 is also included for vocational training.

Appropriations dealing with these health matters may be summarized as follows:

(a) for continuing construction of Gallinger Municipal hospital in Washington \$150,000.

(b) for vocational training in U. S. Veterans' Bureau \$40,000,000; for medical and hospital service U. S. Veterans' Bureau, \$25,000,000.

(c) for U. S. Public Health Service to be used for medical, surgical and hospital service; for quarantine service, for freight and transportation, \$635,000.

(d) for prevention of epidemic \$1,000.

(e) for support of Southern Branch of National Home of Disabled Soldiers at Tampton, Va., \$106,500.

## Industrial Physicians Have Interesting Meeting at Cleveland

The Ohio Association of Industrial Physicians held its second annual meeting in Cleveland, December 3rd, jointly with the first fall meeting of the Cleveland Society of Industrial Physicians. Members of both organizations were guests for the day of Dr. Ralph W. Elliott, manager of the Medical Department of the National Lamp Works at Nela Park, Cleveland.

There was a morning business session, followed after lunch by the reading of papers. About fifty attended, nearly all being members of the State Association. The papers were very freely and ably discussed, and that part of the program was followed by a moving picture demonstration of the many processes involved in the manufacture of Mazda lamps.

Dinner was served by the Nela Park organization, and was followed by a very able talk with practical demonstrations on the "Principles of Industrial Illumination," by Mr. J. M. Ketch, of Nela Park. The demonstrations brought home to the members most forcibly what is meant by good and by poor illumination in industry. Mr. Ketch showed it was not merely a question of quantity of light, but one of proper arrangements, diffusion, etc., as well, and illustrated the value of proper reflectors, mounting height and

spacing of lights, and the danger from glare and deep shadows.

The first paper read at the afternoon session was "Some Considerations for the Physician in Industry," by Dr. Clyde E. Ford, president of the American Association of Industrial Physicians and Surgeons, and medical director for the General Chemical Company, New York City. Dr. Ford called attention to the fact that the work of a physician in industry is really highly specialized work, not merely "good medicine and surgery," and far from merely traumatic surgery. It deals with problems of the group as much or more than with those of the individual. Its field is essentially preventive work in its broadest application and calls for attention to many things not included in any medical curriculum. Dr. Ford urged the development of a greater sense of the responsibilities of citizenship, and insight into group problems, and more research work in connection with the work, notably in industrial physiology, hygiene and diseases. He said that these things have been so much neglected by the profession at large, that there is real need for a special group to carry on this work. A careful resume was given of the subjects upon which a physician in industry should be informed in addition to having a good general and medical education. A strong plea was made for more carefully collected and compiled statistics in industrial medical work and more uniformity in keeping of records. This, because the more accurate knowledge of the problem, the better it can be met, and without adequate and reliable statistics, it is hard to estimate just what has been done, and is still to be done.

The discussion of this paper by Dr. C. D. Selby of Toledo, Ohio, Dr. Wade Wright of Harvard Medical School, Dr. E. R. Hayhurst, of Ohio State University, Dr. E. B. Starr of the Ohio State Department of Health, and Dr. O. P. Geier of Cincinnati, emphasized the need for training in the industries of the man who is to take charge of industrial medical work. Also the opportunity for observation of groups and research work this made possible in diagnosis and other fields. The need for more accurate morbidity as well as mortality statistics from industry was particularly stressed.

The second paper on "Sickness Relief Plans in Industrial Establishments," by Dr. R. I. Shipley, medical director of the Hydraulic Pressed Steel Company, Cleveland, ably presented the various phases of this subject. He described in detail the method of operation of such a plan in his own plant, where the experience so far had been very satisfactory. This paper was discussed by Mr. H. W. Forster, of Philadelphia. Drs. Geier of Cincinnati, Lowe of Akron, Wright of Boston and Hayhurst of Columbus, also contributed to the discussion, and the value of such relief organizations was shown, not only as furnishing needed help to the man but also as an aid in pre-



ventive work and for the collection of morbidity statistics.

Officers elected for the ensuing year by the Ohio Association of Industrial Physicians are: president, Dr. Sidney I. McCurdy, Medical Director, Youngstown Sheet & Tube Co.; vice-president, Dr. R. P. Albaugh, Medical Director, Bourne-Fuller Co., Cleveland; secretary, Dr. A. G. Cranch, Medical Director, National Carbon Co., Inc., Cleveland. The next meeting will probably be held in May, 1922, at the time and

place of Ohio State Medical Association meeting.

New officers of the Cleveland Society of Industrial Physicians are: president, Dr. R. I. Shipley, Medical Director, Hydraulic Pressed Steel Co.; secretary, Dr. A. G. Cranch.

Dr. Donald B. Lowe, Akron, is the retiring president of the Ohio Association, and Dr. Ralph W. Elliott, Cleveland, of the Cleveland Society. Dr. R. P. Albaugh, Cleveland, was formerly secretary of both the state and Cleveland organizations.

## DEATHS IN OHIO

*William H. Bruns, M. D.*, University of Cincinnati College of Medicine, 1915; aged 33; died at his home in St. Henry, November 21, of tuberculosis. Dr. Bruns served an internship at Cincinnati General Hospital. He is survived by his parents and three brothers.

*Lawrence C. Carr, M. D.*, Ohio Medical College, Cincinnati, 1878; aged 66; was found dead in his room in a Cincinnati hotel, December 4, a victim of heart disease. Dr. Carr was well known for his work in combating yellow fever. He was appointed surgeon-in-chief at San Diego soon after war was declared with Spain and later became a major, in which capacity he served with General Pershing in the Philippines.

*William A. Dickey, M. D.*, Louisville Medical College, 1877; Northwestern University Medical School, Chicago, 1886; aged 71; former member of the Ohio State Medical Association; died at his home in Toledo, November 4. Dr. Dickey served at one time as president of the Toledo Academy of Medicine, and in 1913 was president of the Northern Tri-State Medical Association. He was the founder and formerly professor of the principles and practice of medicine at Toledo Medical College, and at one time was attending physician at St. Vincent's Hospital. He leaves a widow and one son.

*Oscar B. Kirkpatrick, M. D.*, Miami Medical College, Cincinnati, 1886; aged 65; member of the Ohio State Medical Association and Fellow of the American Medical Association; died at his home in Cherry Fork, November 18, of nephrolithiasis. Dr. Kirkpatrick was a native of Adams County and spent practically his entire life there. He had served his county society as president, delegate to State Society and as member of the auxiliary legislative committee. During the World War he was medical examiner for the county draft board, and at the time of his death was president of the county board of health. His widow survives.

*Lee Douglas Meader, M. D.*, Pulte Medical College, Cincinnati, 1891; aged 53; died at his

home in Cincinnati, November 16. Dr. Meader gave up the practice of medicine in 1909 to devote his time to the furniture business.

*Wallace A. Ort, M. D.*, College of Physicians and Surgeons, Baltimore, 1901; aged 43; member of the Ohio State Medical Association and Fellow of the American Medical Association; died at his home in Springfield, November 24, of Bright's disease and hardening of the arteries. During the war Dr. Ort served at Fort Oglethorpe, Camp Greenleaf, Georgia. His health failed shortly after leaving camp and he was unable to resume his civilian practice. He was the son of the late Dr. Samuel Ort, for many years president of Wittenberg College. Besides his wife, he leaves five sisters and one brother.

*Pearl M. Sater, M. D.*, Medical College of Ohio, Cincinnati, 1893; aged 52; member of the Ohio State Medical Association; died at his home in Hamilton, November 30, from apoplexy. Dr. Sater practiced in Hamilton for 18 years. He was prominent in medical organization work and had occupied the position of secretary of the Butler County Medical Society. He leaves his widow, father, three brothers and one sister.

*William W. Stonehocker, M. D.*, Columbus Medical College, 1881; aged 66; former member of the Ohio State Medical Association; died at his home in Bladensburg, November 15. Dr. Stonehocker practiced medicine in Bladensburg for 25 years. He is survived by his widow.

*William C. Waters, M. D.*, Columbus Medical College, 1882; aged 77; former member of the Ohio State Medical Association; died at his home in Zanesville, November 22, after a lingering illness from Bright's disease. Dr. Waters was actively interested in civic affairs. He served at various times as a member of the city council, president of the council, and judge of the police court. Although he had retired as an active physician at the time of the World War Dr. Waters resumed practice during the influenza epidemic. He was a veteran of the Civil War. Surviving are his widow and two children.

*James F. York, M. D.*, Eclectic Medical College, Cincinnati, 1895; aged 55; died at the Palace Hotel, Cincinnati, November 3. Dr. York's home was at Portsmouth. For ten years he was mayor of Kenova, West Virginia.

## Special Course for Health Commissioners Proposed by State Department of Health

After long consideration a plan proposed by Director of Health, Dr. Harry H. Snively, for the training of health commissioners goes into effect this month. The plan is to conduct a correspondence study course in public health for health commissioners. The course is given by the State Department of Health and is in charge of a committee of the staff consisting of Dr. E. R. Hayhurst, Dr. F. G. Boudreau, and Mr. Paul Mason.

The fact that health commissioners require more training in public health theory and practice is said to be evident to those who have studied the present system of health organization in Ohio. The only requirement in counties is that the health commissioner shall be a licensed physician, while in cities the health commissioner need have no special qualifications at all. When the Hughes-Griswold Law took effect a large number of health commissioners were needed at once and a sufficient force of trained men was not available. Many of these positions in Ohio are filled by untrained men, most of whom have felt the need of training. It is obviously impossible to call all these men to Columbus for a prolonged course in public health. The alternative is to train them in the field, and for this purpose a correspondence study course is considered most suitable.

Because of a lack of sufficient personnel and equipment the plan was submitted to the International Health Board, a subdivision of the Rockefeller Foundation. The Board approved of the plan and has appropriated a sum of money for personnel and equipment.

### THE PLAN

The committee in charge of the course plans to start by a poll of whole-time commissioners. Those commissioners who desire to register must signify their willingness to purchase certain books and periodicals and to reply promptly to all questions sent out. After whole-time health commissioners have been given an opportunity to enroll, part-time health commissioners will be polled, and finally it is proposed to extend the course to members of boards of health and all others actually interested in public health work in Ohio.

The first four subjects to be taken up are:

1. Public Health Administration
2. Communicable Diseases
3. Sanitary Engineering
4. Laboratory Methods.

After a candidate has completed courses in these four subjects, he will be eligible for one or two weeks intensive course in Columbus.

### PROCEDURE OF TEACHING

The teaching staff is selected from the personnel of the State Department of Health. To each instructor one subject is assigned, and he is expected to prepare a guide to suitable literature, and a set of questions so arranged as to provide guidance in study for the candidate.

To these questions each candidate will submit written answers which will be examined, corrected and returned by the instructor. Only one subject will be pursued at a time.

The courses will be made as practical as possible, bearing directly on the public health situation in the various health districts in Ohio.

### THE EXPERIMENT WATCHED BY OTHER STATES

While health departments of other states have established correspondence study courses, the proposed plan in Ohio is unlike any other and will be watched with interest by health officials of other states.

The only thing considered necessary to make the plan a complete success is the loyal and continuous support of the health commissioners. If such cooperation can be secured the plan should strengthen the present plan of health organization in Ohio very considerably.

Registration blanks were sent to whole-time health commissioners before the first of the year.

### Division of Laboratories Does Large Amount of Work

During the month of November a total of 11,476 examinations were made in the Division of Laboratories. Of these, 6448 were for diphtheria, 2991 were Wassermann tests, and 519 for tuberculosis. The large number of diphtheria examinations is due to the extreme prevalence of the disease and the present use of cultures for dismissing quarantine.

The number of specimens of blood submitted for the Wassermann reaction has steadily increased since this work was begun. Tests are now made every day.

Samples of water examined during the month numbered 375. This work too is constantly increasing as health commissioners are making an effort to eliminate surface water supplies in the various health districts.

Twenty-three samples of liquors were examined for alcoholic content for the State Prohibition Commissioner. Samples examined for the Department of Agriculture numbered 603, and included foods, drugs, stock feeds and fertilizers.

Outfits distributed during the month reached the enormous total of 26,196. Of these, 11,514 were for diphtheria. Outfits containing silver

nitrate solution for the prevention of blindness numbered 8012. Nearly two thousand doses of typhoid vaccine were distributed.

### Occupational Diseases Reported to Division of Industrial Hygiene

The number of cases of occupational disease reported each month in the state is steadily increasing. Fifty-two were received in November. They included dinitro-benzol poisoning, lead poisoning, benzol poisoning, occupational dermatitis and ammonia gas poisoning.

The division received eighty requests for advice from various sources.

One interesting investigation made by the staff of this division had to do with the illumination in some portable school buildings. Owing to the delay in the building program caused by the war, congestion is the rule in Ohio school buildings, and portable buildings are very common. The illumination in three such buildings was found to be quite inadequate, and health commissioners are advised to investigate such buildings in their districts to determine whether the sight and health of the pupils are being conserved.

### Tuberculosis Clinics Held With Cooperation of Local Physicians

Up to the time of going to press, tuberculosis clinics have been held in Pickaway, Medina, Highland, Logan, Athens and Allen Counties. Over 300 persons have been examined at these clinics and thirty per cent. have been found to have tuberculosis. About thirty per cent. of the remainder have shown signs and symptoms pointing to the possibility of tuberculosis and are being observed by their physicians.

In conjunction with these clinics meetings of the county medical societies have been held and the tuberculosis problem discussed. It is generally recognized that the great mass of the sick do not consult their physicians until much valuable time has been lost by the patient. This is unfair to the physician since he is then asked to assume the added burden of treating a patient who has not shown proper interest in his own physical welfare and by his neglect or lack of proper appreciation has permitted his condition to merge from the acute into the chronic stage.

The entire clinic program is centered about education of the public. The idea is to impress the fact that there are unrecognized cases of tuberculosis in every community and that these can be avoided and many lives saved by an early physical examination of all suspects and contacts. Interest is shown by the fact that of the cases in the 6 clinics held thus far, 116 have been referred for diagnosis by physicians. The great majority of these cases are persons whom physicians know are brought into direct contact with known cases of tuberculosis and whom they be-

lieve should receive physical examination for this reason.

The fact that 144 cases were referred by nurses indicates that the general field work of nurses probably brings them into closer contact with the great mass of people who only consult a physician when seriously ill and who, unfortunately and unwisely, usually practice self-medication. Teachers, health commissioners, the lay public and publicity have been responsible for the remaining number of cases examined.

One hundred and five have been diagnosed as positive and 45 as suspected cases of tuberculosis, and referred to their private or family physicians for instruction and treatment. The health departments in the various clinic areas have been charged with the duty of following up these cases, to the extent that the patients consult their physicians and remain under observation and treatment.

### Drive on Registration of Births and Deaths

An inspector of the Division of Vital Statistics, State Department of Health, has visited all the physicians, undertakers and local registrars in Tuscarawas County in order to improve the registration of births and deaths. This is in line with the policy of the department to improve the present system of registration in Ohio. Similar visits have been made in a number of counties, and more are planned.

### Small Advertisements

*Wanted*—To correspond with physicians interested in touring Europe during the Spring of 1922, for the purpose of study and travel. Hospitals of Paris, Rome and Bern will be visited with a post-graduate course at London and Edinburgh. F. Young, M. D., Center and State Sts., Marion, Ohio.

*Wanted*—Location within 50 miles of Cleveland, small town with conveniences preferred. Will buy real estate if house and office combined. Address H. L., care *The Journal*.

*For Sale*—By owner, 1921 Apperson Ace roadster, like new. Cost \$3,700, will sell for \$1,800. Address C. L. Snider, 265 E. Main St., Columbus, Ohio.

*For Rent*—Two suites of offices suitable for physicians or dentists at 269 E. State Street, Columbus. Address Dr. E. D. Helfrich at same address. Citizens phone 7049.

*For Sale*—Beautiful modern mansion, small growing town on Muskingum River, near Marietta. Fine grounds, nearly square block, two small cottages. Ideal for hospital or sanitarium. Good opportunity for live doctor. \$18,000.00 cash, or terms. For full information address Mrs. Margaret Johnson, 216 East Town Street, Columbus, Ohio.

*Wanted*—Physician for Noble County health commissioner, part-time, for 1922. Dr. F. W. Murrey, former commissioner who has removed from county, advises there are two or three locations in Noble County, where a qualified physician could do good general practice when not occupied with health commission duties. Address Noble County Board of Health, Caldwell, Ohio.

## ACADEMIES AND COUNTY SOCIETIES

### Cincinnati

Dr. Guy Hunter of Johns Hopkins Medical College addressed the Cincinnati Academy of Medicine, November 14, on surgical operations. The academy took steps to facilitate the payment of 1922 membership dues and has now qualified a good portion of its 1921 membership for the new year.

### Cleveland

(Lester Taylor, M. D., Secretary)

The 173 regular meeting of the Cleveland Academy was held, November 18. The program of the evening consisted of two papers by Cleveland physicians. The first was "The Diagnosis and Treatment of Osteomyelitis," by Dr. J. J. Kurlander, who took up the practical points in the differential diagnosis and the handling of this type of bone disease. His paper was discussed by Dr. Bauman. The second paper was presented by Dr. Henry John on "The Differential Diagnosis of True and False Diabetes." Dr. John endeavored to differentiate between cases which showed high blood sugar with no sugar in the urine and those whose urine showed sugar but with a normal or low blood sugar, due to an increased kidney permeability. He pointed out two types of diabetes, the functional and the anatomical, the functional being due to an exhausted gland which could be relieved by rest. The paper was interestingly illustrated by numerous charts. Discussion by Drs. Christie, W. H. Tuckerman, A. V. Pav and H. L. Koeckert.

Dr. John Phillips became president of the academy for 1922 at the annual meeting on December 16. Dr. Clyde L. Cummer was made president-elect; Dr. C. W. Stone, vice-president; and Drs. G. F. Thomas and S. J. Webster, trustees. Guy M. Wells was reappointed executive secretary. Reports of various committees showed that during the year the academy has, among other things:

Taken a leading part in successfully maintaining high medical standards in Ohio.

Successfully opposed several attempts to break down the sanitary code of the city of Cleveland for temporary and expedient purposes.

Assisted in the prosecution of more medical fakes and unethical practitioners than in any preceding year, making Cleveland the best policed city in this respect in Ohio, and one of the best in the United States.

The Board of Hearing has disciplined 36 physicians whose cases were not specifically covered by law.

The academy has made recommendations for the conduct of free and public clinics which have been adopted throughout the county.

The report of the Milk Commission showed that a high standard of purity for certified milk has been maintained. The Tuberculosis Com-

mission reported plans for taking up and carrying on all the work previously done by the former Anti-Tuberculosis League. Dudley Blossom, director of welfare; Dr. H. L. Rockwood, commissioner of health, and Dr. C. H. McFarland, superintendent of City Hospital, were commended for their work and for their cooperation with the work of the medical profession.

### Columbus

(James A. Beer, M. D., Secretary)

The annual banquet of the Columbus Academy of Medicine was held at the Hotel Seneca, December 12. Delicious vitamins and proximate principles served in most agreeable forms were given due consideration, and Lady Nicotine received even more homage than usual. Harmony prevailed—from orchestra, quarette and among those present—even among the overflow who waited for their bodily sustenance patiently. The society was highly honored and entertained by the address on "Recent Cancer Therapy" given by Dr. Francis Carter Wood of the Crocker Cancer Research Foundation of Columbia University.

Officers for 1922 were announced as follows: president, E. A. Hamilton; vice-president, W. D. Murphy; secretary-treasurer, James A. Beer; trustee, E. W. Schueller; delegate, John A. Alcorn; alternate, G. C. Schaeffer.

The retiring president, Dr. G. C. Schaeffer, presented his successor, Dr. Hamilton, with a gavel in the form of a femur which he claimed was from the "Missing Link", a very rare specimen from a famous English collection. The gavel was accepted in a manner befitting the occasion by the new president, who also promised to give the academy his best endeavors for 1922. Attendance at the banquet was 226, of whom 16 were former presidents.

#### FIRST DISTRICT

*Warren County* Medical Society's season closed with the November 1 meeting. Drs. Clayton A. Tippet of Westboro, C. A. Coleman of the urological service of the National Soldiers' Home, Dayton, and C. J. Broeman of Cincinnati, were the speakers. The meeting proved to be one of the most interesting sessions of the year. It is very seldom that Warren County Society has a dull meeting and the speakers secured for the new year assure a continuance of the high class papers and lectures that have characterized the meetings for many years.

#### SECOND DISTRICT

*Miami County* Medical Society held its last meeting of the year at Troy, December 1. The first matter taken up was the annual election of officers which resulted as follows: president, Dr. H. E. Shilling, Troy; vice-president, Dr. C. R. Coate, Pleasant Hill; secretary-treasurer, Dr. G. J. Hance, Troy; censor, Dr. Warren Coleman, Troy. After the election two excellent papers were given by Dr. L. N. Linderberger, Troy, on "Acute Epidemic Cerebrospinal Meningitis", and

retary-treasurer, was presented and several members reported clinical cases. Attendance 20.—B. F. Metcalfe, Correspondent.

#### THIRD DISTRICT

*Hancock County* Medical Society members were guests, November 9, of Dr. J. V. Hartman, Finlay. Drs. J. P. Baker, D. B. Biggs, W. J. Fishell and N. L. MacLaughlan were assisting hosts. Following a delicious buffet lunch, Dr. Hartman reported on the meeting of the Clinical Congress of Surgeons of North America in Philadelphia recently, and Dr. MacLaughlan discussed legislative problems.—News Clipping.

*Logan County* Medical Society held its regular meeting in Bellefontaine, December 2. Luncheon at twelve o'clock was followed by a report from the committee appointed to consider plans for employment of a full-time county health commissioner. The matter was thoroughly discussed and the committee continued. The society went on record in favor of a course of lectures on social hygiene to the general public. Officers elected for the new year are: president, Dr. C. K. Startzman; vice-president, Dr. F. R. Makemson; secretary-treasurer, Dr. M. L. Pratt; legislative committeeman, Dr. W. W. Hamer; delegate, Dr. E. R. Henning; alternate, Dr. C. W. Pay; all of Bellefontaine.

*Seneca County* Medical Society has chosen Dr. V. L. Magers, Tiffin, as its president for the coming year. Dr. Edwards H. Porter, who has served many terms as secretary-treasurer with much success, has been reelected to that post.

#### FOURTH DISTRICT

*Putnam County* Medical Society banqueted at the Hotel DuMont, December 1, with 11 members and 15 visitors present. Ten Lima physicians were present and helped to make the meeting a success. Dr. Strachan of Cleveland, representing Parke, Davis and Company, gave an illustrated lecture on vitamins, which he classified as follows: (1) fat soluble, as cod liver oil, milk, etc.; (2) water soluble, as shell or bran of wheat and rice; (3) water soluble vitamins, as limes, lemons, etc. He illustrated the effect of the lack of the various vitamins upon the white rat and pigeon and again their rapid return to normal when the lacking vitamin was supplied. The election of officers resulted in the selection of the following: Dr. Frank Light, Ottawa, president; Dr. A. F. Sheibly, Ottawa, vice-president; Dr. J. A. Harold, Ottawa, secretary-treasurer; Dr. H. A. Neiswander, Pandora, corresponding secretary.—H. A. Neiswander, Correspondent.

*Sandusky County* Medical Society met at the Hotel Burdette, Bellevue, November 17, as guests of local members. Dr. Thomas L. Ramsey, Toledo, was the guest of the evening and read a paper on "Blood Chemistry." He laid stress on the importance of chemical analysis of the blood, as an aid in early diagnosis of

pathologic conditions; also its value as a prognostic sign, as well as its significance in differential diagnosis in endocrine disturbance. He demonstrated the intricacies as well as the simplicity of methods used. Dr. J. I. Appelby then gave a chemical demonstration of the metabolism machine as an interesting and practical test. The factor of safety in surgical work was presumably quite manifestly shown.

The general discussion was led by Dr. Shultz, who commended the paper highly, injected some pertinent questions and gave a review of the changing of opinions on the matter as they had come under his observation. Dr. Ickes lauded the paper but insisted that the threshold of excitability of his mental structure had not been lowered sufficiently to allow the matter to enter in large enough doses to produce a reaction. This was the attitude assumed by most of the members, who nevertheless declared they were greatly edified and would have regretted being absent. A vote of thanks was rendered Dr. Ramsey and he was elected to honorary membership in the society.

Dr. M. O. Phillips introduced the following resolution, which was adopted after discussion:

Whereas, the best interests and ultimate success of the Sandusky County Memorial Hospital are dependent upon the hearty co-operation and support of every member of the Sandusky County Medical Society, and,

Whereas, the presence of a staff in this local hospital, a purely public institution, will be a source of irritation and a cause of ill feeling and friction among the members of the Sandusky County Medical Society, and,

Whereas, the members of committee manifestly overstepped their authority in submitting to the process of a staff organization without first obtaining consensus of opinion of the entire Medical Society, be it therefore, resolved that action of said committee be rescinded and considered null and void.

Be it further resolved that the Sandusky County Medical Society protest against a staff of the aforementioned character and declare in favor of staff where all members of the Society may come and go, with equal treatment to all and special privileges to none.

Be it further resolved that a copy of these resolutions be mailed to the Board of Trustees Sandusky County Memorial Hospital and one copy be given the press.

—C. I. Kuntz, Secretary.

*Williams County* Medical Society, in session November 17, elected the following officers for 1922: President, Dr. D. S. Burns, Byran; vice-president, Dr. W. A. Held, West Unity; secretary-treasurer, Dr. F. E. Solier, Bryan; delegate for 1922 and 1923, Dr. J. A. Weitz, Montpelier; censor, Dr. W. L. Hogue, Montpelier. In the office of secretary-treasurer Dr. Solier succeeds Dr. J. A. Weitz who has served in this capacity for many years and been a most trustworthy bulwark of medical organization.

#### FIFTH DISTRICT

*Ashtabula County* Medical Society held its 147th regular meeting, November 9. After a splendid dinner the program of the evening was taken up. "Preventive Medicine" was the subject of a paper by Dr. C. E. Case which brought out thorough discussion dealing with local conditions. Motion was adopted indorsing the health commissioner's work in preventive medicine. A lengthy discussion on medical publicity was followed by the appointment of a committee

Dr. C. R. Coate, on "Ether Anesthesia in the Treatment of Beginning Pulmonary Tuberculosis." There was a lively discussion of each paper.—G. J. Hance, Secretary.

*Darke County* Medical Society held its regular monthly meeting at Greenville, December 8. The annual report of Dr. A. F. Sarver, the section on this subject consisting of Drs. Pardee, Wasson, Hogan and Wynkoop.—J. J. Hogan, Secretary.

*Lorain County* Medical Society had a splendid meeting at the Lorain Public Library, December 13. Drs. Gill and Burley reported on their recent eastern trips and Dr. Hart gave a brief review of the life and character of S. Weir Mitchell, as the physician, the man of science, the man of letters and the man of affairs. A number of interesting cases were reported and clinical cases presented. Dr. R. D. A. Gunn, Oberlin, was elected president for 1922; Dr. Zina Pitcher, Elyria, vice-president, and Dr. W. E. Hart, Elyria, reelected secretary-treasurer.

#### SIXTH DISTRICT

*Ashland County* Medical Society met for its last session of the year, December 6, at Samaritan Hospital, Ashland. The election of officers was the principal order of business and resulted as follows: Dr. G. B. Fuller, president; Dr. O. J. Powell, vice-president; Dr. L. G. Sheets, secretary-treasurer; Dr. Paul R. Ensign, censor; Dr. W. F. Emery, legislative committeeman; Dr. C. C. Patton, delegate, and Dr. G. P. Riebel, alternate. After the business session a splendid dinner was served, followed by a few toasts and roasts.—D. L. Mohn, Secretary.

*Summit County* Medical Society held its eightieth annual meeting, December 8, with an attendance of 151 from Barberton, Wadsworth, Copley, Cuyahoga Falls, Akron and Milwaukee. Officers elected for 1922 are: president, R. H. McKay; vice-president, C. T. Hill; secretary-treasurer and historian, A. S. McCormick; board of censors, J. M. Denison, D. W. Stevenson, R. V. Luce; health and legislation, W. Wilson, R. C. Kendig, W. A. Mansfield; library, S. St. J. Wright, H. R. Heckert; delegates, L. E. Brown, J. D. Smith, H. S. Davidson; state legislation, U. D. Seidel; national legislation, H. I. Cozad.—A. S. McCormick, Secretary.

*Stark County* Medical Society to the number of 75 members were guests of the medical staff of the Massillon State Hospital, November 22. The program of the evening was devoted to consideration of mental diseases. Dr. A. G. Hyde, superintendent of the hospital, and Drs. F. L. Rhodes and J. M. Donahue, staff members, were the principal speakers.—News Clipping.

*Portage County* Medical Society met at the office of Dr. W. B. Andrews, Kent, December 7. Dr. James T. Norton read an interesting paper on "Infant Feeding", giving observations based on his work with the Babies' Dispensary and Hospital of Cleveland, and later application of

these methods. Discussion was entered into by all the members. Dr. Andrews compared the Cleveland work with some he had watched in New York City. Dr. Worden, county health commissioner, presented a case of obscure eruptive disease for diagnosis. The annual report of the secretary, Dr. Knowlton, showed that attendance at the twelve meetings held in 1921 had averaged thirty-five per cent. The election of officers for 1922 resulted as follows: President, Dr. G. J. Waggoner, Ravenna; vice-president, Dr. J. T. Norton, Kent; secretary-treasurer, Dr. Emily J. Widdecombe, Kent.—E. J. Widdecombe, Secretary.

*Richland County* Medical Society held an open meeting, December 14, in Mansfield for discussion of problems pertaining to medical and public health legislation. Among the speakers were Hon. C. E. McBride on "Educational Standards for Professions"; Rev. Paul Kohler, president of the Lutheran Synod of Ohio, on "The Necessity for the Public to Protect Itself Against Imposers in Professions"; Senator H. R. Endly on "The Necessity for Separate Boards for Limited Practitioners"; Representative Phillip Wolf on "Past, Present and Proposed Legislations and Their Effects upon Public Health"; and Dr. Walter Brown director of the child health demonstration for the National Child Health Council, on "Type of Medical Men to Employ for Self and Family." There was a thorough discussion in which Robert G. Paterson, secretary of the Ohio Public Health Association, and Executive Secretary Don K. Martin of the State Association, participated with many others. Officers elected for the new year are: Charles R. Keller, president; R. C. Wise, vice-president; J. S. Hattery, secretary-treasurer; S. E. Findley, delegate; George Smith, alternate; F. A. McCullough, medical defense committeeman; J. S. Hattery, legislative committeeman.

#### SEVENTH DISTRICT

*Jefferson County* Medical Society's meeting of December 13th was strictly a business affair, the addresses and discussions being given to consideration of ways and means for bettering conditions of practice and other subjects concerning the welfare of the profession. Dr. Ben F. Collins was elected president and Dr. G. F. Gourley, secretary-treasurer. The latter succeeds Dr. J. R. Mossgrove, now vice-president.

#### EIGHTH DISTRICT

*Morgan County* Medical Society met on November 16 at the Malta Hotel, Malta. An excellent dinner was served after which Dr. E. R. Brush, Zanesville, councilor of the Eighth District, gave an inspiring talk on medical organization. Officers for the new year were elected as follows: Dr. C. V. Davis, Pennsville, president; Dr. L. C. Holcomb, Pennsville, vice-president; Dr. D. G. Ralston, McConnellsville, secretary-treasurer; Dr. C. E. Northrup, McConnellsville, delegate; Dr. Lee Humphrey, Malta,

**When This Issue Went to Press**

County	Membership	
	1921	1922
Ashland .....	23	16
Ashtabula .....	42	28
<b>Brown</b> .....	11	13
Champaign .....	24	1
Fairfield .....	33	5
Gallia .....	28	22
Geauga .....	9	9
Hamilton .....	484	203
Highland .....	23	8
<b>Jackson</b> .....	20	20
Lawrence .....	28	10
Logan .....	38	22
<b>Lorain</b> .....	76	77
Marion .....	58	26
Medina .....	22	23
Meigs .....	13	11
Miami .....	46	17
Muskingum .....	58	23
Ottawa .....	16	8
Pike .....	9	8
Portage .....	23	17
Preble .....	16	9
Putnam .....	31	11
Sandusky .....	39	21
Seneca .....	31	24
Stark .....	135	79
Tuscarawas .....	45	14
Warren .....	27	16
Washington .....	38	10
Wayne .....	35	10
Williams .....	26	8

Mt. Sterling, as president, and Dr. F. D. Postle, London, as secretary for the year 1922. Dr. F. G. Boudreau of the State Department of Health was a guest at the meeting and addressed the society.—News Clipping.

*Morrow County* Medical Society, at its annual session at Mt. Gilead, December 7, chose Dr. W. L. Case as president for the new year. Dr. C. S. Jackson was elected vice-president; Dr. Todd Caris, secretary; Dr. W. C. Bennett, treasurer; Dr. R. L. Pierce, delegate; Dr. F. H. Stires, alternate.—Dr. Todd Caris, Secretary.

**Gorgas Memorial Institute of Tropical and Preventive Medicine to Be Established in Panama**

Members of the medical profession and others interested in questions of public health and sanitation are showing deep interest in the recent announcement of the plans of the board of directors of the Gorgas Memorial for the establishment of a Memorial Institution in the City of Panama for research and the extension of means of prevention of tropical diseases.

The honor for the conception of this idea and of bringing it into actual existence belongs to Dr. Belisario Porras, president of the Republic of Panama, who in the name of his government has tendered the site, a building, and all required equipment, valued in all at approximately \$500,000. At the request of Dr. Porras, Admiral Braisted, formerly surgeon general of the United States Navy, with the cooperation of others equally interested in making this Memorial possible, incorporated the Gorgas Memorial Institute for the purpose, in addition to directing the scientific work, of raising an endowment fund of five million dollars for maintenance.

The Advisory Board, of which Secretary of State Hughes is honorary chairman, consists of the diplomatic representatives of all the Central and South American countries and representative committees of the leading national medical and surgical associations, public health groups, and many southern societies by which Dr. Gorgas was beloved.

The proposed Memorial will be built adjacent to the new million dollar Santo Tomas Hospital, and the use of its complete facilities has been tendered the Gorgas Memorial to aid in the launching of the work.

In commenting upon the field of work before the Institute, Admiral Braisted stated that among the diseases which will be studied in addition to yellow fever and malaria, are dengue, pellagra, beriberi, leprosy, cholera, and the various mycoses. It is the concensus of opinion that tremendous advances can and will be made through the efforts of the research work in this field.

alternate and legislative committeeman.—D. G. Ralston, Secretary.

*Muskingum County* Academy of Medicine held its December meeting in Zanesville on the 7th in conjunction with an all-day clinic conducted by the state and local health departments and the Rotary Club for crippled children. Dr. C. H. Hyman, Cleveland, was the consulting orthopedist and he was assisted by members of the local society. In the annual election of officers Dr. C. P. Sellers was chosen president; Dr. G. B. Trout, vice-president; Dr. Beatrice Todd Hagen, secretary-treasurer; Drs. C. H. Higgins and H. R. Geyer, censors; Dr. G. B. Trout, delegate; Dr. T. H. Infield, legislative committeeman.—Beatrice T. Hagen, Secretary.

**NINTH DISTRICT**

*Lawrence County* Medical Society held its annual election in Ironton, December 1. Drs. O. H. Hemminger, E. E. Ellsworth and W. W. Lynd were reelected to the offices of president, secretary-treasurer and censor, respectively. Dr. E. E. Wells was chosen vice-president. Dr. Ellsworth was also continued as legislative committeeman.—E. E. Ellsworth, Secretary.

**TENTH DISTRICT**

*Madison County* Medical Society, in session at London, November 17, chose Dr. R. H. Trimble,

# The Medical College and the Medical Profession\*

By HENRY PAGE, M.D., Cincinnati

Dean of the Medical College of Medicine of the University of Cincinnati

*Editor's Note.*—In announcing the policies that will guide his Deanship of the College of Medicine, Dr. Page, emphasizes the value of making selfishness a cardinal virtue instead of a vice. He also insists that any step taken by the College of Medicine, which could be detrimental to the interests of the legitimate practitioner would eventually be detrimental to the College itself and the interest of the public it has been created to serve. Hence the necessity of uniting the individual force of professional units into the cooperative power of the College for the benefit of public service. The College is after all the heart of medicine and it must attract not only students but it must also create a medical center for the profession who support it. The College hopes not only to live up to higher educational ideals but also plans to extend its utility to the profession at large.

**I**N MY ADDRESS this evening I shall attempt to make the members of the Medical Profession see, not only that I am very much in earnest in an endeavor to couple-up more closely the interests and the ideals of the doctors of Cincinnati with the interests of the College of Medicine, but also that it is to the self interest of us all—collectively and individually—to bring about such a union, cemented together by a single purpose.

## MAKING SELFISHNESS A CARDINAL VIRTUE

The purpose of all human cooperation has its origin in selfishness—but selfishness is not always an evil. Intelligent selfishness sees clearly that in rendering service to society it may gain its greatest individual reward. This form of selfishness is a cardinal virtue, just as truly as unintelligent self-seeking for rewards at the expense of others is a cardinal vice.

The only purpose which can unite the College and the Profession is this intelligent selfishness; which, in its mutual endeavor to render service, tends to give us all a maximum reward.

In speeches before various bodies in this city I have emphasized this statement, "*Any step taken by the College of Medicine which could be detrimental to the interest of any legitimate practitioner in this city would eventually be detrimental to the College itself and the interests of the public it has been created to serve. It would, therefore, be a false step and should be avoided.*"

It is intelligent selfishness which makes me wish to see you all tied-up more closely with the College of Medicine. We want to get something out of you and we want to give you a fair return for what we get. As a matter of fact, it is our belief that we should give you more than you give, for we are an organization devoted to public service and as such we should be prepared to give service without bargaining for a reward.

## CREATING POWER OUT OF FORCE

Before discussing any specific details of cooperation, I wish to impose upon your patience a

little further in developing the somewhat abstract idea of the meaning and value of cooperation. As school boys we learned that the whole cannot be greater than the sum of its parts. It seems at first a denial of this axiom to say that the medical profession is much greater than the sum total of the doctors who compose it, but such is the case. The individual doctor is a unit of force but a common education, a common interest, a common method of living and thinking unites this individual unit of force to other similar units to create something new. This new creation of unity is called power. I think it is rather important to distinguish between power and force.

The coal in the bowels of the earth, the muscles of a horse or the brain cells of man represent units of force. Burn the coal in an engine to generate steam, or make the horse use his muscles to pull a load or activate the brain cells of man to exercise reason and you transform force into power. Power may be called movement in a definite direction, i.e., it is force organized to perform a definite purpose.

Individual man was the greatest of all powers before society was created, because man's brain best fitted him to move continuously in one direction, but when society was organized you began to have a complex unit in which mankind ceased to have any direction save that which could occur within this new unit. Collectively speaking, therefore, man has great power. Individually he has but little power. As a social force he is capable of uniting with other forces to create unlimited power.

If you hitch a span of horses to a wagon you create enough power to haul a load of coal to your home; but if you hitch one to the front and one to the rear of the wagon the only power you create is represented by the difference between the two forces. One force in this case destroys a large part of the other. Now I have never seen this experiment tried with horses but the commonest object in daily life is the spectacle of one set of men hitching themselves to the front of the public service wagon while an equal number hitch themselves to the rear. Both crowds are pulling like mad in opposite directions, while the public waits patiently until the traces break. The

\*An address presented before the Cincinnati Academy of Medicine, November 7, 1921.



funny part—or the tragic part—of the whole thing is that neither side knows exactly where it wants to go.

Tomorrow this city will see the traces on one end of the school board—public-service wagon—broken and those hitched to the other end will rush into power and about nine-tenths of both crowds don't know why they have been pulling against their enemies for the past six weeks. As I have no vote as yet I am only a disgusted spectator of this very unintelligent exhibition, but I am before you tonight to do all in my power to prevent the medical profession from making a similar exhibition of unintelligent selfishness—an exhibition of men scrambling to gain unworthy ends and forgetting the big goal of public service toward which we must strive if we desire to profit.

#### THE COLLEGE THE HEART OF MEDICINE

Now, gentlemen, I am not so unobserving as to have failed to note that the profession and the College of Medicine are further apart than they should be. Furthermore, I have discovered that the fault lies with both parties. It is probable that the largest measure of fault lies with the College—which like all human organizations has tended to become so self-centered in its own affairs that it has been easy to forget the wishes, desires and aspirations of others. Now I am a confirmed optimist and I believe that every doctor in Cincinnati wants to see the College of Medicine become the greatest of medical colleges. I believe that those within and those without the College have a common ambition to serve the College and through the College to serve the profession and the people of this city, and that our chief trouble is that the College has not given those outside of the College enough of a chance to hitch themselves upon the right side of the public-service-college-wagon.

It is not that our College people are snobbish, offish, exclusive or that they have a magnificent idea of their own importance. I say with the greatest emphasis that this is not the case. I came here five months ago as an unprejudiced stranger and I have already developed a great admiration of and affection for our College teachers, and I would have neither admired nor been fond of them had they exhibited a narrow, snobbish attitude. As a matter of fact the members of our Faculty have often expressed to me a desire that we should get closer and closer to the profession-at-large.

Having presented the etiology and the diagnosis of a morbid condition in our medical situation, you are now expecting me to tell you the remedy. I know this and I regret that I must disappoint those who look for a patent medicine invention of mine that will cure everything from impecuniosity to hydrocephalus. I assure you that no such specific exists. But we need not despair because in consultation we may certainly devise ways and means to cure most of our

ills. Gentlemen, I want to tell you that I want help—all the help you can give me. Given that help I have no fear of the end result. The heart of civilization is in its schools and the heart of medicine is in its medical schools. If medicine is to be great in Cincinnati you gentlemen within and without the College must hitch yourselves to the public-service wagon and pull together to achieve greatness. Some of us in the College may not fully realize how much we depend upon the help of the profession. On the other hand the profession must not fail to realize that the bread and butter, as well as the professional standing and the welfare of every doctor in Cincinnati, depends in large part upon keeping the heart of medicine—the College—beating strong, clean and true.

Soon after my arrival in Cincinnati one of my friends was heard to say (and of course I heard it two hours later), "What the dickens does an ex-Army officer know about medical education?" On the occasion I replied—"His only claim to wisdom is that he knows that he is a 100 per cent. ignoramus as far as medical education is concerned." It is with this profession of wisdom that I shall now present to you some of the ideals and ideas that have been suggested to me whereby we as a College can render better service to the Profession and the people of Cincinnati. Our wisdom lies in the knowledge that only in service to others may we expect to profit. To be brief we are intelligently selfish—I hope.

#### IDEALS OF THE COLLEGE

First let us announce our ideals:—

(A) The ideal of the College is the first subject I wish to speak of. We want to give the best medical training that can be given to undergraduates, but we are more concerned in graduating the right kind of men than we are in graduating unethical men of talents, who may use these talents to prey upon the public. In towns that have no colleges, the standards tend to be lower. The higher the standard of the college the higher will be the medical and ethical standards in the town. This is true not only because a constant influx into the town of high class young graduates must have its effect, but also because no college can last unless it is clean and earnest in its purpose to strive for higher things—spiritual and material. Such an influence also has its effect. The end result of a high college activity is to advertise the town as a medical center and to attract patients instead of repelling them. If we graduate men of a high type, therefore, work will flow toward and not away from Cincinnati and every doctor in the city will have a share of the benefits resulting therefrom.

(B) Our second ideal, like the first, is to render service and more of it. We want, not only to graduate doctors but we want to help those who have graduated to constantly draw aid and

inspiration from the College to make them better and better doctors. As yet I have no complete plans worked out toward this end, but the following plans are being considered:

#### PLANS FOR EXTENDING OUR SERVICE

(1) There is not a doctor in this city who does not, at times, wish that he had access to sources of knowledge that would aid in the solution of a pressing problem. I refer not only to specific but to general problems that require expert advice. In my opinion the College of Medicine and its laboratories should be at your service in such emergencies. To illustrate what I mean I will give two examples of what we have done to the few who are already using us. (a). One doctor wanted to know how to make an accurate investigation of the action of a drug. Our Professor of Pharmacology was able in a few moments to correct a wrong idea as to the method of approach to such a study and put the investigation on the right track. (b). Another doctor wished to study a dissection of an organ as a guide to an operation he wished to perform. Our Professor of Anatomy was able to give him what he wanted and was glad to tell him that he would give him any facility he possessed to help him at any time.

Within reason, our Professors in Biochemistry, Physiology, Bacteriology and Pathology and all other departments will give you suggestions and aid—and at times laboratory facilities may be made available for you to work out your problems. You can readily understand that our busy teachers in crowded laboratories are not prepared to give post-graduate instruction but they can and will aid you in your problems. I only ask that you should give us a trial. No formality is needed. Come to my office at any time, or even write to me and I will get in touch with those who can help you and I'll thank you for coming.

(2). The second plan is that we shall grant permits to any doctor who wants to hear any lecture on any given subject. We hope at an early date to send out, to all interested doctors, a weekly schedule of our lectures, so that doctors can pick out a subject they wish to study and attend that lecture. In the meanwhile any one of you can secure a card from me to attend any lecture given in the college.

Of course, here again, college rules would prevent us from letting anyone take an entire set of lectures without registering for the course, but single lectures are always open to visitors who may be given permits to attend 3 or more of a set of lectures in succession, if space permits.

The process is again simple, come to my office, get your card and accept my thanks for your interest in us.

(3). A third plan, we have in mind, is the admission into the College of probationary teachers. The charter and the College rules may

interfere with this plan, but I shall ask the Board of Directors to consider it. The object of this plan is to develop an expert teaching staff for the college and at the same time develop specialists in medicine. This is a scheme to help the young doctor to secure that education which a specialist requires and at the same time to qualify as an expert teacher of medicine.

The plan is that the head of a department—say surgery—will diagnose what the young aspirant needs to make him a surgeon. He will, for example, send him in turn to the anatomical, pathological, internal medicine, biochemical and other departments for the necessary study and research. In these departments he is taught to demonstrate elementary essentials to students. When he has been given a suitable foundation the head of the department will make him an assistant in his operating room and give him surgical research problems to solve. By this plan the young doctor can get well planned courses of study and at the same time make a living and keep in touch with the realities of practical life. He can, with no loss of time, pursue his studies for 2, 3, 4 or even 5 years. The end result is an educated specialist.

This I repeat will be an opportunity for the younger men. I have always felt that the young M. D. has not had enough help and encouragement in his struggle to gain knowledge and experience during the first trying years of "getting established." Without any loss of interest in those who have served the College, the profession and the public long and well, we hope to do more for the young man than most colleges have done in the past.

Indeed I should have stated it as one of our ideals that we may help to encourage and inspire the younger men of the profession.

Nothing would give me greater satisfaction than to have every young doctor in this city call upon me and at least give me the chance to try to do something for him.

(4). A fourth plan we have in mind is to give the College over for 2 weeks of each year to our alumni and I hope space will prove sufficient to include all doctors in this plan. At commencement time I hope to see offered a myriad of studies from which our visitors may make a choice. These will not be courses in any sense of the word—nor will they be clinics, but—as their name implies—they will be studies of a single item. A few examples will make this clear: (1) How to take a blood sample for Widal's or Wassermann's. (2) How to give a 606. (3) Study of normal breath sounds of the chest. (4) Study of how to do an intubation. (5) How to prepare an animal for experimental investigation. (6) Study of digitalis on the animal heart.

You will see that while the sum total of a number of studies might be the equivalent of a course, we will confine ourself to studies alone

and courses will not be attempted. By this plan a doctor may come and take a study lasting 15 minutes, or he can take a series of studies requiring 8 hours a day for 2 weeks.

This plan is very near to my heart and I hope to see it working in June, 1922.

Other plans are being considered but I will not abuse your patience by enumerating them to you. What I am trying to get over to you is not a promise of what we shall do, nor a recital of what we want to do—the point, gentlemen, is that we want you to be one of us and to unite with us in putting Cincinnati on the Medical Map in large letters.

Of course you cannot all be professors, nor even attending surgeons in the clinics. Of course, too, our selections of professors and attending surgeons may not in some instances be the best

selections. And of course some will be disappointed, feel neglected, and some will get mad. In affairs, human, it has and will—sad to say—always be so, but why despair? If you have confidence in our honesty and fidelity of purpose the irritations and vexations I speak of will be but as ripples on the lake.

I have already told you gentlemen that I want your help in building up the College, but let me repeat again that I desire most of all to gain your confidence in our honesty and fidelity to the College, the profession and the people of this city. I came to make a bid for that confidence. If you grant it, there will be few big problems to solve. With your sympathy to support us, we can move fast and with infinite power to rescue those who need our aid. Our reward will be a greater medical profession and a grateful public.



## HOSPITAL NOTES

—Trustees of the Ohio Masonic Home have announced that they will receive bids on the construction of the proposed new \$500,000 hospital building early this year. The site for the hospital has been marked out in accordance with definite plans for hospital expansion adopted several years ago. Bids on the construction were received last year but were rejected as being too high. If new bids meet with the approval of the board the structure will be rushed to completion.

—Greenville's new hospital was practically finished and ready for furnishings and equipment, December 1. The building, a former residence, has been entirely remodeled into a sixteen-room, fire-proof structure.

—Members of the volunteer medical and surgical staff of the Ohio Soldiers' and Sailors' Orphans' Home, Xenia, gathered at the institution in November for their sixteenth annual meeting. Among those included on the staff are: Drs. W. A. Galloway, dean; A. C. Messenger, secretary; Reed Madden, W. H. Finley, R. H. Grube, Xenia; C. L. Patterson, Horace Bonner, B. C. West, A. F. Shepherd, Dayton; J. C. Larkin, Hillsboro; J. E. Greiwe, Robert Sattler, Cincinnati; R. C. Rind, Springfield; Charles J. Shepard, C. M. Shepard, Andrew Timberman, Hugh A. Baldwin, Columbus; R. C. Longfellow, Toledo.

—Dr. Herman H. Hoppe, director of the department of nervous and mental diseases at Cincinnati General Hospital, has suggested to Hamilton County commissioners that the proposed addition to Longview Hospital, which is to be used as a receiving and observation building, be

located upon ground adjoining Cincinnati General Hospital instead of on the Longview grounds in Carthage. Dr. Hoppe's idea is to have the new psychopathic department operated under administration of the present Longview staff, but he believes there would be great advantage in the suggested location by reason of the additional medical attendance. Probate Judge W. H. Lueders has heartily indorsed Dr. Hoppe's plan.

—The will of a late Columbus resident bequeaths the sum of \$8,000 to a hospital for crippled children. It further provides that in case there is no such institution in Columbus the money be turned over to the institution most nearly fulfilling the functions of such a hospital.

—General reorganization of the staff of Seton Hospital, Cincinnati, has been effected with Dr. Carroll DeCourcy as president; Dr. Edward Kennedy, vice-president; and Dr. Joseph D. Courcy, secretary-treasurer.

### Hospitals Must Provide Schools

Under a ruling of Attorney General John G. Price, authorities at the district tuberculosis hospitals are required to furnish educational facilities for the children of school age who are inmates at the hospitals. The opinion was rendered in response to an inquiry from the Clark County prosecuting attorney.

In answer to a question whether or not the school district wherein such a hospital is located should furnish schooling facilities for the children, the attorney general says, in his opinion: "To cause the school district where such a hospital is located to provide a school for such would work a hardship on the district."

It is pointed out that in the larger counties of Ohio such schools are maintained by the hospital authorities.

## Medical Attention and Hospitalization on Large Scale Is Planned Under Reorganized Veterans' Bureau

Following the consolidation of governmental machinery for veteran relief under the United States Veterans' Bureau, with the four main divisions of administration, medical service, rehabilitation and claims, consolidating the executive functions of the medical division of the United States Public Health Service, the Federal Board for Vocational Training, and the War Risk Insurance Bureau, the personnel and activity of the Seventh Division, consisting of the three states of Ohio, Indiana and Kentucky, is now taking concrete shape.

Ohio has been divided into six sub-districts with headquarters in Cleveland, Cincinnati, Columbus, Dayton, Toledo, and Canton. Under this arrangement the function of the bureau will include the utilization of hospital units and the supervision of the large proportion of examination and treatment of disabled war veterans.

With the enlarged functions of this service there is a full time headquarters staff of 35 medical officers in the Cincinnati office, together with 600 other employees. In the various divisions there are approximately 90,000 cases on file in that office in various stages of completion. The new location of the Cincinnati headquarters is the Krause-Bahlman Building, 408 Pioneer Street.

Under the direction of the Veterans' Bureau, a small staff of medical officers has been travelling throughout the country in an effort to overcome dissatisfaction among ex-service men by seeing that all those entitled to service receive full and just attention. As a part of this service the local branches of the Red Cross with the corps of field agents and home investigators is acting as a clearing house and medium between ex-service men and the Bureau.

Under this system all the personnel, facilities, property and equipment of the United States Public Health Service transferred to the Bureau of War Risk Insurance by order of the Secretary of the Treasury on April 19, 1921, and all the Rehabilitation Division of the Federal Board of Vocational Education are transferred to the Veterans' Bureau and put under the control of the director, with the provision that the commissioned personnel of the United States Public Health Service detailed to the Veterans' Bureau shall hold the same rank, receive the same pay and be subject to the same rules for promotion as in the Public Health Service. Establishment of a central office in the District of Columbia, and not more than fourteen regional offices nor more than one hundred and forty suboffices for administering the act are provided. The director, subject to the instructions of the president, is to be responsible for the proper examination, medical care, treatment, hospitalization, convalescence

and after care, welfare, nursing, and vocational training, and such other services as may be necessary for the beneficiaries of the Bureau of War Risk Insurance. He is authorized to utilize the facilities of the Public Health Service, the War, the Navy, and the Interior departments, the Soldiers' Home, and such other governmental facilities as may be made available. He is also authorized to maintain an inspection service and to standardize methods of examination, medical care, treatment, hospitalization and convalescent care, and to provide special hospital facilities for the proper medical care and treatment of the beneficiaries. The new system takes the entire problem of medical and hospital care of War Risk Insurance men out from under the Treasury Department and puts it under a director appointed by the president, and responsible to him alone, with practically unlimited authority.

A special committee of the United States Senate appointed for the purpose of investigating governmental activities for the relief of former service men, has just reported with recommendations for re-examination of all previously disallowed claims. The committee goes further and criticizes the policy that dealt with compensation claims as a purely medical problem and declares many applicants have been rated unfairly and unjustly.

The bureau should "broaden its interpretation and widen the scope of application of existing laws," the report says, adding that additional legislation would be sought to meet deficiencies shown by its hearing.

Among specific recommendations are:

Appropriation of \$16,400,000 for hospitals; transfer of all government hospitals, including soldier homes not needed by the Army or Navy, to the Bureau; formation of a Chaplain Corps for service hospitals and training centers; provision of cemeteries at soldier hospitals for interment of veteran dead; standardization of training, permitting the applicant to select, as far as possible, his own vocation; extension of existing insurance to \$10,000 for each policy holder if he desires it, and extension of insurance and compensation privilege to Americans who served in allied forces.

Cancellation of contracts with state, municipal and private hospitals which were not in existence April 1, 1917, and with all similar institutions which after inspection are found unsuitable, was recommended as one administrative reform, others under this head including:

Issuance of rules and regulations for the maintenance of order and discipline; frequent and thorough inspection of hospitals and training centers; elimination of politics from appointments;

establishment of additional vocational centers at institutions where mental and tubercular patients are under treatment.

The committee said the government had failed to obtain "results commensurate with the large expenditures" in rehabilitation work, and expressed belief that knowledge of the government's failure prevented men "seeking hospital treatment until too late, and a stream of dying patients beyond the possibility of cure is in part the result."

Location of hospitals upon improper sites was denounced, that at Ft. McHenry, Md., being cited as an example.

"Abominable conditions have existed in various hospitals which could have been avoided and which should be avoided in the future," the report continues. "The need of new hospitals is too clear for argument."

A class of unworthy beneficiaries, "small in number but noisy," the committee asserted, "is doing great harm to more worthy comrades." Such men, it was added, pretend the need of hospitalization "for the sake of the good living at the expense of the government, and are constant trouble makers." The committee urged their dismissal.

One of the most important functions of the newly organized Veterans' Bureau took form December 5, when Vocational Training School No. 1 was opened at Chillicothe on the former site of Camp Sherman. The school, which is the first of a number of similar schools to be established in different parts of the country, opened with an enrollment of 500 men, which is expected to grow rapidly until it has expanded to the maximum of 5,000. Instruction is to be given the disabled veterans in all trades and occupations which may be desired by the trainees. Courses offered at present include carpentry, plumbing, auto mechanics, steam fitting, upholstering, cabinet making, shoemaking, laundering, pattern making, farming, horticulture, painting, sheet metal work, electrical work, cold storage, baking and cooking. Academic courses will be offered on the side for those who want them.

The medical staff for the temporary hospital at the Vocational Training School Center includes the following Chillicothe physicians: Drs. A. Henry Dunn, surgery; R. W. Holmes, X-ray; George S. Mytinger, eye, ear, nose and throat; H. E. Harmon, medical and interne; Glen Nisely, laboratory. A resident physician will be on duty at all times and the local staff part time.

### Occupational Disease Forms Ready

Forms for establishing claims under the occupational disease amendments to the Workmen's Compensation Act have just been completed and printed by the Ohio Industrial Commission.

Special Form O. D. 4, which constitutes application for an award from the state occupational disease fund, contains three separate parts. Part I is to be signed and sworn to by the disabled

employee; Part II to be executed by the employer or his authorized agent, and Part III to be executed by the attending physician. The third part of this form, to be filled out by the attending physician, is for submission of a description of the claimant's condition, including diagnosis and symptoms, with a statement as to the probable period of disability. Upon receipt of this form the Industrial Commission will mail to the attending physician the regular medical Blanks as usual.

Form O. D.-25 is the medical report, to be executed entirely by the attending physician. This form requires a history of the particular case; treatment; description of complicating diseases, if any; history of previous illnesses due to occupation, if any; period during which claimant was totally disabled; whether or not he has resumed work; together with a statement of names and addresses of hospitals, nurses and other persons rendering service in addition to the attending physician. This latter form will constitute the basis for the claim by the physician against the Industrial Commission for medical service.

Both of the forms mentioned above are on white paper with a notice printed in red ink that they are "for occupational disease only."

A special form, O. D. 1-22, printed on yellow paper, constitutes the first notice of occupational disease and application for payment of claim for Section 22 (self-insuring employers). The data asked in this form includes the questions set forth in both of the other forms for regular claims against the occupational disease fund.

It will be remembered that the occupational disease law was analyzed in detail on page 487 of the July, 1921, *Journal*, and a list of the diseases which are compensable from the occupational disease fund under the Industrial Commission was given. On page 531 of the August issue the reasons for prompt reporting of compensable diseases to the Industrial Commission together with other developments were set forth; and on page 604 of the September *Journal* the procedure in these cases and the difference between compensable and non-compensable diseases were explained.

As heretofore all occupational diseases reportable to the State Department of Health, and some of which are not compensable, must still be reported on special forms provided by that state department. Copies of these reports are furnished by the State Department of Health to the Industrial Commission. References and full requirements for the reporting of non-compensable occupational diseases as well as those now compensable under the workmen's compensation law to the State Department of Health as heretofore can be ascertained through the citation to occupational diseases in the general index on page 944 of the December, 1920, *Journal*, which pertains to material on this subject published throughout that year.

# The Cancer Campaign

Andre Crotti, M. D., Chairman.....Columbus

F. E. Bunts, M. D.....Cleveland      J. Louis Ransohoff, M. D. Cincinnati  
C. W. Moots, M. D.....Toledo      Don K. Martin, Sec'y.....Columbus

## Superficial Malignancies\*

CHARLES F. BOWEN, Ph. C., M.D., Columbus

*Editor's Note.*—While Dr. Bowen's paper deals only with superficial malignancies, the same general principles he stresses apply in all cases of cancer and in all phases of the cancer problem. Seen early enough and thoroughly treated by a combination of X-ray, radium and electric coagulation, Dr. Bowen maintains that the selective therapy of localized cancer is almost 100 per cent. efficient. Failures may be due to discouragement on the part of patients or to mistakes regarding the extent and seriousness of the case; insufficient treatment at the beginning or too long continued treatment after the cancer cells have been destroyed. It should be realized that the therapeutic ulcer caused by the treatment must be given due opportunity to heal.

**C**ANCER IS PERHAPS the most important subject which confronts the medical profession today, with the possible exception of tuberculosis.

We have heard a great deal about the prevention of tuberculosis, and large societies and clubs have been organized to stamp out this disease, and the results have been most gratifying.

Few people, however, realize that there are more deaths from cancer at the present time than there are from tuberculosis. During the first four months of this year there were about two hundred and fifty more deaths from cancer in New York City than from tuberculosis, so the question naturally arises, "What are we going to do for the cancer patient?" There is no doubt whatever that the organized work against the spread of tuberculosis has materially reduced its death rate.

The campaign to stamp out tuberculosis had its basis upon the fact that tuberculosis was an

infectious disease and the whole idea was to educate the tubercular patient to properly care for himself and prevent his relatives and friends, who were thrown in contact with him, from contracting the disease. So the good results which have been obtained in lessening the death rate from tuberculosis have been along the lines of *preventive medicine*.

### THE CANCER PROBLEM

Our problem in cancer, however, is somewhat different. Cancer is not an infectious disease, as we consider it at the present time, so we have no need of organizing societies and clubs to prevent cancer, as at the present time we know of no method of doing this. Since cancer is not preventable, in the ordinary sense of the word, we must direct our attention to making as early a diagnosis as possible, and start treatment while there is yet hope of cure. This can best be accomplished by organizing societies and cancer clinics where the public can be acquainted with the early symptoms of cancer, where they can

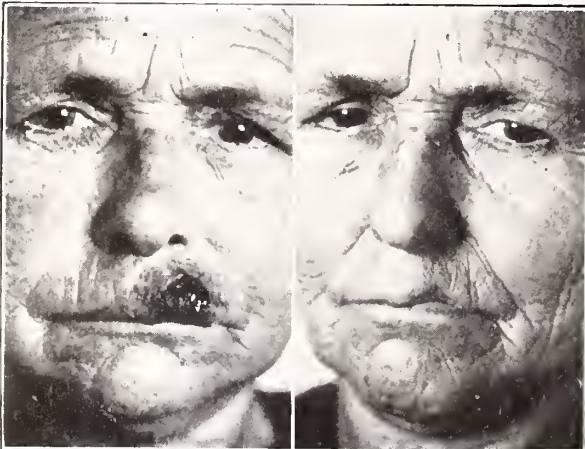


Fig. 1. A very painful cancer of the upper lip, at least one and one-half inches in diameter. Relief from pain after first treatment. The after picture speaks for itself.



Fig. 2. Cancer of the eye of several years' duration. Had grown completely over the sight. Healing was perfect, with the eyesight perfectly restored.



Fig. 3. A small hard tumor of several months' duration, growing in the lower eyelid. Removed with no scarring in one treatment.



Fig. 6. A horny growth had become irritated and was growing rapidly. Notice large base.



Fig. 4. Cancer of the lower eyelid, showing the perfect result which can be obtained with Radiat on therapy.

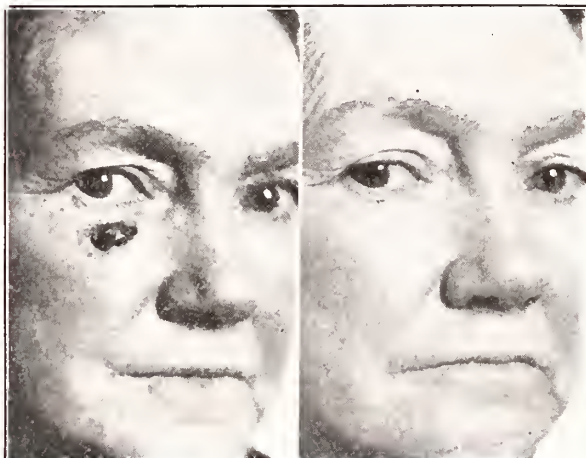


Fig. 7. A perfect result in a case of cancer, where healing usually causes contraction of the lids.



Fig. 5. A mole suddenly began to grow rapidly, raising one half inch above the skin level. After-result perfect.



Fig. 8. An ugly looking cancerous growth on the end of the nose. Removed with practically no deformity.



Fig. 9. Superficial cancer of the breast, completely destroyed with Radium and X-ray. Healing perfect.



Fig. 11. Cancer of the tongue completely cured in one treatment.



Fig. 10. Extensive cancer of the lower lip, almost one-half of the lip being involved. Healed with very little destruction of normal tissue.



Fig. 12. Extensive cancer of the lip, involving the mucous membrane and gum. Healed with very little scarring.

have a correct diagnosis made, and can be advised as to where proper treatment can be obtained.

In order to properly treat cancer, it is essential that we have a clear idea of the different types of this disease and what we may expect from each one. With a clear understanding of the life history of each type, and with a clear understanding of the various methods which are used in the treatment of cancer, I think we will get better and better results.

#### SUPERFICIAL MALIGNANCIES

While this paper deals only with superficial malignancies, the same general principles apply in all cases of cancer, no matter where situated.

Superficial cancer is essentially a local disease, and its tendency is to remain in this one location, but, gradually increasing in its surface extent. Later, it extends into the deeper tissues and into the lymphatic system.

While cancer is still a localized disease, every

case can be cured, and some cases which are no longer localized can be cured, by attacking both the superficial and the deep lesions. Whether or not all cases are cured, is another question. What I want to do in this paper is to give some of the reasons why I have not cured all of my cases and to describe the methods used at the present time, which are almost one hundred per cent. efficient.

Twenty years ago we gave our epitheliomas a mild X-ray treatment, every other day, without filters. If the cancer did not heal, it was because the patient got tired of coming for the treatments, or else we produced a Roentgen ulcer, which, of course, could not heal under continued X-ray treatments.

A little later, we began to understand the ill-effects of *over-treatment*, and we began to use filters. This led to the time when we gave our patients heavier treatments, farther apart, say once a week. We soon developed a technique

(Continued on page 67)





COMPANY'S BUILDING BERRY & WEBSTER STS.

# The Medical Protective Company Fort Wayne, Indiana

PROFESSIONAL PROTECTION EXCLUSIVELY



CHARLES A. WILDING  
VICE - PRESIDENT



LOUIS FOX  
PRESIDENT



MAURICE C. NIEZER  
TREASURER



BYRON H. SOMERS  
SECRETARY & MANAGER



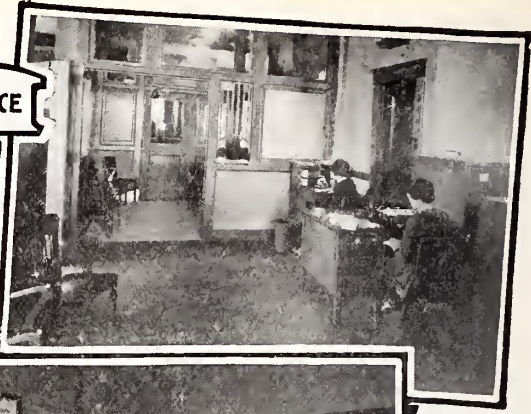
CHARLES M. NIEZER  
CHIEF of LEGAL STAFF

**OFFICERS  
AND  
DIRECTORS**

There are certain fundamental principles of sound business endeavor which dictate existence and decide success. Necessity must make the industry of primary importance and of permanent value.

The laws regulating the practice of medicine and dentistry, as well as the natural unpreventable hazards, gives primary importance to an organization of our kind. Specialized Service has induced a success which cannot but impress an appreciation of the dependence of the professions upon the permanent value of The Medical Protective Company.

**ENTRANCE**



**SECRETARY'S OFFICE**



**AUDITING DEPARTMENT**



**DEPARTMENT OF ISSUE**



**AGENCY DEPARTMENT**



**ADVERTISING DEPARTMENT**



**RENEWAL DEPARTMENT**



**SALES-BY-MAIL DEPARTMENT**





GENERAL OFFICES  
LEGAL DEPT.

The quality, reliability, promptness and accuracy of service depends upon the facilities for work. The science of Medical Jurisprudence and its skillful application enters into the defense of all claims and suits; and to these essentials are constantly being added the experience of continuous practice and the study and solution of new problems, to the end that the finished service may at all times be most efficient in operation and endurance.

The Medical Protective Company has risen to leadership because its clients have confidence in its judgment and faith in its integrity.



CHIEF COUNSEL'S  
OFFICE

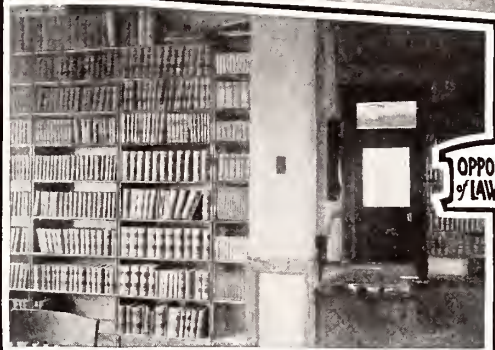


FILING  
DEPARTMENT

CORRIDOR  
ATTORNEYS' OFFICES



VIEW OF  
LAW  
LIBRARY



OPPOSITE VIEW  
OF LAW  
LIBRARY



STOCK  
ROOM

MAILING  
DEPARTMENT



ASSISTANT SECRETARIES

H.W.GINTY AGENCY



W.P.BREEN COUNSELOR

LEGAL DEPARTMENT



E.F.MILLER ADVERTISING



JOHN MORRIS COUNSELOR



L.L.FRANK RENEWAL



F.E.M'LUCAS ATTORNEY

ASSETS

1921.....	\$1,121,337
1920.....	909,982
1919.....	729,339
1918.....	615,651
1917.....	440,497
1916.....	365,979
1915.....	300,765
1914.....	253,520
1913.....	208,118
1912.....	172,310
1911.....	148,835
1910.....	130,237

All devoted to one line exclusively: a security unsurpassed by any other organization.

THE MEDICAL PROTECTIVE CO. OF FORT WAYNE, INDIANA



GUS FOX AUDITOR



JAMES P.MURPHY ATTORNEY



F.A.McCLANAHAN ATTORNEY



G.W.KIRKUP ASST. AUDITOR



GUY COLERICK COUNSELOR



WALTER NORD RECORDS



HARRY C.HOGAN COUNSELOR

## Superficial Malignancies

(Continued from page 62)

which would cure practically all of the cases, which stayed with us. We noticed that a great many patients only took one, two or three treatments, and then failed to return. Upon inquiry, we learned that they stopped treatments because they did not see any improvement. The patients had heard so much about burning out cancers that they were frankly disappointed when they did not see some decided change after one or two treatments. A number of patients who had stopped treatments stated that their cancer had gradually gotten well, of its own accord, refusing, however, to give the X-ray any credit. Some patients were so disappointed at the apparent failure of the X-ray that they refused to take any kind of treatment, and died the usual cancer death.

### CAUSES OF FAILURE

The cause of failure then, in the majority of cases, was the failure of the patient to continue treatment. We are not surprised at this, when we consider that the majority of the cancer patients are old and sometimes feeble. On the other hand, some of the failures are due entirely to the personal equation of the operator. This, I can sum up as follows: (1) failure to realize the extent and seriousness of the case, (2) failure to give sufficiently hard or severe treatments at the beginning of the series; and (3) failure to stop treatment after the cancer cells have been destroyed, allowing the ulcer to heal.

This led us to devise ways and means of curing our patients with fewer and fewer treatments. We tried massive doses, and various modifications of this method, but, there were always a certain number of cases which would not respond to treatment.

Radium was used with about the same results, as with the X-ray, always leaving a certain number of cases which would not respond to treatment. Electric coagulation and fulgeration were used with about the same result. This led to the conclusion that no one method would cure all cases. The use of escherotics in the form of pastes, liquids or whatnot, has long since been discarded, as destroying too much healthy tissue, as being entirely too painful to the patient, and, on the whole too unscientific.

The three remedies or agents at hand, which offer the most hope, are the X-ray, radium and electric coagulation. These three, in proper combination, will kill any cancer within reach.

### SELECTIVE THERAPY

We proceed somewhat as follows: All the growth projecting above the normal skin is destroyed by electric coagulation, after injecting novocaine, with a little adrenalin. The burned tissue is carefully curetted away, and the base of the ulcer thoroughly heated with the electric current. The X-ray is then used to destroy any cells which are lying deeper in the tissues. Any



THE pride of the craftsman in his handiwork is exemplified in the zeal with which Parke, Davis & Company's pharmaceutical chemists, biologists, and physiologists maintain the unvarying quality of Adrenalin. And that quality is the natural result of highly specialized scientific skill gained through twenty years' experience in the manufacture of the original product.



THE NAME "ADRENALIN" IS LINKED INSEPARABLY WITH THE GOOD NAME OF PARKE, DAVIS & COMPANY

of the cancerous tissue, which is covered by normal epithelium is exposed by the electric coagulation. The main object is to expose all the cancer tissue and form an open ulcer. If there is much thickening and induration around the base of the ulcer, radium needles are frequently imbedded in the tissue and left for a period of from five to eight hours.

Some cases receive all three treatments, X-ray, electric coagulation and radium. This may seem like a gunshot method, but, I have found it very efficient. The patients are sent home, with instructions about keeping the ulcer clean, and are asked to return in one month for observation.

The large majority are healed, when they return. Patients frequently fail to return, but, upon inquiry I learn that healing has taken place. A few cases will need an occasional X-ray treatment to complete the healing process.

344 E. STATE STREET.

### Health Exposition and Institute in Louisville

A National Health Exposition, occupying 60,000 square feet of floor space, will be held in the Jefferson County Armory, Louisville, Kentucky, February 1-9, under the auspices of the United States Public Health Service, State Board of Health of Kentucky, Jefferson County Board of Health and the Health Department of the City of Louisville. It will include exhibits in medicine, nursing, dentistry, hospitalization and pharmacy. The University of Louisville, the public school system, and various local, state and national health organizations will participate.

The annual conference of the city and county health officers, the annual convention of the Kentucky State Public Health Association and other health meetings are scheduled in connection with the Exposition.

An institute will be conducted by the United States Public Health Service, for which the following speakers have been announced: Dr. M. J. Rosenau, dean of the Harvard School of Public Health; Dr. Josephine Baker, director of the Department of Child Hygiene, New York City Board of Health; Dr. Wm. A. Evans, former health officer of Chicago and public health editor; George T. Palmer, president of the Illinois Tuberculosis Association and director of the Bureau of Tuberculosis of the Illinois State Board of Health; Dr. Frederick R. Greene, secretary of the Council on Health and Public Instruction, American Medical Association; Dr. Valeria H. Parker, director of the Interdepartmental Board of Social Hygiene; Dr. John H. Stokes, syphilographer of the Mayo Clinic; Dr. Frankwood Williams, director of the National Association of Mental Hygiene; Dr. W. S. Rankin, health officer of North Carolina, a member of the Council of Health and Public Instruction of the American Medical Association and re-

cently president of the American Public Health Association; Dr. John Dill Robertson, health officer of Chicago; Dr. John R. McDowell, director of health for the Lake Division, American Red Cross; Dr. John R. McMullen, United States Public Health Service, and Miss Frances Brink, director of the National Organization for Public Health Nursing.

### Cincinnati Ophthalmological Club

The Cincinnati Ophthalmological Club was organized recently, with a charter membership of twenty-two members. Dr. Robert Sattler is the president, Dr. Derrick T. Vail, vice-president, and Dr. W. E. Schenck, secretary-treasurer. Ophthalmologists who were instrumental in organizing the club are Drs. Wylie McL. Ayres, F. B. Cross, R. C. Heflebower, Clarence King, Fred W. Lamb, F. D. Phinney, W. E. Schenck and D. T. Vail.

The club enjoyed its first regular meeting at the Ophthalmic Hospital, December 9. Dr. Sattler delivered an inaugural address memorializing the two nestors of ophthalmology in Cincinnati, Drs. E. Williams and Stephen C. Ayres, and expressing his appreciation for the formation of a local organization and the honor conferred on him as its first president.

Dr. Sattler presented a male patient for whom a capsular extraction in both eyes had been done for chronic iritis with numerous synechiae including the pupillary area and decline of vision. He remarked the ease with which the synechiae were broken up and the practical improvement in vision. He presented a second patient, female aged 48, bilateral lymphoma of lacrimal, parotid and sublingual glands and proptosis of the left eye in which removal of the lacrimal gland gave negative result. Microscopic examination showed a picture resembling lympho-sarcoma. The doctor was considering the advisability of X-ray or radium treatment.

Dr. F. D. Phinney demonstrated the exophthalmometer which is quite accurate in estimating the amount of proptosis present and whether treatment has improved the condition. Particularly of value in exophthalmic goitre.

Dr. Derrick T. Vail read a paper on "Sympathetic Ophthalmia", emphasizing the Gifford treatment.—W. E. Schneck, Secretary.

### CHOSEN FOR MOSCOW TRIP

Dr. M. D. Godfrey, Columbus, who for the past year has been studying in Vienna, has been chosen as one of the 10 physicians to go with the Hoover administration to Moscow, Russia. Dr. Godfrey, after being discharged from the army, went to Vienna and entered a hospital for special work in infants' diseases. Recently he volunteered for Red Cross service and was stationed in Prague. In November he was ordered to London to receive final instructions from the Hoover headquarters, prior to leaving for Russia.

# RADIUM

Cancer of the Cervix responds particularly well to Radium, especially when supplemented by X-Ray, applied externally.

Some of our most prominent surgeons are not operating upon Cancer of the Cervix at the present time.

Your inquiries are invited.



DR. CHAS. F. BOWEN  
344 EAST STATE STREET  
COLUMBUS, OHIO

## Ohio Health Code, Placed on Trial in Cuyahoga County, Upheld by Supreme Court

The validity of the Hughes-Griswold Act, Ohio's modern and model health code, has been sustained by the state supreme court in a unanimous opinion construing the law as "a valid enactment not in conflict with the provisions of the constitution."

The decision on this measure which placed Ohio in the forefront in health administration in response to a demand for relief from the previous incompetent and poorly paid health official system, was bitterly fought through the courts and was considered the final effort to interfere with the operation of the law.

The decision removes the last obstacle to complete organization and follows the formal announcement of the Health Department that the state is organized almost completely, as contemplated by the law, which became effective January 1, 1920.

In his decision Justice James G. Johnson, who wrote the opinion for the court, says that the lawmaking power has authority to prescribe general health and sanitary regulations.

"The peace, morals, health and safety of the citizens are a matter of concern to the state," the opinion says, "and the small divisions of government may be compelled to contribute their share of the expense.

The suit that called forth the opinion was one in mandamus brought by the villages of Cuyahoga Heights and West Park against Auditor John A. Zangerle, of Cuyahoga County, to compel him to restore to the municipalities money that had been retained for the Cuyahoga general health district.

The syllabi in this case as handed down by the Supreme Court on December 6, held:

1. The general assembly in the exercise of the legislative power conferred by the constitution has authority to enact general laws prescribing health, sanitary and similar regulations effective throughout the state; and to provide such reasonable classification therein as may be deemed necessary to accomplish the object sought.

2. The peace, morals, health and safety of the people are a matter of concern to the state, and when the state has enacted general laws providing sanitary and similar regulations effective throughout the state the different subdivisions of the government may be required to contribute to the carrying out of the legislation.

3. Where there are two possible interpretations of a statute, one of which will render it valid and the other invalid, courts will adopt the former so as to bring it into harmony with the constitution.

4. The Griswold health act (108 O. L., pt. 2, page 1085; Section 1261-16 et. seq., General

Code) does not require the application of a tax levied for a certain distinct object to a different object in violation of Section 5, Article XII of the Constitution, and it is the duty of the county auditor in retaining the prorata amount apportioned to each township and municipality for health purposes to do so only from such funds as are legally applicable to such purposes.

5. The Hughes health law (108 O. L., pt. 1, 236; Section 1261-16 et seq., General Code), the Griswold law (108 O. L., pt. 2, 1085) which amended it, are valid enactments not in conflict with the provisions of the constitution.

\* \* \*

Although another ruling is given only in overruling a demurrer to a petition in mandamus, it is considered that its effect will be to hold that Hamilton County must pay the state for the support of children in the Ohio Institution for Feeble-Minded Youth. The suit is one of the Attorney General against County Treasurer Louis J. Huwe, and for the period from 1910 to 1915. The amount is \$68,907, and for the period from 1915 to 1921 probably is still larger.

Attorney General John G. Price represented that the proper financial officers made demands upon Hamilton County, but that the treasurer refused to honor the drafts and the county officials refused to levy taxes to pay the accounts. The county demurred.

The opinion, by Justice E. S. Matthias, concurred in by practically all his associates, holds that a proceeding in mandamus may be maintained to require a public officer to perform an act which the law specifically enjoins as a duty resulting from his office where there is not a plain and adequate remedy in the ordinary course of law.

It also is held that an action in mandamus may be maintained where there are not sufficient funds in the treasury to pay the claims against the county commissioners and county auditor to make the levy to satisfy the claim.

### National Board Exams Next Month

The first examination of the National Board of Medical Examiners under the new plan outlined in the November, 1921, issue of *The Journal*, in Part I and II will be held as follows:

Part I, February 15, 16 and 17, inclusive.

Part II, February 20 and 21, inclusive.

Applications for examination should be received no later than January 15. Application blanks and circulars of information may be had by writing to the secretary, Dr. J. S. Rodman, 1310 Medical Arts Building, Philadelphia, Pennsylvania.



## Six Years Experience with Radium Over One Thousand Cases Treated

*Adequate amounts of Radium in both tubes and needles to meet any and all requirements at any time. Patients requiring hospital accommodations are treated at Mt. Carmel, Grant, Protestant, St. Francis or McKindey Hospitals at the option of the physician or surgeon referring the patient.*

*Ethical co-operation assured.*



**BEN. R. KIRKENDALL, M. D.**

137 E. State St.

Columbus, Ohio



Thirty-eight applicants for licenses to practice medicine in Ohio took the examination conducted by the State Medical Board, December 7-9. The candidates represented twenty-two schools widely distributed over the United States and other countries, including the Universities of Budapest, Hungary; Naples, Italy; Palermo, Italy; Zurich, Switzerland; Kolozfvar, Roumania. It is interesting to note that there were as many candidates from Harvard, Johns Hopkins and Jefferson as there were from any of the Ohio colleges, there being three from each of these schools and Western Reserve, while the University of Cincinnati and the Eclectic Medical College of Cincinnati each furnished two candidates. The examination questions are given elsewhere on this page.

Among applicants for licenses to practice limited branches were eight osteopaths; three osteopaths for surgery only; one chiropractor; two cosmetic therapists; two chiroprodists; 13 midwives and three masseurs.

#### PROSECUTIONS

J. F. Koehl, Akron, was fined \$100 and costs in Municipal Court for practicing chiropody without a license; \$75.00 suspended on good behavior.

—Mrs. A. Michlak, Bridgeport, fined \$25.00 and costs for illegal practice of midwifery, December 5.

—C. M. Harner, healer, was fined \$50.00 and costs by Justice J. E. Jones, Xenia, December 10, for illegal practice of medicine.

—C. A. Patrick, Columbus, fined \$25.00 and costs, December 10, by Municipal Judge Ruth for illegal practice of medicine.

—Elizabeth Kish, found guilty in the Municipal Court of Akron on two charges of illegally practicing medicine, was fined \$250 and costs on each count, with \$200 of each charge suspended pending good behavior.

—Robert E. McDargh, pleaded guilty in Columbus Municipal Court, November 12, to a charge of illegal practice of medicine, and was fined \$25.00 and costs.

#### December Examination Questions

##### BACTERIOLOGY, PATHOLOGY AND HYGIENE

1. Name five pathogenic bacteria and give morphologic and cultural characteristics of each.
2. Describe serum sensitization and tell how to recognize its presence.
3. In testing water and finding a bacillus of the colon group, how would you differentiate between *b. coli* and *b. typhosus*?
4. Describe the macroscopic and microscopic appearance of cancer of the uterine cervix and

## The Kennedy Radium Laboratory

Established 1914

Dr. Thomas C. Kennedy  
Dr. Will H. Kennedy

For application of radium in malignant and other diseases where indicated.

Co-operation with physicians or surgeons desired.

All inquiries or request for information will receive prompt attention.

709 HUME-MANSUR BLDG.  
INDIANAPOLIS, INDIANA

## Cincinnati Radium Laboratory

22 West Seventh Street

Needle, Tube and Plaque  
Applicators



CHARLES GOOSMANN, M. D.

Combined X-Ray and Radium Treatments  
Used Wherever Indicated.



# RADIUM

TUBULAR APPLICATORS  
 NEEDLE APPLICATORS - FLAT APPLICATORS  
*and*  
 APPLICATORS of SPECIAL DESIGN  
 Complete Installations of Emanation Apparatus

SOLD ON BASIS of U. S. BUREAU  
 of STANDARDS CERTIFICATE

*Correspondence Invited By Our*  
 PHYSICAL, CHEMICAL & MEDICAL DEPARTMENTS

THE RADIUM COMPANY  
 OF COLORADO, Inc.

*Main Office and Reduction Works*  
 DENVER, COLO., U. S. A.

122	<i>Branch Offices</i>	
S. Michigan Ave.	50 Union Square	LONDON
CHICAGO	NEW YORK	PARIS



## The Holzer Hospital Gallipolis, Ohio

*Announces the purchase of a sufficient quantity of radium for all therapeutic uses.*

# Radium Service

By the Physicians Radium Association of Chicago (Inc.)

Established to make Radium more available for approved therapeutic purposes in the **Middle States** Has *the* large and complete equipment needed to meet the special requirements of any case in which Radium Therapy is indicated. Radium furnished to physicians, or treatments referred to us, given here, if preferred. Moderate rental fees charged.

Careful consideration will be given inquiries concerning cases in which the use of Radium is indicated.

### BOARD OF DIRECTORS

- William L. Baum, M. D.
- N. Sproat Heaney, M. D.
- Frederick Menge, M. D.
- Thomas J. Watkins, M. D.

## The Physicians Radium Association

1104 Tower Bldg., 6 N. Michigan Ave.  
 CHICAGO

Telephones: | Manager:  
 Randolph 6897-6898 | William L. Brown, M. D.

name chief channels of metastasis. 5. Describe the pathologic process of suppurative appendicitis. 6. Describe the pathologic changes in locomotor ataxia. 7. Give the pathologic possibilities in thrombosis of veins in the lower extremity. 8. Name the diseases which should be reported to the local health officer. 9. What measures should a health officer take in an epidemic of acute anterior poliomyelitis? 10. When sore throat is unduly prevalent among school children in a community, what should be suspected and what steps should be taken.

#### DIAGNOSIS

1. Give differential diagnosis of enlarged cervical glands. 2. What diseases cause enlargement of left ventricle? 3. Name the most important diagnostic signs in (a) scarlet fever (b) diphtheria (c) measles. 4. Retention of urine; give causes, how differentiate. 5. Diagnosis, prognosis and treatment of paralysis agitans. 6. Give physical signs of aneurism of the aorta. 7. Define an hallucination and a delusion. 8. Differentiate epidemic cerebrospinal meningitis and tuberculous meningitis. 9. Discuss (a) angioneurotic edema (b) Raynauds' disease. 10. Give early signs of tabes dorsalis.

#### PHYSIOLOGY

1. What is the normal proportion of blood in the human body, and how is it renewed after hemorrhage? 2. Describe a complete physiologic cycle of the heart. 3. State the composition and mechanical functions of the saliva. What relation does the saliva bear to the sense of taste? 4. Name the centers and the nerves which regulate intestinal peristalsis, and describe their action. 5. State briefly the function of each class of foods in the nutritive process. 6. Give the origin and uses of lymph. 7. What are ptomaines, and how are they produced? 8. Name some of the involuntary muscles and the function with which each is concerned. 9. State the functions of (a) the vas deferens, (b) the vesiculae seminales, and (c) the prostate gland. 10. What is the physiologic significance of the normal patellar reflex, and through what nerves is it accomplished?

#### SPECIALTIES

1. Define and give symptoms and treatment of acne vulgaris. 2. Define blepharitis marginalis and name some of the sequelae of neglected cases. 3. What are the symptoms of chronic suppurative inflammation of the middle ear? Give treatment. 4. What indications call for the removal of adenoids? 5. Give symptoms and treatment of acute laryngitis.

#### MATERIA MEDICA (Regular)

1. Write a prescription containing not less

than three drugs to be used in the treatment of dysentery in an adult patient. What dietary treatment would you also advise? 2. Belladonna—Discuss its action, use and dosage. What is its principal alkaloid and how is it used? 3. What is a hypnotic? Name three giving dose of each preparation. 4. Explain the action and use of diuretics. 5. Digitalis—Give its physiological action. In what conditions is it used? 6. Describe in detail your treatment in a case of diphtheria in a child of six years. 7. Discuss the action of heat and cold as therapeutic agents. In what conditions would you employ them? 8. What remedies are to be used to correct anemic conditions? How should they be employed? 9. Apomorphine—From what is it derived? In what conditions is it used? Give its physiological action and dose. 10. Name two cerebral sedatives and describe their therapeutic actions.

#### MATERIA MEDICA (Homoeopathic)

1. A patient complains of "generalized weakness"; upon examination this is found to be due to anaemia. Which of the following remedies is homoeopathic to this condition and tell why? Gelsemium-Arsenicum. 2. To what form of paralysis is Stannum met. and Lathyrus sat. homoeopathic. 3. Give the characteristic symptoms of Bryonia; Ipecac; Nux Vom. 4. Differentiate the cough of Phosphorus from that of Causticum. 5. Give the therapeutics of gastric ulcer. 6. Why is a diagnosis essential to an accurate prescription? 7. Give the physiological action of Agaricus and show what symptoms of this remedy under the various divisions of the Hahnemannian scheme may be explained by this action. 8. What homoeopathic remedies are apt to be indicated in hypothyroidism? 9. Indications for four remedies in typhoid fever. 10. Discuss fully the mental symptoms of Aconite; Rhus tox; Cimicifuga.

#### MATERIA MEDICA (Eclectic)

1. Name three plant remedies that are used as cathartics. Give their specific indications, and usual dose. 2. Give the specific indications for the use of Bryonia, and usual dose. 3. Name five alkaloids, and give accurate dosage. 4. Give the specific indications for the use of acids. 5. Give the symptoms of poisoning by phenol. Give antidote and usual treatment. 6. What remedies would you use in the various stages of a typical case of typhoid fever? Give dosage. 7. Differentiate carefully, the therapeutic uses of belladonna and gelsemium. 8. Name three saline laxatives, with dosage. 9. What is the physiological effect of ergot? Give specific indications for its use, and dosage. 10. Give the indications and dosage of bismuth sub-nitrate.

Happy New Year---  
A Prosperous 1922

Are the First Greetings  
to the Medical Profession of Ohio  
from



1104-1108 N. High St.

Columbus, Ohio

The Management of an Infant's Diet

## Mellin's Food

was introduced to the medical profession in 1866.

It was the first

## Maltose and Dextrins

product presented to physicians in serviceable form.

This means over fifty years' experience in the selection of materials that enter into the manufacture of Mellin's Food.

This means over fifty years' experience in the manipulation of these materials to secure certain definite results.

This means over fifty years' experience in the perfection of every detail that would have a bearing upon the making of

## A Superior Product

which we claim Mellin's Food to be.

Mellin's Food Company, Boston, Mass.

## PRACTICE

1. Give the etiology, symptoms and treatment of tetanus. 2. Give the symptoms and medical treatment of exophthalmic goitre. 3. Give etiology and treatment of hematuria. 4. How would you arrange a diet for a case of diabetes mellitus of moderate severity? 5. Outline the treatment of a case of scarlet fever and tell how you would recognize the occurrence of some of the more common complications. 6. Define etiology and the more important symptoms. 7. Give the symptoms and treatment of bronchopneumonia in a child of ten years. 8. Give the symptoms and prognosis in a case of cerebral hemorrhage. 9. Give the symptoms of disseminated sclerosis. 10. Describe herpes zoster and give treatment.

## CHEMISTRY

1. Describe concisely, one test for albumin, and one for sugar, in the urine. Upon what chemical action is each based? 2. What is the difference between ethyl and methyl alcohol? Give formulae. How would you treat a case of poisoning with wood alcohol? 3. Name the chlorides of mercury. Give formulae. Which is poisonous? Give treatment. 4. Give the principal constituents of cow's milk by percentage. How could you detect water adulteration? 5. What is urea? Give chemical formula. How does it originate in the body?

## ANATOMY

1. Give the gross anatomy of the spine. 2. Give the principal points to which the spinal accessory nerve is distributed. 3. Give origin and insertion of the muscles of the fore arm. 4. Describe the diaphragm. Give its uses, relations and openings. 5. Describe the ureters and give their pelvic relations.

## SURGERY

1. Diagnosis and treatment of simple Colles' fracture. 2. Diagnosis and treatment of volvulus. 3. Describe clearly surgical treatment of varicose veins of leg. 4. Give treatment and prognosis of acute salpingitis. 5. What produces surgical shock? 6. Give treatment of lacerated wound of ankle including repair of several Achilles' tendon. 7. Diagnosis and treatment of fracture of internal condyle of humerus. 8. Describe treatment of fistula in ano. 9. Give diagnosis of fracture of base of skull. 10. When would you use drainage after appendectomy? Be specific.

## OBSTETRICS

1. Uterine inertia—Discuss its causes and outline treatment for this condition. 2. State the most important signs of pregnancy up to the fourth month. 3. Discuss (a) placenta praevia (b) eclampsia. Outline treatment for each condition. 4. Diagnose posterior positions of vertex presentation and discuss the management of these conditions. 5. When is Version indicated? Outline your procedure to accomplish it.

**Dares Haemoglobinometer**

Candle lighted, or Electric lighted.  
We are accepting orders for prompt delivery.  
Write for booklet and prices.

**Tycos Office Sphygmomanometer**

With 6 inch silvered dial.  
A distinct advance over the pocket type.  
Immediate delivery. Price \$37.50.

Surgical Instruments—Dressings,  
Pharmaceuticals, Biologicals

Your orders will receive prompt attention—  
"You will do better in Toledo."

**The Rupp and Bowman Co.**

319 Superior St.  
TOLEDO, OHIO

**Prescribe**

**"Horlick's"**  
the Original and Genuine

Endorsed by the medical profession, who for over a third of a century have proven its reliability in the feeding of infants, nursing mothers, convalescents, and the aged.

*Samples prepaid upon request.*

**Horlick's Malted Milk Co.**  
Racine, Wisconsin



*Infant Feeding*

*Diet Materials*

**WHEN YOU WANT IT, AS YOU WANT IT**

The physician's individual feeding formula is what counts because he realizes that most of the baby's troubles are nutritional. Happy was the day when the physician himself changed the rate of infant mortality by prescribing feeding formulas for the individual infant.

In line with this thought Mead Johnson & Company co-operate with the physicians by offering their

**MEAD'S DEXTRI-MALTOSE No. 1 for the Average Baby.**

**MEAD'S DEXTRI-MALTOSE No. 3 for the Constipated Baby.**

**MEAD'S CASEC (Calcium Caseinate) for the Colicky Breast-Fed Baby.**

and various materials for making gruels, such as **MEAD'S ARROWROOT** and **MEAD'S BARLEY FLOUR**, all of which **CARRY NO LAITY DIRECTIONS ON THE TRADE PACKAGES.**

These products are worth investigating and we would be very glad to describe their uses in meeting your individual feeding problems.

Upon application literature will be sent by return mail.

**The Mead Johnson Policy**

Mead's Infant Diet Materials are advertised only to physicians. No feeding directions accompany trade packages. Information regarding their use reaches the mother only by written instructions from her doctor on his own private prescription blank.

**MEAD JOHNSON & COMPANY**  
EVANSVILLE INDIANA, U.S.A.



TRADE MARK



Not a "hit and miss" relief of pain and congestion at the expense of the heart, kidneys, intestines and nervous system, like the old-time coal-tar derivatives.

Information, Literature and Ample Trial Quantity from

But the promptest and most reliable analgesic and decongestive action so far known, with notable freedom from heart depressant, kidney-irritant, constipating and cumulative toxic by-effects.

**SCHERING & GLATZ, INC.**  
150 Maiden Lane, New York

**NEURALGIA - NEURITIS**  
**LUMBAGO - SCIATICA**

## Proportion of Physical Defects Among College Students Presents Interesting Data for Consideration

The annual report recently submitted by Dr. J. H. Nichols of the Department of Physical Education at Ohio State University on the physical examinations of first-year male students reveal some interesting findings. The rating and grading of these 1689 students shows that only eighteen per cent. fall in Class A or are in excellent physical condition. Eighty per cent. fall in Class B, two per cent. in Class C, and less than one per cent. in Class D, which includes those who are crippled and extremely deficient in physical development.

In this rating test the height, weight, lung capacity and chest expansion were taken; all postural defects, such as round shoulders, low shoulders, curvature of the spine, knock knees and flat feet were recorded and the condition of the eyes, nose and throat, teeth, skin and glandular condition, heart, lungs and kidneys determined.

### POSTURAL DEFECTS

The outstanding feature of the results of these examinations for the past five years is that a large per cent. of students have marked postural defects, are under-developed physically and handle their bodies poorly. It is true that the

poor mechanical handling of their bodies is offset greatly by their youth and otherwise good physical condition.

The results of the examinations certainly suggest that the public schools and preparatory schools might do much toward preventing poor habits of posture and the deficient physical development if an adequate system of physical education, beginning in the first grade, could be adopted in all the schools.

### TOBACCO

Six hundred and twenty-nine of this year's freshman class use tobacco in some form. This is a five per cent. decrease from last year, which was forty-two per cent., and a one per cent. decrease from 1919-20. Two hundred and seventy-eight or forty-four per cent. of the men using tobacco smoke cigarettes. Last year fifty-two per cent. used cigarettes, twelve per cent. used cigars, thirty-eight per cent. a pipe, and five per cent., or thirty-two men, admit they chew. Fortunately, chewing is not a very common habit among students, about the same number using tobacco in this form each year.

The year following the war showed a larger

## "HALT"

### POST A GUARD ON YOUR R WORK

"PROTECTION" is the first and most important feature in all fields of endeavor.

Who can afford to risk the results of their painstaking examinations by fitting glasses to their patients made for "a price?" Remember,—where low price is THE object, "QUALITY IS TAINTED." The country is now flooded with the greatest quantity, of "second," "third" and "export" quality lenses in the history of the Optical business. They are being offered to the trade as first quality at ridiculously low prices, BUT when the quality is considered, any price is exorbitant for inferior, defective lenses, such as we have seen delivered.

It behooves every Refractionist to "look well" to his source of supplies during the crisis of this readjustment period. Make sure of the quality of the glasses you supply your patients by patronizing a House in which you are justified in having absolute confidence.

WHITE-HAINES have always used first quality lenses from the recognized highest class Lens Manufacturers and you are assured that your work is safeguarded when your prescriptions are sent to them.

## The White-Haines Optical Company

*Four Shops Where Spectacles Are Correctly Made.*

Columbus, Ohio

Indianapolis, Ind.

Pittsburg, Penna.

Springfield, Ill.



# SAVE MONEY ON YOUR X-RAY SUPPLIES

Get Our Price List and Discounts on Quantities Before You Purchase  
**HUNDREDS OF DOCTORS FIND WE SAVE THEM FROM 10% TO 25% ON X-RAY LABORATORY COSTS**

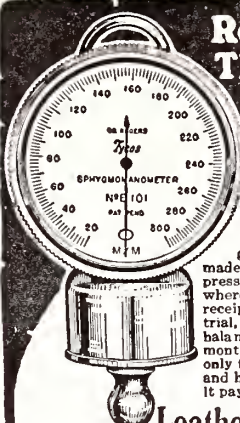
## Among the Many Articles Sold Are

- X-RAY PLATES.** These brands in stock for quick shipment, PARAGON Brand, for finest work; UNIVERSAL Brand, where price is important.
- X-RAY FILMS.** Duplitzed or Dental—all standard sizes. Eastman, Ilford or X-ograph metal backed. Fast or slow emulsion.
- BARIUM SULPHATE.** For stomach work. Finest grade. Low price.
- COOLIDGE X-RAY TUBES.** 5 Styles, 10 or 30 milliamp.—Radiator (small bulb), or broad, medium or fine focus, large bulb. Lead Glass Shields for Radiator type.
- DEVELOPING TANKS.** 4 or 6 compartment stone, will end your dark room troubles. 5 sizes of Enameled Steel Tanks.
- DENTAL FILM MOUNTS.** Black or gray cardboard with celluloid window or all celluloid type, one to eleven film openings. Special list and samples on request. Price includes your name and address.
- DEVELOPER CHEMICALS.** Metol, Hydroquinone, Hypt, etc.
- INTENSIFYING SCREENS.** Paterson TE, or celloid-backed screens. Reduce exposure to one-fourth or less. Double screens for film. All-metal Cassettes.
- LEADED GLOVES AND APRONS.** (New type glove, lower priced).
- FILING ENVELOPES** with printed X-Ray form. (For used plates). Order direct or through your dealer.

If You Have a Machine Get Your Name on Our Mailing List



**GEO. W. BRADY & CO.**  
 771 So. Western Ave.,  
 Chicago



## Rent This TYCOS Nine Months Then It's Yours

**\$2.50 Monthly Brings It**

The new 1922 model celebrated Blood Pressure Apparatus, Dr. Rogers' Sphygmomanometer is very accurately made and registers both systolic and diastolic pressures. The cash price of the Tycoseverywhere is \$25.00. We will send it to you on receipt of only \$2.50 and, if after ten days' trial, you wish to keep it, simply pay the balance—\$22.50—the same as rent—in nine monthly payments of \$2.50 each. You pay only the cash price (no interest—no extras) and have nine full months in which to make it pay for itself.

### Leather Case and Booklet Free

With every Tycos is included Free a genuine moroccolleather case. You can put your Tycos into this case and carry the entire instrument in your pocket. Besides the case, we give you Free, a 44-page booklet which explains accurately, thoroughly and plainly just how and why the Sphygmomanometer is essential to the intelligent practice of medicine.

### Ten Days' Trial—Money Back

Send today. Just sign and mail the coupon below—enclose \$2.50 for first month's rent and we will immediately send you the instrument and you will only have to pay \$2.50 each month until the cash price, \$25.00, is paid in full. Send that \$2.50 today. Remember, we give ten days' trial and return your money if you are not satisfied. The price for all cash with order is just the same, \$25.00.

----- SIGN AND MAIL COUPON -----

A. S. ALOE CO. Factory Distributors. Olive St., St. Louis, Mo.  
 I enclose first payment, \$2.50, for which send me Dr. Rogers' TYCOS and Outfit on ten days' trial as per your offer. I agree that the title is to remain in you until paid in full.

Name .....

Address .....

## THE STORM BINDER AND ABDOMINAL SUPPORTER

PATENTED

### For Men, Women, Children and Babies

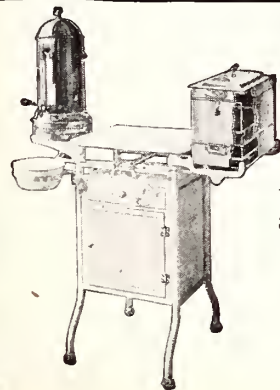


Modifications for Hernia, Relaxed Sacro-iliac Articulations, Floating Kidney, High and Low Operations, Ptosis, Pregnancy,  
 :: Pertussis, Obesity, Etc. ::

Send for new folder and testimonials of physicians. General mail orders filled at Philadelphia only—within twenty-four hours

KATHERINE L. STORM, M. D., 1701 Diamond Street - - - Philadelphia

## The Lebanon Sterilizing Outfit



This is one of the most popular and up-to-date office equipments. The stand has a drawer and a dressing cabinet with shelf. The sterilizer equipment comprises a combination Dressing and Instrument Sterilizer and a three-gallon urn and is heavily nickel plated. Furnished with gasoline, gas or electric heaters.

**THE MAX WOCHER & SON CO.**

Surgical Instruments—Orthopaedic Appliances—Hospital Furniture  
 19-27 W. Sixth Street Cincinnati, Ohio

per cent. of first year men using tobacco than ever before, forty-two per cent.

#### SWIMMING

This year twenty-eight per cent. of the men examined were unable to swim, which is three per cent. more than last year and just the same as the year before. Over the past five years there has been an increase in the number of men who are able to swim, 1223 falling into this group this year.

#### VACCINATION

Nineteen per cent. have not been vaccinated, 312 being referred for vaccination. This is a three per cent. decrease over last year, which may be interpreted as reflecting an enlightened public opinion or a more rigid enforcement of the vaccination law in the schools of the state.

#### TEETH

Very few students, only 62 or 63 per cent., were found to have neglected and decayed teeth, and this has been true since examinations were begun in 1916. There is a growing appreciation of the importance of caring for the teeth.

#### EYES

Very few suffer from gross uncorrected defects of the eye. About 18 per cent. of the entering students wear glasses, and 10 per cent., who are not wearing glasses, have defective sight.

#### TONSILS

During the past five years the number of men who have had their tonsils removed has been steadily increasing, this year 13 per cent. having had this operation, indicating a real appreciation of the dangers of diseased tonsils, by parents.

#### HEART

A total of 40, or 2.5 per cent. of the first-year men were found to have organic heart disease. The most important reason for completing examinations the first week of school and before any physical or military work is begun, is to prevent this class of students from being put into physical activities that would injure them and might further impair the heart condition. These men are all put in special classes under medical supervision in physical education.

More than 250 men were trying out for athletic teams at the beginning of the present semester. For athletes the examinations are repeated for each sport in which they participate.

Dr. Nichols' report recommends that another physical examination be given men students late in their college career, preferably in the senior year. This would make it possible to compare their physical condition with that of the freshman year and to determine to some extent whether students improve or deteriorate physically during the four years they attend the University. It would also make it possible to check up on old defects for which correction was advised and to discover any new conditions which may have developed during the school course.

# To Prevent Hydrophobia

Use

## Pasteur Treatment

With a

Potent Product and Prompt Service  
PRICE \$25.00

Order from

James McIlvaine Phillips, M. D.

2057 N. High St.

Columbus,

Ohio

LUETIN TEST  
URINE  
BLOOD  
SPUTUM  
EFFUSIONS  
STOMACH  
CONTENTS  
WASSERMANN &  
NOGUCHI  
REACTIONS  
GONORRHEAL  
COMPLEMENT  
FIXATION TEST  
BLOOD CHEMISTRY

AUTOGENOUS  
VACCINES  
FAECES  
GENITO-URINARY  
SURGICAL and  
GYNECOLOGICAL  
PATHOLOGY  
DARK FIELD  
ILLUMINATING  
FOR  
SPIROCHETA  
PALLIDA  
MEDICO-LEGAL  
POST MORTEM

# LABORATORY

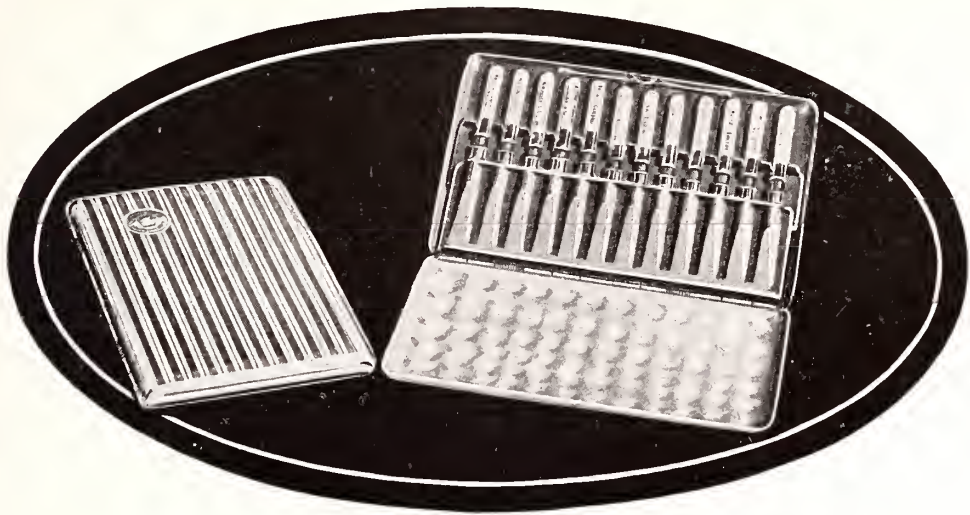
Clinical and Pathological

COLUMBUS, OHIO 370 East Town Street

J. J. Coons, B. S., M. D.  
H. M. Brundage, M. D.  
Dorris Coss, B. S., M. S.  
Coral Walters, B. A.

PROMPT SERVICE.

Immediate Report on Frozen Sections of all  
Tumors.



# Special Offer

On a handsome, white metal case, holding 12 Mulford Hypo-Units — the ever-ready, collapsible-tube syringe.

No larger than a cigarette case—fits the vest pocket.

And each Hypo-Unit is a complete syringe, with sterile needle and contents — ready for immediate use.

## \$5.00

**Mulford Hypo-Unit Pocket Case, filled with 12 Hypo-Units, as follows:—**

- 1—Atropine Sulphate, 1-100 gr.
- 2—Digital Aqueous
- 1—Caffeine and Sodium Benzoate, 2 1-2 gr.
- 2—Cardiac, No. 1
- 2—Camphor in Oil, 2 gr.
- 2—Nitroglycerin, 1-100 gr.
- 2—Strychnine Sulphate, 1-60 gr.

**Price, filled..... \$5.00**

**Price, filled and with 7 boxes of refills..... 12.00**

(Special fillings upon request)

**Use This Coupon**

**H. K. MULFORD CO., Philadelphia, Pa. (Dept. )**

Please send, charges prepaid: (check order desired)

- 1 Mulford Hypo-Unit Case, Filled ..... \$ 5.00
- 1 Mulford Hypo-Unit Case Filled and with 7 boxes of refills ..... 12.00

My Druggist's Name and Address below

Enclosed is my check for \$ \_\_\_\_\_

Name \_\_\_\_\_ M. D.

Address \_\_\_\_\_

## H. K. Mulford Company

Philadelphia, U. S. A.

## Effort to Revive Old Age Pension Proposal Expected

An effort to secure the support of various factions favoring old age pensions in Ohio is being made by the Ohio State Federation of Labor, under the auspices of which a meeting is to be held in Columbus on January 10 and 11, when plans are expected to be made for the circulation of petitions initiating such a law.

In 1917 Governor Cox appointed a commission to study proposals of old age pensions and health insurance, as a result of which measures on each proposition later were introduced in the legislature. Neither, however, was acted upon, the first having been reported favorably by the committee which considered it, and the second having been reported out without recommendation.

Initiation of a law requires the securing of signatures of three per cent. of the electors of 44 counties, but those signatures must contain signatures of one and a half per cent. of the electors of at least 44 counties, approximately 60,000 or 65,000 names.

Then, if the initiated bill is not acted upon, a referendum declaring it a statute may be held, after signatures of three per cent. more electors, in at least 44 counties, are secured.

Determination to go ahead with plans to initiate such a law has resulted from the success of the soldiers' bonus, it is declared.

The original commission appointed by Governor Cox to study age and health conditions was composed of Donnelly; W. A. Julian, Cincinnati; M. B. Hammond, Columbus; Dr. A. R. Warner, Cleveland; O. B. Chapman, Dayton; Rev. D. F. Garland, Dayton; Dudley R. Kennedy, Youngstown.

The bill, the initiation of which is to be sponsored by the labor federation, probably will be similar to the one the last assembly refused to act upon.

This measure provides for the payment of approximately \$1 a day to persons over 65 years of age, after certain conditions have been complied with, and certain qualifications met, the salient ones being:

That the person be a resident of Ohio on the day he establishes his claim to pension.

That he has been a resident for not less than 15 years preceding such date.

That he has been a citizen of the United States for at least 15 years preceding the filing of application.

That his yearly income does not amount to \$350 or upward.

That the net capital value of the accumulated property of such person, or the accumulated property of a husband or wife of such person, does not amount to \$2500 or more.

Property rights of those applying for pensions are defined, and it is brought out that in the event of the awarding of a pension to a person with property, the real estate shall be conveyed to the pension commission and at the death of the pensioners sold and the difference between the proceeds and what has been paid to the donors in pensions, if any, turned over to the state.

## Every Physician

Is Interested In

## Physician's Supplies

In dispensing, he requires a great variety in his office—in prescribing he uses the **PRESCRIPTION DEPARTMENT** that is **UP-TO-DATE**.

If you are unacquainted with our plan of handling the physician's requirements, you may profit by giving us an opportunity to show you what we can do.

## The Wendt Bristol Co.

47 South High St., Columbus, Ohio

**FINE PHARMACEUTICAL SPECIALTIES**

## Our Business

is confined exclusively to the manufacture of Strictly High Grade Medicines and Pharmaceuticals *for Physicians, Dispensing and Prescribing.*



Our Offices and Laboratories are now located in our New Building, 330-336 Oak Street, one square north of Grant Hospital.

NO GOODS SOLD AT RETAIL

**The COLUMBUS PHARMACAL Co.**

COLUMBUS, OHIO



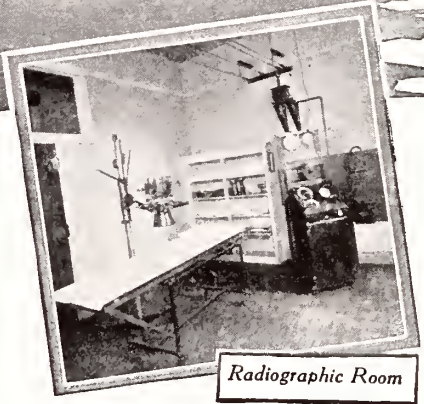
Treatment Room



Kansas City General Hospital With Victor Equipped X-Ray Laboratory



Transformer Room



Radiographic Room

# Selecting An X-Ray Machine

THE physician who decides to apply the X-Rays in his general practice requires more than a machine. What are the technical resources of the company that makes the machine? How far does that company co-operate with the medical profession in devising apparatus that meet its requirements? Is the company in a position to aid the practitioner with technical advice? Is it prepared to maintain its apparatus in perfect operative condition?

Clearly, the physician must deal with a manufacturer of X-Ray equipment who realizes that his responsibility does not end with the installation of a machine and who is governed by the standards that the medical profession observes in its dealings with the public.

Victor X-Ray apparatus is made by a company whose research facilities are unsurpassed. The

history of the X-Ray in medicine is practically the history of Victor apparatus. Hardly a year passes but the Victor Research Laboratories develop an improvement that enables the physician to use X-Rays with greater effectiveness.

The Victor X-Ray Corporation feels that its responsibility does not end with the installation of one of its machines. It maintains Service Stations in the principal cities—stations which the physician may call upon for technical assistance at a moment's notice and for repairs.

Physicians who install Victor apparatus are kept informed of the latest developments in X-Ray technique through "Service Suggestions," a publication which is issued from time to time by the Victor X-Ray Corporation and distributed gratuitously.

VICTOR X-RAY CORPORATION, Jackson Blvd. at Robey St., Chicago

*Territorial Sales and Service Stations:*

Columbus: J. L. Taylor, 145 E. State St.



## PUBLIC HEALTH NOTES

A series of weekly lectures on personal health, hygiene and development for members of the National Guard and civilians in Columbus and vicinity opened with a talk on "Keeping Fit" by Dr. R. G. Leland, adjutant of the 112 Medical Regiment, and chief of the division of hygiene of the State Department of Health. "Tuberculosis" with emphasis on the necessity for early examination, diagnosis and treatment, with some suggestions as to care, was the subject of the second lecture, given by Dr. Jackson Frank, head of the division of tuberculosis of the State Department. Other subjects included in the course were "Cancer", "Communicable Diseases", "Personal Hygiene" and Transportation of Sick and Wounded in Peace and War."

—Representatives of Rotary Clubs in five counties—Summit, Wayne, Stark, Portage and Holmes—meeting in Akron recently took initial steps toward organizing as one of the ten orthopedic districts contemplated for Ohio, for the purpose of making an intensified effort to furnish treatment and educational facilities to crippled children in these counties. Indorsement was given a proposed plan to have the counties join forces in employing a physiotherapist and orthopedic specialist to conduct clinical work in the district.

—County health commissioners of the state have been supplied with booklets on health preservation for distribution to school teachers in their districts. The booklets, issued by the State Department of Health, are intended to inform teachers how to detect symptoms of contagious disease and how to handle the afflicted until removed from school and referred to family physicians.

—Three cases of trachoma were reported by Dr. W. K. Ruble, Clinton County health commissioner, in November.

—Thirty-five delegates representing eight states from Minnesota to Massachusetts attended the meeting of the special industrial physical work committee of the National Physical Directors' Society in Springfield in November. The Western Ohio Physical Directors' Society met in conjunction with the committee. One of the speakers of note was Dr. J. W. McConnell of the United States Public Health Service, whose topic was "The Government's Health Problems."

—An educational campaign to stimulate the use of milk as a nutritious food is being carried on in Delaware and Delaware County under the joint auspices of the city and county health departments and the extension department of Ohio State University. Drs. C. W. Chidester and A. J. Pounds, city and county health commissioners, respectively, are overseeing the work.

**M**ORE people die from pneumonia than any other disease.

Approximately 25 out of every 100 cases end fatally. Dr. Gustav Goldman has demonstrated that at least twenty of these twenty-five deaths may be prevented by employing Bacterial Vaccines.

Why delay and chance a fatal termination?

*Dr. Gustav Goldman's article appeared in American Medicine, March, 1921*

Bacteriological Laboratories of  
**G. H. SHERMAN, M. D.**  
DETROIT, U. S. A.

## Fort Wayne Medical Laboratory Inc.

ESTABLISHED 1905

### CLINICAL AND X-RAY

DR. BONNELLE W. RHAMY, Director

Bacteriological, Serological, Pathological, Toxicological and Chemical examinations of all kinds given prompt, personal attention.

Full instructions, fee table, sterile containers, Keidel and culture tubes sent on request.

As early diagnosis is the important factor in successful treatment, it will pay to utilize dependable laboratory diagnosis early and often.

Wassermann Tests (Daily except Sunday).....\$5.00  
*(Send 3-5 cc. of blood)*

On every blood I use two antigens and run two tests; the regular method and the latest and best, the ice box method which is especially valuable when testing for cure, and in cases giving doubtful reactions. This insures an accurate report.

Gonorrhoea Complement Fixation Test.....\$5.00  
*(Send 3-5 cc. of blood)*

This seriological test is the very best means of determining the presence or absence (cure) of systemic Gonorrhoeal infection.

Tuberculosis Complement Fixation Test.....\$ 5.00

Blood Chemistry—Sugar—Urea—Nitrogen, etc.,

Each ..... 5.00

Spinal Fluid Gold Curve..... 5.00

Blood Typing for Transfusion..... 5.00

Blood Cultures..... 5.00

Tissue Diagnosis..... 5.00

Basal Metabolism Estimation..... 10.00

#### AUTOGENOUS VACCINES

Bacteriologic Diagnosis and cultures..... \$ 2.00

Twenty Doses Vaccine in 2 cc. vials..... 5.00

#### COMPLETE X-RAY DEPARTMENT

Diagnostic and Therapeutic

*Special Delivery Postage Insures Prompt Delivery*

327 W. Berry St. Ft. Wayne, Indiana

1 Block South from Interurban Station.

*To be used only  
under direction  
of a physician*

## A Food to Keep Babies Well

*Adapted to Mother's Milk*

S. M. A. is a finished product which may be used by the physician with every assurance of success. In prescribing S. M. A. he is not conducting an experiment in baby feeding, but is using a food which has been fed constantly in the dispensary for six years, and by scores of physicians in general practice for two years.

S. M. A. is a food to keep babies well. It is recommended to family physicians because it is a simple and satisfactory food for babies who are deprived of Mother's milk or who require food in addition to what the mother can supply; because it contains the required food elements; because it needs only

the addition of warm boiled water to prepare it whether for the month-old baby or for the baby a year old; because clinical records of S. M. A. feeding indicate absence of spasmophilia and because it makes happy, solid, breast-fed-looking infants.

It is easy to understand how S. M. A. rouses the parents' enthusiasm, and adds to the prestige of the physician.

Please write for the S. M. A. bulletin for physicians. It gives the history of S. M. A., and contains complete directions for its use.

\*H. J. Gerstenberger et al. I. Studies in the Adaptation of an Artificial Food to Human Milk. Am. J. Dis. Child. Vol. X, Pg. 249-265.

H. J. Gerstenberger et al. II. Studies in the Adaptation of an Artificial Food to Human Milk. (A Report of Three Years' Clinical Experience with the Feeding of S. M. A.) Am. J. Dis. Child. Vol. XVII, Pg. I.

**THE LABORATORY PRODUCTS COMPANY**  
3829 CEDAR AVENUE CLEVELAND, OHIO

### DISTRIBUTING AGENTS

Greater New York: Sheffield Farms  
Slawson Decker Co.

Greater Boston: H. P. Hood's Sons Co.

Philadelphia: Supplee-Wills-Jones Co.  
Abbott's Alderney Dairies Co.

Indianapolis: The Polk Sanitary Dairy  
Company

Detroit: Detroit Creamery Co.

Cleveland: The Telling-Belle Vernon  
Company

Milwaukee: Gridley Dairy Co.

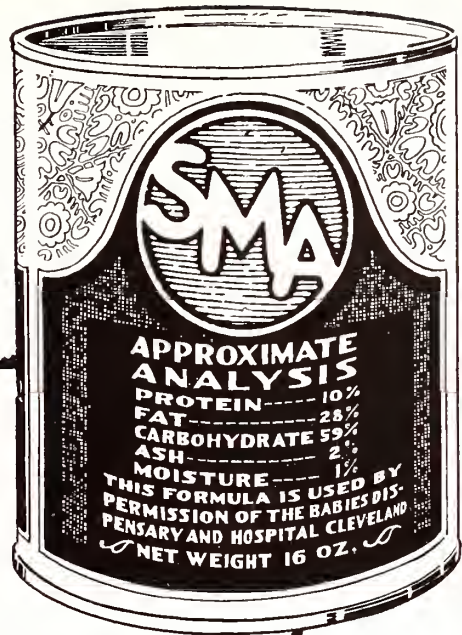
Louisville: D. H. Ewing's Sons

Montreal: The Guaranteed Pure Milk  
Co., Limited

Pittsburgh: Rieck-McJunkin Dairy Co.

Winnipeg: Crescent Creamery Co.

Akron: The Akron Pure Milk Co.



## Outbreak of Diarrhea and Enteritis at Delaware

About the middle of September an outbreak of diarrhea and enteritis in Delaware began which gradually increased in extent until November, reaching its peak between the eleventh and twentieth of that month. An investigation made by Dr. E. R. Shaffer of the State Department of Health showed that from 30 to 50 per cent. of the population had been affected and that the only victims were those who used the public water supply. The public water supply of the city is taken from a number of wells which have failed to yield a sufficient quantity of water, so that the supply has been supplemented by Olen-tangy River water. There is no filtration so the water has been treated with large amounts of chlorine. Owing to high turbidity the chlorine treatment was not always effective, and quite a number of samples have shown colon bacillus contamination.

At a recent meeting of the local board of health and representatives of the State Department of Health, the situation was thoroughly discussed and the danger of a typhoid fever epidemic pointed out. The board adopted a formal complaint addressed to the State Department of Health asking for an investigation and an order for the necessary improvements in the water supply system. The history and characteristics of the outbreak of diarrhea and enteritis at Delaware are so similar to that which occurred at Salem that the possibility of an extensive epidemic of typhoid fever cannot be overlooked. It is probable that prompt action will be taken by the State Department of Health to order such improvements as will prevent a repetition of the outbreak.

All necessary measures to cope with a possible outbreak of typhoid fever have been taken by the Delaware board of health and health commissioner.

### Dr. Fletcher on International Committee

Dr. Thurman R. Fletcher, chief medical examiner for the Industrial Commission of Ohio, has been appointed a member of the medical advisory committee of the International Congress of Industrial Commissions. Mr. H. C. Baker, director of the division of claims for the Ohio Commission, has been appointed a member of the committee on forms and procedure of the Congress.

The membership of the organization consists of the Industrial Commissions and officers who administer workmen's compensation laws in United States and Canada. The purpose of the committees is to secure uniformity in laws and procedure and gain the benefit of various experiences. Selection of two Ohioans to serve thereon is considered a tribute to the law of this state and its administration.

# Gastric Acidity

determined by a new method which is simple, accurate and rapid.

## The Shohl-King Gastric

### Analysis Outfit

A colorimetric apparatus for the determination of the true acidity of the gastric contents.

*Write for literature.*

**Hynson, Westcott & Dunning**  
BALTIMORE

## Silver-Salvarsan

(SILVER-ARSPHENAMINE-METZ)

The sodium salt of  
silver-diamino-dihydroxy-arsenobenzene

**R**ELATIVE infrequency of reaction, rapid disappearance of contagious lesions, and general therapeutic effectiveness seem to indicate that Silver-Salvarsan is a drug of real value in the treatment of syphilis.

Silver-Salvarsan requires no alkalization and its ease of administration commends it to many practitioners.

More than two million injections of Silver-Salvarsan have been given in the United States and abroad.

**HAMETZ LABORATORIES, Inc.**  
*One-Twenty-Two Hudson Street, New York*



# MEDICAL ECONOMICS

PUBLIC HEALTH - SOCIAL WELFARE *and* ORGANIZATION PROBLEMS  
WITH EDITORIAL COMMENT *by* D. K. M.

## State Medicine in Ohio

While the term "state medicine" without any additional definition and qualification is comparable in its indefiniteness to "relativity" which has been so frequently discussed with limited understanding in recent months, and while members of the medical profession should be genuinely concerned over any projects coming under the general heading of state medicine, there is at present an existing problem which must be met with clarity of thought and definite policy.

With the enactment of the Sheppard-Towner legislation in Congress, in the face of strong opposition from the medical profession, its provisions to be placed in operation merit the interest and careful consideration of the profession to the end that its application in this state may be limited to the public health administrative field of *education*.

Whatever elaboration is made on the general program of education to include clinics should be limited to the scope of consultation and diagnosis, with the understanding that this work, if undertaken, must not only be with the sanction and cooperation of the local medical organizations but under their management and direction, and that whatever patients are examined must be referred to the clinics by their family physicians for diagnostic and consultation purposes only; not remedial treatment.

If by chance the operation of the law is extended into the curative field this should be founded on the same principle of attention only to indigent cases or to those defects where curative steps are incident to prevention.

Ohio and each other state in the union will receive an outright grant of \$10,000 of federal funds for use in carrying out provisions under the Sheppard-Towner legislation. In addition, in proportion to population and provided Ohio appropriates an amount equal to that granted by the federal government, an additional amount of \$43,840 will be available to this state, which matched by a similar amount from Ohio funds and the outright federal grant of \$10,000 would provide almost one hundred thousand dollars for the current year in this state. With no immediate prospects of a special session of the Ohio legislature in 1922 and with little likelihood that the state emergency board will appropriate funds for this purpose, no elaborate program could be undertaken in Ohio this year under the grant of

\$10,000, thus limiting the program, for the time being at any rate, to one of education.

The medical profession of Ohio has cause for congratulation on the attitude of State Director of Health H. H. Snively toward these policies. Dr. Snively has made it clear that although acting as a public health official in the interest of all citizens of Ohio, he appreciates the advice and needs the cooperation of the medical profession in the determination of Ohio health policies. He has pledged his department to work out a harmonious alignment between public health administration and private medical practice. In a brief talk to the Council of the Ohio State Medical Association at its January meeting in Columbus he stated his desire, in compliance with a request presented to him by the Committee on Public Policy and Legislation of the State Association, to define in Ohio a definite policy on the proper relation between the medical profession and public health administration, with the idea that such policy should set an example for inter-relationship in these matters in other states, thus avoiding improper encroachment by public health administration into the proper realm of private medical practice. It will be remembered that the Committee on Public Policy and Legislation, the officers and Council of your State Association have given much thought and concerted effort toward an accurate definition of and restriction to state medicine. (In this connection see first editorial in the October, 1921, *Journal*.)

With close attention to problems incident to this policy the effects or non-effects in the application of the Sheppard-Towner provision will be carefully watched. The tendency toward socialism is strong and must be reckoned with. Its appeal is evidently alluring to many people. Garbed in the habiliments of welfare and health, socialism not readily recognized as such is making rapid strides.

With the consistent attention being given by the leaders in medical organization in Ohio to all economic, social and political problems affecting medical practice, there is little if any danger, *provided* the members realize the absolute necessity of a strong and harmonious organization, of the profession itself being "sold out" to socialized state medicine, of demoralization of medical standards or exploitation of medical service.

With a wholesome aversion to paternalism or the infringement upon state rights the medical

profession will be interested in the efforts of those groups which insisted on the enactment of the Sheppard-Towner bill to justify their demands made to Congress.

It is a serious question whether federal-state aid as a means of financing state work has not gone far enough, and whether public health work, except those activities which are clearly national in character, is not better carried forward as functions of state and local government.

This new legislation, if it is to effect a remedy for any existing difficulties must be carried forward on a sound, practical, restricted basis with due consideration for private relationship and with the inviolate status between physician and patient, rather than in a spirit of fanaticism or socialism.

In commenting on the interesting questions raised by the operation of the Sheppard-Towner bill one editorial writer says:

"The broad question is whether our people are to take care of themselves or be taken care of by the government; whether they are to manage their own affairs, or permit the government to do so; whether they are to be the independent, individualistic, resourceful people they used to be, or mere wards of the central authority. The issues are weighty, involving as they do both the character of our government and institutions, and of our people. Every scheme of government aid ought to be viewed with grave suspicion, for all such schemes involve fundamental political principles."

---

### Policy Problems

If there were no problems to solve and if absolute justice prevailed throughout the land, there would be little if any need for medical organization.

Representing as it does the collective thought and will of the profession, medical organization is necessary in order to translate such collective thought and will into effective action and activity for the advancement and benefit of the membership individually and collectively.

These are times of difficulty and uncertainty. Safety to medicine depends on strong organization including as nearly as possible one hundred per cent. of those eligible to membership.

The Council of The Ohio State Medical Association has been planning an extension of organization service. This is necessarily contingent on a sustained and gradually increasing membership.

Medical organization must be cohesive and sincerely responsive to the will of its members. There have been times when several prominent national leaders failed to represent the will and sentiment of the great majority—this was especially true in problems of state medicine and socialization of medical service.

The officers and policy committee of the Ohio

State Medical Association have been working for a closer contact between the constituent state organizations comprising the A. M. A. and for a concise definition of the proper function of public health administration, to the end that further encroachment into the field of private practice may be permanently halted.

As stated by Dr. Wells Teachnor, president of the State Association in a recent communication to the presidents and secretaries of county medical societies and academies of medicine, "the officers, Council and committees of the Association are keenly alert to existing conditions and definite problems with which the medical profession is confronted, and those who have been chosen by you to formulate policies, promulgate activities and to investigate such conditions are conscientiously and constantly striving for the advancement of the profession and for a proper recognition for it by the public and the state."

The existence of problems must first be recognized before they can be solved. The thoroughness of solution depends on effectiveness of organization, representative of and responsive to the membership. Attention to all such matters is pledged by the Council in its official minutes in this issue, including "problems with relation to the policies and personnel of the leadership in the A. M. A., with relation to medical education, foundation subsidies, the interrelation of the state medical societies, questions of state medicine, legislation, medico-political situations and cults."

---

### Medical Service in State Institutions

It is of interest to the medical profession of Ohio that the state board of control, the middle of January, allotted a sum of \$290,000 from the contingent appropriation by the legislature for that purpose, for the more adequate remuneration of assistant physicians, nurses and attendants at the state hospitals.

The sum of \$90,000 will be available between now and July 1, and \$200,000 between July 1, 1922, and July 1, 1923. The new schedule of compensation for assistant physicians in the state institutions will range from \$1,200 to \$2,600 per annum in addition to living quarters "found" and other perquisites.

The appropriation will also enable the State Department of Welfare to secure a well qualified physician for head of the medical department of the State Bureau of Juvenile Research; and to provide a staff for the new tuberculosis hospital at the Massillon institution.

The new arrangement is also expected to provide medical service on the basis of approximately one physician to every 300 patients in the state hospitals instead of the present ratio of one to 475.

An extension of clinical and curative work

based on more adequate service and equipment is expected to result from the new program. It is the ultimate policy of the Department of Welfare to return as many as possible of the state patients to useful, outside life following thorough examination, treatment and institutional care especially adopted to the various types of cases.

Comment has appeared in these columns from time to time emphasizing the importance of interest by members of the medical profession in the attitude of the state toward physicians in public service, especially those who hold executive positions as medical superintendents of state institutions.

It has been pointed out that the public derives its idea of the problems of medical service, and, in fact, largely evaluates such service on the basis of the recognition or lack of recognition by the state for the members of the profession serving as public officials in the administration of state institutions.

In the January issue of *The Journal* comment was made on statements attributed to State Director of Welfare MacAyeal for a medical promotional system in state institutions. A medical superintendent has taken exception to that comment, apparently misunderstanding that those physicians who have had long service in state institutions have themselves exemplified the necessity of years of training in this special kind of service, and thus illustrating the necessity for the state to provide not only adequate financial reward for such loyalty and service but also to provide sufficient assistance and adequate scientific equipment in the various state hospitals.

Those physicians who have given years of loyal service to the state may justly be proud of their accomplishments and are a credit to their own profession.

The sole purpose and idea of this *Journal* in commenting on the general situation in state institutions was to urge a greater support by the physicians for their fellow members who are giving their lives and efforts in the state service, and to encourage cooperation to the end that all necessary, adequate and desirable facilities in the way of additions to the medical staffs, technicians and laboratories might be made available.

The desirability of a medical promotional system in the state institutions is already illustrated and borne out by the splendid type of medical men who have reached their present positions as superintendents through continuous and meritorious service. They should not be hampered or restricted by lack of proper assistance and facilities in carrying forward and expending their service to the state wards. This type of service should be entirely outside the realm of political influence. The permanency and efficiency of such service depends on the interest, loyalty and permanency of the men in these positions.

### Income Tax Returns

The old saw "death and taxes" causes one at least occasionally to consider the inevitable. The federal income tax returns for 1921 must be made to the Collector of Internal Revenue in your district before March 15, accompanied by a remittance of at least one-fourth of the yearly tax.

Several changes have been made in the law since returns were required last year. In brief the law at present requires that a return shall be made by the following individuals:

1. Every individual having a net income for the taxable year of \$1,000 or over, if single, or if married and not living with husband or wife.

2. Every individual having a net income for the taxable year of \$2,000 or over, if married and living with husband or wife; and,

3. Every individual having a gross income for the taxable year of \$5,000 or over, regardless of the amount of his net income.

The normal and surtax rates for the year 1921 under the new law are the same as for the year 1920. However, the specific exemptions have been increased, except in the case of a single person, who is entitled to an exemption of only \$1,000, as heretofore.

The head of a family, or a married person living with husband or wife, is allowed an exemption of \$2,500, unless the net income is in excess of \$5,000, in which case the allowable exemption is only \$2,000. The old law allowed a flat exemption of \$2,000 to the head of a family or a married person.

An exemption of \$400 is allowed for each dependent under 18 years of age, or who is incapable of self-support because mentally or physically defective, instead of \$200, as under the revenue act of 1918.

Quite a number of physicians in making their returns last year, through ignorance of the fact that they were entitled to various exemptions, remitted to the government more than they should have. As a handy reminder these exemptions are set forth in some detail on page 139 of this issue.

---

### Workmen's Compensation—Occupational Diseases

By its action on the first group of claims presented to the State Industrial Commission under the occupational disease section the precedent and policy in handling claims of this nature in the future is being established.

Up to the middle of January about 140 claims had been filed with the Commission under the occupational disease section. Of those finally disposed of, 20 were allowed and eight were disallowed. Of those which were allowed dermatitis contracted from handling rubber or chemicals in the rubber industry constituted the basis for the majority. Lead poisoning contracted in storage battery industries, carbon dioxide poisoning

from a steel industry and dermatitis from varnish manufacturing are found in the list.

Practically all the claims so far filed are from employes of industrial establishments, only eight such claims coming from public employes. In all claims compensation so far has only been for temporary disability and medical fees. One case of death based on dermatitis from cutting oil in a roller bearing plant has not yet been heard.

In practically all cases which were disallowed it was found that the claimant was not employed for three months where the disease developed or the disease occurred before the law became effective on August 5.

The average period of disability on the cases so far heard ranges from one to 51 days.

In addition to the details in handling the new class of cases under the occupational disease law quite a number of other changes have occurred in the State Industrial Commission in the past few weeks, including dismissal of several heads of departments. The medical profession of Ohio is directly interested in the honest and efficient administration of the Workmen's Compensation Law, there being in excess of three million dollars' worth of medical service rendered by Ohio doctors in Industrial Commission cases in the course of a year. A more friendly attitude on the part of the physicians toward the administration of the law had developed during the past three or four years, largely due to the cooperation in the medical department of the Commission and the adoption of a more adequate medical fee schedule and the removal of the two hundred dollar limit for medical attention in special cases.

Perhaps due in a measure to the uncertain tenure of employes in the Industrial Commission there has been an occasional lack of interest in expediting cases and failure to respond to inquiries from physicians having claims against the Workmen's Compensation fund. It should be remembered in this connection that the headquarters of the Ohio State Medical Association are at the service of members of the Association in overcoming delays and seeing that cases are handled with fairness, efficiency and dispatch. Any information on the operation of the law or any complaint against its administration should be made known to the office of the Association so that proper action may be taken to correct any shortcomings.

#### Dr. McClellan III

As this issue went to press it was learned that Dr. James S. McClellan, veteran secretary of the Belmont County Medical Society and councilor of the Seventh District of the State Association, was confined to bed by illness in the Ohio Valley General Hospital, Wheeling, West Virginia. *The Journal* wishes him a full and speedy recovery.

#### Prohibition Prescription Sentiment

Early returns on the questionnaire issued by the American Medical Association on alcohol as a therapeutic agent are said to show that from Ohio the reply to the question of the value of whisky as a therapeutic agent in the practice of medicine brought forth 921 ayes and 931 noes, and in reply to the question of whether or not physicians should be held within definite limitations as restrictions in prescribing intoxicants, 1,014 ayes and 580 noes.

Returns from 33 states and the District of Columbia showed replies divided almost equally on the therapeutic value of whisky.

Of the first total of votes assembled from nineteen states it is said that 6,797 physicians replied that they did not consider whisky a necessary therapeutic agent, and that 6,519 asserted that they had found it of value. The first replies against beer appear to be in a majority of about three to one, with a less majority against wine.

The entire question of prohibition in Ohio is of particular interest at this time in view of the conflicting claims and figures set forth in the public press between the prohibition enforcement officers and some of the news and editorial writers. In a large front page spread on the subject of "Bootlegger Rule in Ohio" in one of the Columbus newspapers recently the following statement appeared:

"But all of us, wets and drys alike, and men and women who are neither wet nor dry, stand appalled at the amazing breakdown of law and the consequent growth of the spirit of anarchy throughout the state."

Unquestionably alcohol has a definite and distinct place in science, and the belief and knowledge of thousands of earnest physicians should and must be given consideration. On this point the *Ohio State Journal* under the heading of "Alcoholics as Medicine" comments editorially as follows:

"The Journal of the American Medical Association has been conducting a comprehensive canvass of physicians throughout the country to ascertain, if possible, the consensus of medical opinion on the value of whisky, beer and wine as medicines. In the ratio of less than 12 to 11 the doctors interviewed declared the belief that whisky is a necessary therapeutic agent. That beer and wine are not necessary in the practice of medicine was held by the doctors in the ratio of about 3 to 1 and 2 to 1, respectively.

"These composite opinions on the subject under consideration, while they reflect marked divergencies of views, are worth at least something. The opinions of radical drys or radical wets who are not physicians are worth positively nothing, for they are based on preconceived prejudices. The doctors, most of them at least, may be supposed to give unprejudiced conclusions from actual experience and, while their knowledge of their own science is far from perfect, they at least know more about it than the rest of us do and are the best guides we have. It seems likely that, as time goes on and some of the furious partisanship disappears from the discussion of the pro-

# Wounds and Injuries of the Scalp: Their Complications and Treatment\*

By J. EDWARD PIRRUNG, M.D., F. A. C. S., Cincinnati

*Editor's Note.*—Scalp wounds are of such varied nature and severity and are associated in so many instances, with more severe injuries of the skull and brain that they deserve very especial attention on the part of the surgeon. Superficial or deep debridement, depending on the conditions found, with the use of antitetanic serum should be a routine treatment. Not infrequently erysipelas, sepsis and cellulitis are complications to be feared. Also septic sinus involvement, septic meningitis and brain abscess may follow and prevention is better than attempts at surgical interference. Considering the conditions found postmortem in septic meningitis it is not surprising that laminectomy and drainage are not entirely successful.

**I**N A CONSIDERATION of injuries of the head we pass in review those of the soft coverings and next those involving the bony structure, finally those involving the brain and its coverings, together with the vessels and nerves contained within the bony skull. My discussion shall be entirely limited to a consideration of the effect of injury on the soft structure (outside of the skull) together with a review of the commoner complications of scalp wounds, viz., infection and diseases involving the tissues in contact with the wound, or those infections and diseases which are carried through the blood and lymph streams to the sinuses and coverings of the brain. Lymph channel infections transferred to the structures of the head, face and neck are additional complications to be considered.

## ANATOMICAL CONSIDERATIONS

The layers of the scalp are five in number:—

*First:* The skin, thickest in the body closely connected with the superficial facial and inset with the hair follicles throughout its entire thickness.

*Second:* Superficial fascia, a dense fibrofatty layer adherent above with the skin and below with the occipito-frontalis.

*Third:* Occipitio-frontalis or epicranial aponeurosis, extending from the occiput to the brow, the tendinous portion in front being attached and blended with the muscle above and to the inner and outer sides of the orbit, its posterior attachment from the occipital protuberances and curved line to the regions adjacent to the mastoid.

*Fourth:* The deep cellular layer connecting the muscles with the pericranium.

*Fifth:* The pericranium or external periosteum covering the cranial bones.

These five layers are the vault covering and in addition we have the temporal muscles deeply seated and fan shaped extending from the side of the head and covering the entire extent of the temporal fossae. Other muscular and fascial coverings are attached at the base. These, however, are of minor importance in this discussion.

The *blood supply* of the scalp is abundant, hence free bleeding occurs in wounds involving the scalp. The arterial supply is for the frontal regions, frontal and supra-orbital branches from the ophthalmic; laterally the temporal artery supplies the parietal regions; posteriorly, the posterior auricular and the occipital supply blood to these regions. The occipital artery pierces the cranial attachment of the trapezius muscle and becomes superficial just behind the mastoid process. All of these arteries anastomose freely in their respective localities, supplying branches to the superficial and deep structures of the scalp. The arteries lie loosely in the scalp and retract freely after injury, hence in the control of hemorrhage it is often necessary to use the needle and transfix in ligation. The veins in general follow the course of the arteries. They communicate freely with the veins and sinuses within the cranial cavity, the frontal and supra-orbital with the ophthalmic, the occipital with the mastoid and other emissary veins. Frequently other diploic communications exist. Very commonly we find venous intra and extra-cranial anastomoses at or near the sutures, especially at the sagittal. Direct communication with the superior longitudinal sinuses is made through the foramen caecum of the frontal bone, other extra and intra-cranial communications are established through the condyloid and vertebral veins.

The *nerve supply* of the scalp is derived from the supra-orbital branch of the fifth cranial, the temporal and posterior auricular branches of the seventh and from the deep cervical plexus through the greater and lesser occipital, and other superficial branches arising from the second, third and fourth cervical.

The *lymph drainage* from the scalp passes through the superficial cervical, posterior, auricular occipital and the parotid glands. Those in anterior regions following the course of the temporal vein drain through the parotid and into the neck, posteriorly they follow the course of the occipital veins passing into the occipital and posterior cervical glands.

## TYPES OF SCALP WOUNDS

Wounds of the scalp may vary from a minor abrasion or haematoma to a partial or complete

\*Read before the Surgical Section of the Ohio State Medical Association, during the Diamond Jubilee Meeting, at Columbus, May 3-5, 1921.

detachment or an avulsion of the scalp. For descriptive purposes, the wounds of the scalp may be classified according to the kind of edges the wound presents upon examination, or they may also be named from the instrument or missile producing the wound, as stab, or gun shot, incised, contused or lacerated, operative and punctured. Avulsions or detachments of the scalp may be partial or complete. Haematomas may be sub-cutaneous, sup-aponeurotic or in under the pericranium. We also speak of infected wounds and poisoned wounds. Poisoned wounds caused by bites of animals, or venomous reptiles. Wounds of abrasions with the complication of sub-cutaneous emphysema, nearly always mean the connection with an facial air sinus. Gas bacillus infections are uncommon in the scalp because of the free blood supply and the small amount of muscle tissue from which the bacillus extracts muscle sugar, this being necessary for their growth and development.

From the point of view of treatment, wounds of the scalp should be approached with the following points in view. *First:* Prevention of infection. *Second:* Control of hemorrhage. *Third:* Closure and repair of the wound. This of course offers consideration only of those wounds of soft parts. "The Complications and Management in Brain Injuries" I have considered elsewhere, (*Cinti. Med. Journal*, January, 1921.)

*Examination of Wounds.*—The examination should be made under the strictest observance of the rules of asepsis, shaving, scrubbing and cleaning of a considerable area adjacent to the wound or haematoma, or even the entire scalp should be shaved or cleaned with soap and warm water before we begin our investigations or exploration. Rubber gloves should be worn and every effort should be made to prevent contamination, even if we consider the wound already infected. In taking such precaution we can at least prevent additional or mixed infections. Carefully examine the edges of the wound to determine the viability of these tissues. Next determine if the wound divides only the superficial tissues, or does it also extend below the galea? Is there present superficial or deep accumulations of blood in recent wounds, or pus in those seen later? Is the pericranium damaged or opened? And finally is there also damage to the bone? Important vessels or nerves may also be divided or injured and foreign bodies may be present, such as hair, bullets, dirt, gravel and parts of clothing. Remember that foreign bodies may be hard to find and frequently X-ray examinations are required to locate them; while free incisions may also be justified in determining their presence or absence.

A penetrating wound of the scalp should be fully incised in order that one may remove the hair and damaged tissues from the course of the tract, thus preventing retention of deleterious materials which predispose to sepsis. Don't rely

on probing. It had better not be done. Incision under local anesthesia is safer and adds little to the risk. If the wound is above the aponeurotic tissue and the muscle and fascia are intact, *superficial debridement*, after the preliminary antiseptic and aseptic precautions have taken, is all that is required. Such a wound can usually be closed without drainage. The sutures should be interrupted of silk or silk worm gut. If any accumulations should occur after suture, they can be readily relieved by removal of the adjacent stitch. Whenever the wound or missile has extended in under the aponeurosis or pericranium, incision should be free, debridement as in other wounds should be wide enough to remove all the damaged tissue and haemostasis should be perfect. Free drainage should be established at the most dependent part of the original wound or a new drainage opening established. I prefer the latter, because in many deep scalp wounds treated early by the above method, you will have the occurrence of primary healing, whereas if drainage material be placed within the original wound it interferes with the natural reparative processes.

When infection has already occurred, there need be no thought of suture. Lay open the wound widely, place in drainage and cover the scalp with hot antiseptic fomentations. Closure in that case, if the wound be large, must be done through plastic incisions and sutures after you have thoroughly combatted the infection. One must not be afraid to practice wide debridement in fresh wounds of the scalp. Sufficient tissues can be procured for immediate or late closure by incising and sliding of the scalp structures.

In avulsions or partial detachments where the skull is exposed, the bony tissue is always predisposed to infection and necrosis. When necrosis occurs it is best to delay your plastic operations or skin grafting until healthy granulations have occurred, clinical judgment should guide you in this practice rather than reports from the laboratory. If the bone has been widely exposed and denuded of its soft coverings and periosteum, necrosis will occur. I have had two such cases to deal with. Such conditions tax your patience and ingenuity in treatment.

#### AVOIDING COMPLICATIONS

Scalp wounds occurring on the battlefield, and the wounds from stable, auto, or street accidents predispose to *tetanus*. This complication can usually be prevented by the incision or excision of the damaged tissues with the establishment of free drainage and the early use of antitetanic serum. I inject 1500 units routinely after all head wounds. *Erysipelas*, *sepsis* and *cellulitis* can usually be prevented by the management outlined in this paper. If erysipelas occurs, I recommend the use of antistreptococcal serum intravenously (for three days). I give 20 cc. of

the serum locally, and paint the scalp with tincture iodine, going well beyond the line of spreading infection. It is also advisable to keep up the nutrition by forced feeding, supportive treatment, relieve pain by the free use of morphine, reduce high temperatures with cold sponges and by the use of antipyretics. Erysipelas vaccines combined with staphylococcus have appeared to do good in some cases. I am not thoroughly convinced of their value and only offer the observation for what it may be worth.

*Cellulitis* should be treated by multiple incisions after shaving and cleaning of the entire scalp. Incisions should be in line of the muscle fibres and extend down to but not through the pericranium unless there be exudates in under that covering, then it should be freely incised. Rubber tissue drainage should be placed in each opening, the entire scalp covered with hot boric fomentations.

Finally the occurrence of *septic sinus involvements*, *septic meningitis* and *brain abscesses* are the complications most to be feared. These travel along the course of the lymphatics and veins and are in the most part due to infected materials retained under tension with insufficient drainage. Whenever localized collections of pus occur within the skull, if it be possible to determine their presence, operate at once, establishing drainage. Septic meningitis is hopeless when considered from the standpoint of surgical operation alone. If such complication arises we must resort to repeated spinal puncture, in order to remove the septic products. Autogenous vaccines followed by supportive and symptomatic treatment directing our efforts toward preventing further extension from the original wound. Laminectomy and continuous drainage of the infected cerebro spinal fluids have recently been advocated. For continuous drainage in septic meningitic involvement, it is recommended by some operators to remove the lower cervical laminae early before adhesive inflammation has blocked off the subdual spaces. With this procedure I have had no experience. I can see no advantage in the procedure over repeated punctures and treatment as outlined in this paper. Prevention is the watchword. Death will usually occur 36 hours after purulent meningitis begins. On post mortem examination the coverings of the brain and cord are found plastered together with organized fibrin. Considering the condition as disclosed in post mortem findings alone, it seems useless to expect a very great amount of relief from such a procedure.

It is unusual to have *thrombosis* of the intracranial blood sinuses arising from a septic scalp wound, such infection being generalized overcomes the patient very early, or a septic meningitis closes the final picture of dissolution. Occasionally thrombosis of the sinuses at or near the sella-turcica occur, from extension through

the orbital cavity in such cases a drainage through the orbit or the sphenoid cavity may be attempted, however, such attempts will most often end in failure. Meningo-cortical and subdural are the usual types of *abscess* occurring from septic extensions or sinus thrombosis. If it be possible to correctly determine their presence during life, operative procedures should be directed towards relief. *Lymph gland infections* of the occipital cervical and parotoid regions, and cellular extensions into the orbital cavity, sphenomaxillary fossae or facial regions are not uncommon. These complications require early and free incision with the establishment of free drainage. When one carefully studies the end results of septic scalp wounds and extension of the infection within the cranial cavity or to the adjacent fossae, he will be convinced without doubt that we should bend our every effort toward prevention of such complications. We can prevent many of them by the proper prophylactic procedures early instituted. We can stay but few of them after their progress has once begun.

1218 WALNUT STREET.

---



---

#### NEW BOOKS

*Clinical Diagnosis*, a text-book of Clinical Microscopy and Clinical Chemistry for Medical Students, Laboratory workers, and Practitioners of Medicine, by Charles Phillips Emerson, A. B., M. D., late resident physician, the Johns Hopkins Hospital; and Associate in Medicine, the Johns Hopkins University; Professor of Medicine, Indiana University School of Medicine, 156 illustrations. Fifth edition entirely rewritten and reset. Price \$7.50. J. B. Lippincott Company, publishers, Washington Square, Philadelphia.

*Epidemiology and Public Health*, A Text and Reference Book for Physicians, Medical Students and Health Workers. In three volumes, by Victor C. Vaughan, M. D., LL. D., chairman of the Division of Medical Sciences of the National Research Council; Emeritus Professor of Hygiene in the University of Michigan, assisted by Henry F. Vaughan, M. S., Dr. P.H., Commissioner of Health of the City of Detroit, and George T. Palmer, M. S., Dr. P.H., Epidemiologist for the Department of Health of the City of Detroit. Vol. I, Respiratory Infections, C. V. Mosby Company, St. Louis, Mo. Price, \$9.00.

*Submucous Resection of the Nasal Septum*, by W. Meddaugh Dunning, M.D., Consulting Otolgist, Fordham Hospital, N. Y. C.; Consulting Otolgist, Manhattan State Hospital, N. Y.; Consulting Laryngologist, Ossining City Hospital, Ossining, N. Y.; Consulting Laryngologist, The Alexander Linn Hospital, Sussex, N. J.; Assistant Surgeon, Manhattan Eye and Ear Hospital, New York; Surgeon, Bronx Eye and Ear Infirmary.

(Continued on Page 98.)

## Contrecoup Damage to the Brain in Head Injuries\*

By JOHN A. CALDWELL, M.D., Cincinnati

*Editor's Note.*—Contrecoup injuries to the brain occur in at least 60 per cent. of all skull fractures. When contrecoup damage is present it always indicates that the head was in motion or freely movable at the time of injury. Such damage occurs most frequently in fractures of the posterior fossae. With a history of head injury while the skull is in motion and persistence of symptoms after operation, contralateral exploration may be justified.

**I**T FREQUENTLY happens that patients, who have received a head injury, will have symptoms referred to the opposite side of the brain, or definite focal symptoms referred to the site of the injury, which will improve or abate on relief of the local pressure, but general pressure symptoms will continue or increase and will fail to be relieved by further measures directed to the site of the supposed sole injury. *Usually a continuance of cerebral pressure-symptoms, after decompression and control of hemorrhage, is attributed to traumatic cerebral edema, and no doubt in many cases this explanation is correct, but in many other cases there is a second more or less localized cerebral lesion often affecting a silent area and, therefore, unsuspected, which is responsible for the failure of the pressure-symptoms to recede. This contrecoup phenomenon, as it called, has long been known, but the mechanism of its production has been a subject of much speculation, (some of which has been most fanciful) and some painstaking and thoughtful research and careful observation, and it is a matter of considerable wonder that the real knowledge, which has resulted from productive investigation, has received so little consideration in surgical teaching and is so incompletely known.* Practically every text-book of surgery that I have seen mentions the subject of injury of the brain by contrecoup, but says nothing about how or why it occurs or under what circumstances it is to be expected.

### CONTRECOUP EXPERIMENTS OF TILLMAN

The most thorough study of this subject based on experimental research was made by O. Tillman, whose method was to subject skulls, containing brains and physical fac-similes of heads made of gelatine contained in glass flasks, to various forms of trauma. Tillman's experiments were most thorough and convincing, only such part of his observations as relate to the contrecoup phenomenon will be quoted at length.

If a sphere of gelatine be struck on one side an impact can be felt at the pole of the sphere opposite the point of stroke and at no other place. If the force of the blow be increased the shape of the mass is changed from spherical to egg-shape, with the pointed end at the pole opposite the point struck, and by increasing the force of the blow the sphere may be made to elongate suffi-

ciently to touch a paper screen placed four centimeters from the side opposite the face struck. If a spherical glass flask, filled with gelatine, is held firmly and is struck by a block, swinging as a pendulum, the flask is shattered at the point of impact and the gelatine mass is disintegrated at the same point. If now the flask hangs free as a pendulum and is struck by a swinging mass the flask shows a depressed fracture at the point of impact, the fracture lines taking the form of concentric circles intersected by radiating lines of fracture, while at the opposite pole a section of the flask is broken out in a solid piece. A similar result is obtained when the flask is allowed to swing freely and strike a fixed body.

Another series of experiments were made with trephined skulls. If a skull, trephined just above the ear, be laid on a firm base and struck with a hammer the brain will spurt from the trephine opening and the ejection of the brain will follow immediately upon the hammer stroke. In this case it is evident that the bending of the skull so increases the intra-cranial pressure as to force the brain through the trephine opening. If a trephined skull be dropped onto a firm hard base, in such manner as to strike on the side of the skull opposite the hole, the brain will spurt through the hole and there will be a noticeable time interval between the stroke of the skull and the ejection of the brain. A similar result is obtained if the skull is allowed to swing and strike a mass on the side opposite the trephine, or if it be suspended so as to swing freely and be struck with a hammer. In all of these experiments on the skull the force was regulated so as to be insufficient to produce a fracture.

A third series of experiments was made with spherical iron globes filled with gelatine, and if these were dropped or swung freely and struck or permitted to swing and strike, on opening the globes the gelatine was found disintegrated both at the point of impact and at the opposite pole.

*The conclusion from these experiments is that the contrecoup phenomenon occurs only when the freely movable skull is struck a blow or when the skull itself, while moving, is stopped by a solid mass. Such clinical evidences as is so far obtainable supports this conclusion.*

### CONTRECOUP DAMAGES SHOWN BY AUTOPSY

In this country E. R. Le Count of Chicago, has given the subject of contrecoup injuries of

\*Presented before the Academy of Medicine, Cincinnati, Ohio.



the brain much attention in his examination of persons dead of head injuries and necropsied by him as Coroner's physician of Cook county. While present at one of his necropsy demonstrations I saw an impressive array of these cases. In one morning he presented three subjects, each dead of extensive depressed skull fracture of the temporal region, and in each case the contralateral damage to the brain was as great or greater than the damage on the side of the injury. All of these persons had been struck by automobiles and the skull had been fractured by striking the paved street—that is, the head was moving and was injured by being suddenly stopped by an immovable body, which method of production fulfills the conditions for contrecoup injury as laid down by Tillman. In an article published by Le Count<sup>2</sup> in the *Journal of the American Medical Association* he analyses 454 fatal fractures of the skull and gives the following data as to the occurrence of the contrecoup phenomenon:—

Of 166 fractures of the middle fossa, in 103, or 62.04 per cent., the greatest bruising of the brain was contralateral. Of 61 fractures of the frontal fossa, in 35, or 21.31 per cent., the centralateral bruising was greater than on the side of injury. Of 49 fractures of the vault, in 39, or 79.59 per cent., the greatest bruising was contralateral. Of 178 fractures of the posterior fossa, 149, or 83.70 per cent., the greatest bruising was contralateral. Of the entire 454 cases, 66.98 per cent. had contralateral brain damage equal to or greater than that at the site of injury. *It is also seen from these statistics that the contrecoup phenomenon occurs most frequently in fractures of the posterior fossae.*

#### ILLUSTRATIVE CASE REPORTS

Among the fractured skulls which I have seen or operated this contrecoup injury has been positively found, either by operation or necropsy, in four cases, and I wish to briefly report them.

CASE 1.—W. W., aged fifty, was struck by a rapidly moving ambulance and was taken to Seton Hospital, where I saw him. He was unconscious, breathing stertorously, and had had several convulsions. *Examination* showed a large haematoma behind the left ear and bleeding from that ear. The left arm and leg and left side of the face were paralyzed. At *operation* a large flap of scalp covering a portion of the left parieto-occipital region was turned down, but no fracture was found. The skull was then opened over the motor area on the right side. The dura bulged and did not pulsate. On incising the dura free uncontrollable hemorrhage flowed from the base out of the dural opening and the brain beneath the opening was deeply injected and pulpified. This patient never came out of coma. His convulsions continued and Cheyne-Stokes breathing followed in a few hours and he died the following day. Here was

a blow on the left occipital region, causing probably a fracture at the base which tore one of the venous sinuses and caused contrecoup injury to the opposite motor area.

CASE 2.—H. S., aged sixty-one, laborer, fell while at work, striking the left side of his head. When examined on admission to the Cincinnati General Hospital he was semi-conscious, but his speech was unintelligible. He could be aroused and seemed to understand, but could not make himself understood. He gave the impression of being aphasic. He had a large haematoma in the left parietal region. His pulse rate was 50. He had an incomplete paralysis of the left arm, leg and left side of the face, and his tongue protruded to the left. His left pupil was larger than the right, but neither reacted. Reflexes: left abdominal and cremasteric absent, patellar absent, Babinski on the left. On lumbar puncture 20 cc. of bloody fluid escaped under evident pressure.

*Operation.*—A large scalp flap (including the haematoma) covering the left parietal region was turned down, but no fracture was found. This flap was then replaced and the skull was opened over the right motor area. The dura bulged and did not pulsate. On incising the dura the cerebrum herniated into the opening and the part in view was red and injected and the vessels of the pia were congested. The dura was left open and the scalp closed with drainage.

This patient's general condition was improved the next day. In three days his speech had improved sufficiently for him to make himself understood, when he acknowledged, as he did subsequently, that he had always been left-handed. In two weeks he had considerable motion in his left arm and he recovered sufficiently to be discharged in seven weeks to take a position as hospital orderly.

Here was a case of injury to the left side of the head with skull fracture (the X-ray showed a doubtful occipital crack) and with aphasia and homolateral hemiplegia. The fortunate circumstance was that the contralateral bruising of the cerebrum was so located that it gave rise to focal symptoms and indicated where to trephine. It was most interesting to have the patient explain his aphasia by acknowledging his left handedness.

CASE 3.—J. A., aged eighty-three, blacksmith, was admitted to the Cincinnati General Hospital, where I saw him through the courtesy of Dr. Palmer, on whose service he was placed. Fellow-workmen stated that he had fallen and struck his head on a piece of machinery. When *examined* on admission he was unconscious; his left eye was ecchymotic and he had a haematoma in the left temple. X-ray showed a crack running from the left temporal region into the sphenoid. Pupils were unequal and reacted. There was a generalized spasticity of all muscles. His arms were crossed over his chest and

held rigid. Abdominal and cremasteric reflexes were absent and bilateral Babinski was present. Lumbar puncture brought forth bloody spinal fluid under pressure. The following day respirations assumed the Cheyne-Stokes type and respiratory death followed.

Necropsy confirmed the skull fracture shown in the X-ray plate in the left temporal region and there was marked congestion and bruising of the cerebrum at this place, but in the opposite temporal region the brain showed fully as great evidence of bruising. The ventricles were distended with blood, and this brought up an interesting speculation which might have been important in a medico-legal way. This man had a history of having had a paralytic stroke several years before, from which he had recovered. Was his fall and skull fracture this time in consequence of a ventricular hemorrhage, or was the intraventricular bleeding due to a cerebral blood-vessel being torn by trauma?

CASE 4.—A woman, aged about sixty, was admitted to the Cincinnati General Hospital with the history of having been struck by an automobile. When *examined* she was semi-conscious and delirious, bleeding from the left ear and had a large haematoma over the left ear through which a depression could be palpated. She had no focal symptoms referred to the side of the injury, but had a complete hemiplegia on the same side. At *operation* nothing was attempted except removal of depressed bone and control of hemorrhage. The patient's condition did not warrant exploration of the other side.

This patient continued irrational for ten days and then died. There was no improvement in her hemiplegia. No necropsy was obtained, but in this case the hemiplegia on the same side as the injury could not easily be explained except as a contrecoup incident.

Recently Dr. Louis Ransohoff reported a case of head injury before the Academy of Medicine in which much contralateral bruising was found in the brain at necropsy. A case, which illustrates the clinical possibilities and course of the contrecoup phenomenon, was reported by Peter Bassoe, of Chicago. The details were related in personal conversation, consequently this narrative may not be scientifically accurate, but is substantially correct.

The patient sustained a depressed skull fracture in the parietal region. He recovered after operation but developed epilepsy. At a subsequent exploration he had a traumatic cyst removed from the cerebrum at the site of injury, but his epilepsy was not relieved and some time after the second operation he died. A necropsy showed a second traumatic cyst located in the opposite cerebral hemisphere in the frontal lobe—a silent area.

*It would seem from the foregoing quotations of data and reports of cases that contrecoup injury to the brain occurs with much greater fre-*

*quency than is generally thought. If this is true, in what way does this knowledge give any practical aid? In answer to this question I would suggest the following: In all skull fractures with depression determine, if possible, the kind and direction of the force, particularly if the head itself was the moving body. If this is found to have been the case, contralateral symptoms may be explained. Where pressure symptoms, or focal symptoms, fail to abate after relief of pressure, a contralateral exploration may be justified.*

#### SUMMARY

To briefly summarize:

1. Contrecoup injury to the brain is quite frequent, occurring in at least 60 per cent. of all skull fractures.
2. It always indicates that the head was in motion or freely movable at the time of injury.
3. It occurs most frequently in fractures of the posterior fossae.
4. With a history of head injury while the skull is in motion and persistence of symptoms after operation, contralateral exploration may be justified.

628 ELM STREET.

#### REFERENCES

1. Tillman, O: Ueber Hirnverletzungen durch stumpfe Gewalt und ihre Beziehungen zu den Bruch des knöchernen Schädels. Archiv für Klinische Chirurgie, 1920, Vol. 66, p. 750.
2. Le Count, E. R., and Apfelnach, C. W.: Pathologic Anatomy of Traumatic Fractures of Cranial Bones and Concomitant Brain Injuries. Jour. A. M. A. Vol. 74, p. 501, February 21, 1921.

#### NEW BOOKS

(Continued from Page 95.)

ary, New York. Contents covers the nose—breathing and smelling, common septal deviations, surgical procedure in submucous resection of the nasal septum, special surgical procedure, typical case histories and their significance, the saddle-back nose, etc. Over 100 pages of text, illustrated by 25 pages of drawings. Price \$1.50 postpaid. Surgery Publishing Co., 15 East 26th St., New York City.

*Lessons on Tuberculosis and Consumption*, showing how to prevent Tuberculosis; how to recognize its first symptoms; how to win back health, by Charles E. Atkinson, M. D., recently medical director of Seymour Sanatorium for Diseases of the Throat and Lungs, Banning, California; formerly member of the resident medical staff at Pottenger Sanatorium for Diseases of the Throat and Lungs, Monrovia, California; previously attending physician and instructor in the medical clinic of the Graves Memorial Dispensary, Los Angeles Medical Department of the University of California; member of the National Tuberculosis Association; fellow of the American Medical Association, etc. 12 mo., cloth, 470 pages. Price \$2.50 net. Funk & Wagnalls Company, New York, Publishers.

# Gastro-Intestinal Diagnosis: The Advantage of Present Day Methods as Seen by the Surgeon\*

By FRANCIS G. LEONARD, M.D., F. A. C. S., Cleveland

*Editor's Note.*—Present day methods in gastro-intestinal diagnosis have distinct advantages for patient and surgeon. Exploratory laparotomy, although not as commonly employed as in former years, is still practiced too frequently. Surgical judgment will be reinforced by a more intimate knowledge of the acuity of the lesion and extent of the pathologic process. Early malignancy of the gastro-intestinal tract has no definite symptomatology. It is only through the correlation of clinical facts, laboratory investigations and the evidence obtained by the roentgen ray, that the perplexing and indefinite symptomatology, associated with gastro-intestinal disease will be converted into practical and life-saving diagnostic truth.

**T**HE PROGRESS of surgery and diagnosis of digestive tract diseases has, indeed, been rapid. Almost in one lifetime we have come from the *darkness of beliefs* to the *hopeful brightness of scientific knowledge*. And the great advancement has been made in the actual memory of most of us.

## HISTORICAL REVIEW AND DEVELOPMENT OF NEWER METHODS

Beaumont, in 1825, after his experiments on Alexis St. Martin, gave to the world a real knowledge of the physiology of the gastro-intestinal tract. Twenty years later Virchow brought forth the discovery of cellular pathology. Then Kussmaul, von Leube and Ewald, in 1870-75, made more accurate information available to the careful worker by the use of the stomach tube. Before the introduction of the roentgen rays the tube was the greatest aid in differentiating between the present comprehensive medical and surgical lesions of the gastro-intestinal canal.

A number of American investigators, especially Hemmeter of Baltimore, Leonard of Philadelphia, and Cannon who introduced the bismuth meal in 1898, are to be given credit for the development of the X-ray as a means of gastro-intestinal diagnosis. Recently the introduction of pneumo-peritoneum technic, through the work of several European scientists and several physicians in this country, particularly Stewart and Stein, has opened the way to many finer distinctions in abdominal diagnosis.

It was through such surgeons as Mayo Robeson, Theodore Billroth, W. W. Keen, and John W. Murphy that the pathology of the gastro-intestinal tract, as well as proper operative technic, has become known. Through such careful methods, as applied at the Mayo Clinic, a knowledge of pathology, a comprehensive diagnosis, and the best operative procedure have joined to make surgery of the stomach and intestine safe and successful for both patient and surgeon.

Minute observation of every individual case is absolutely necessary in making a diagnosis, and the surgeon should utilize every means at his disposal for a complete study. Since the time

allotted me is insufficient for a detailed discourse, I shall restrict my discussion to the diagnostic aids which are of greatest value in timely diagnosis, associating them with chronic lesions, particularly in those ambulatory cases of gastro-intestinal disease which are so numerous and continually encountered. I shall mention the most important essentials in anamnestic data, the physical examination, laboratory tests, radiographic examination, and shall go over the prevalent surgical lesions and epitomize the valuable early diagnostic signs and findings encountered, concluding with a summary of the value to the surgeon and the patient of such requisite study.

## THE METHODS IN USE AND THEIR RELATIVE VALUE

*History.*—Owing to the fact that so many other diseases are complicated by digestive disturbances, and that the onset of some of the most serious conditions we find in diseases of the gastro-intestinal tract is insidious, we cannot over emphasize the great importance of a carefully prepared analysis of the past history and present complaint of these patients. Quite often the facts, which are gathered as to the onset and progress of the disorder, and the patient's statement at the time he presents himself, gives the examiner the direct clue as to the location of the lesion and further tests act as confirmatory evidence. In other cases the symptoms recited may gain importance only when connected with further means of study. A well taken history, then, is invaluable, but a poorly elicited one is worse than useless since it may mislead. The investigator must be well trained in gastro-enterology with a full appreciation of the diseases which he may encounter, he must be altogether painstaking and conscientious, alert and analytical. He must encourage the patient to express himself freely, keep nothing back which might prove significant, yet direct his questions tactfully so as to check the flow of miscellaneous data which often follows an inquiry as to *complaint*. He must go into the gastro-intestinal history thoroughly and discover what the patient really feels, but he must discard those things which are relatively insignificant and he must be able to interpret his findings with a skilled diagnostic sense.

*Examination.*—With such a history before him, the surgeon is well prepared to make a valuable

\*Read before the Surgical Section of the Ohio State Medical Association, during the Diamond Jubilee Meeting, at Columbus, May 3-5, 1921.

physical examination. Examination of the abdomen should always be preceded by a thorough general examination, because of the lesions which produce symptoms referable to the digestive tract (such as tabetic crises, pulmonary lesions or diseases of the generative organs in women).

The examination is conducted principally by inspection and palpation. The shape of the abdomen, enlarged veins, operative scars, visible tumors and peristalsis are considered. On palpation, a tense wall, with sensitive areas or a loose wall as found in malignancy may prove significant. The method of palpation is important. It is necessary to have the patient in a recumbent position with the head and shoulders slightly elevated, the thighs and knees flexed, the attention diverted by conversation. An effectual method of palpation is to place the left hand at the patient's back, using the entire palmar surface of the right hand, which should be warm, to palpate. The patient should inspire and expire slowly. At first the pressure should be gentle, then gradually increased as the apprehension of the patient subsides. By care and persistence small tumors may be elicited in the stomach, caecum, transverse and descending colon where negative findings might otherwise have been recorded. Lesions high up under the costal arch or low in the pelvis often cannot be located in this manner. The pathology of the lower segment of the colon can be detected best by a vaginal or rectal digital examination. A digital rectal exploration should always conclude the examination, noting lesions about the anus, sensitiveness and tumors of the bowel as far as the palpating finger can reach.

*Tests.*—There is no laboratory aid which may not at times be of value to the surgeon interested in gastro-intestinal diagnosis. It is impossible to describe a place of just importance to any separate routine of tests, but certain laboratory examinations should be made in all cases.

In the gastric analysis, the motor meal showing a retention of food for eight hours or over is of distinct value. The estimation of free hydrochloric acid and total acidity is always to be made, but the more recent reliable works showing the great disparity of acid values with their different curves tend to greatly reduce the older conceptions of the value of the acid findings. The Rehffuss tube, employed to obtain gastric contents for estimation of acid curves and for the examination for blood, because of its small size, lack of apprehension of the patient, and absence of trauma, possesses a distinct value as compared with the larger tube. Every gastric juice showing an achlorhydria is incompletely examined without determining the presence or absence of digestive ferments to separate certain neuroses from true organic lesions. The microscopic examinations to determine the bacterial flora especially sarcinae and Boas-Oppler bacilli, are to be commended.

A careful microscopic and chemical examination of the urine also the complete blood count and haemoglobin estimation must be a part of every case record. Furthermore, a blood Wassermann should be a routine procedure; while in certain cases the examination of the spinal fluid, chemical, cytological and serological is also a necessity.

A thorough examination of the stool, especial stress being placed on occult blood, which should be repeated in either questionable or positive cases after a meat free diet, is of very great value. This should also include an examination for pus, parasites and ova, bearing in mind that there are certain conditions which do not indicate surgical therapy.

*Radiology.*—Another means of obtaining evidence that will verify a clinical diagnosis or supply information which might be doubtful, is found in roentgenology. The surgeon has learned to depend upon the fluoroscope and roentgenogram in diagnosing and locating lesions of the gastro-intestinal tract to the same extent that the pathologist, in studying tissue sections, depends upon the microscope. The essentials to a complete thorough study are modern X-ray equipment, experienced roentgenologists, time and patience. The modern equipment of both horizontal and vertical fluoroscopes, intensifying screens, table with plate changing tunnel with shifting mechanism, and a Bucky diaphragm, a valuable accessory for absorbing the secondary rays, is necessary. The experienced radiologist is one who can enlist the confidence of the surgeon in accepting his report on its face value. Three days and occasionally a longer period are necessary for a routine examination. Frequently re-examination will be found necessary and should be performed whenever there is doubt or indefinite signs are encountered. In many instances the use of belladonna, given to the physiological effect, will be found advantageous in differentiating spasmodic from organic contractions.

Fluoroscopy with the use of the barium meal affords a definite knowledge of the stomach, as to its size, outline and position. Irregularities due to intrinsic or extrinsic causes can usually be ascertained. The duodenal bulb can be studied for filling defects, contractures or irritability. A series of rapidly taken, successive plates can be used in confirmatory study of the pylorus and duodenum. The meal should be followed for 48 hours by a series of large plates and any retardation or filling defects in the intestine noted. After this an opaque clysm studied with the fluoroscope and stereoscopic plates will show defects more clearly. Incompetency of the ileocaecal valve may be seen by the backing up of the opaque enema. Fixations, deformities, retention and abnormal dilatation can be sufficiently well recognized.

*Pneumo-Peritoneum.*—A more recent means of

obtaining evidence has been introduced by radiologists experimenting with the injection of air, oxygen or carbondioxide gas into the peritoneal cavity. This pneumo-peritoneum method is not a competitor of the opaque meal, but is concerned with the parenchymatous organs and should be used in connection with the barium. Peritoneal adhesions, tumors of the colon and tumors adjacent to the gastro-intestinal canal can be clearly demonstrated. This method promises to offer special value in differentiating adjacent lesions which may cause symptoms referred to the gastro-intestinal tract.

#### APPLICATION OF THE PRESENT DAY METHODS IN DIAGNOSING PREVALENT LESIONS

*Peptic ulcer* is more frequent than was formerly considered. It is associated with a form of dyspepsia which is usually chronic in course with resulting local loss of tissue in the gastric or duodenal mucosa. When proper management has been neglected complications such as stenosis, hour-glass contraction, malignancy, perforation, hemorrhage and adhesions are frequently encountered.

In the diagnosis of peptic ulcer the history is very significant. It usually presents dyspepsia of a chronic type embracing a train of symptoms of pain in the epigastrium, occurring after meals, commonly known as hunger pains, which are relieved by taking of food and alkalies, with periods of euphoria, alternating with periods of greater or less suffering; this is a syndrome sufficient to warrant strong suspicion of peptic ulcer. Physical signs are very often meager. There is frequently tenderness over the epigastrium with spasticity of the upper abdominal muscles. Visible peristalsis is observed when stenosis of an obstructive degree is present. Local foci of infection should be searched for and emphasized for they are frequently found concomitant with peptic ulcer having etiological relation as Rosenow has demonstrated.

In all laboratory examinations serological blood tests have considerable significance upon ulcer cases, because late studies of gastric syphilis indicate that luetic ulcerations are by no means as rare as was formerly conceded. Gastric acidity at the present time furnishes limited diagnostic evidence but its determination with motor meal tests should not be neglected, for without this information knowledge of gastric function is impossible. Macroscopic blood has but little value; the string stain test is deceptive; negative chemical tests for blood in the stools do not exclude ulcer for chronic ulcers bleed only intermittently if malignancy is lacking.

Evidence obtained by the roentgen ray is indispensable in confirmatory study. It has particular surgical significance in detecting complications which result from tissue changes, such as hour-glass contraction, pyloric stenosis in

which the barium residue is retained six hours or more, fixation of all or a part of the stomach to adjacent viscera. Positive signs such as a niche, accessory pocket, or a deformed duodenum are found associated with calloused ulcer or following fistula. In addition indirect signs such as alteration of gastric tone, peristalsis and motility, gastro-spasm and tenderness in correlation with the clinical history offer the ablest assistance in fortifying the diagnosis.

*Gastric malignancy*, either carcinoma or sarcoma, is characterized by a neoplasm in the gastric wall. Stomach cancer is on the increase regardless of the argument that refinement in diagnosis determines its presence more frequently than in former years. Sarcoma is rare, comprising less than 5 per cent. of all primary gastric tumors. Carcinoma is involved in 94 per cent. of all known forms of gastric neoplasms. From the standpoint of cure early recognition of gastric malignancy is essential. Carcinoma appears rarely before thirty, frequently after forty, sarcoma slightly earlier in life. Gastric cancer commonly presents a history of digestive disturbances extending over a long period of time, and cases in the fourth decade with such dyspeptic histories should be considered potential cancer subjects and urged to undergo a most careful diagnostic survey, instead of waiting for the late symptoms of hemorrhage, vomiting, abdominal tumor and cachexia. A history of indifference to food with loss of weight in a patient forty years of age and beginning weakness should arouse strong suspicion of malignancy.

Motor-meal tests employed early in the disease are of little value. The estimation of gastric acidity has great worth if properly interpreted. Gastric cancer and the absence of free hydrochloric acid do not go hand in hand as was previously thought. Many cases have been persistently treated for dyspepsia until free hydrochloric acid had entirely disappeared and with it the patient's chance for cure. There is no real characteristic picture in the stomach contents of early gastric cancer other than that associated with gastric stagnation consequent upon the development of a stenosis of the pylorus due to ulcer. When the test meal has a low free hydrochloric acid and a correspondingly high combined acid reading with microscopic proof of Boas-Oppler organisms, gastric malignancy is practically certain. The surgically hopeful cases are those diagnosed before Boas-Oppler bacilli are present in large number and before metastasis has begun, for cancer cells in gastric contents indicate a sloughing process which is so far advanced as to make excision impossible.

The roentgen ray is a very valuable aid in definite diagnosis and likewise affords information as to location if in an operable or inoperable zone, but like the suregon is often called in too late to be of timely assistance. The earliest X-ray sign of a crater 2 cm. in diameter in the gastric

wall indicates malignancy, if luetic ulceration can be excluded, and at this period metastasis has often occurred and surgical cure is doubtful. The early diagnosis then must depend upon a consideration of the age of the patient and a carefully taken history well analyzed; a physical examination with particular emphasis on loss of weight and strength, the interpretation of a low gastric acidity, the presence of a small number of Boas-Oppler bacilli and occult blood after a meat free diet. In correlation there should be the roentgenologist's report of a tumor however small, irregularities or filling defects in the gastric wall.

*Small Intestine.*—Lesions of the small intestine are fortunately rare. Malignant or benign tumors, intra-abdominal defects or inflammatory processes frequently express their presence in the symptomatic role of chronic mechanical obstruction. The age and history of the patient will often suggest the lesion. Physical examination of the abdomen will offer certain evidence. The observation of the barium meal on its course from the pylorus as to retardation and distended proximal loops will confirm the presence of a morbid process demanding surgical interference.

*Terminal Ileum and Caecum.*—Diseases of the terminal ileum and caecum that are of chief interest in this discussion are the so-called chronic appendix, tuberculous formation and malignancy. Chronic appendicitis, likened by Deaver to a protean artist, can express itself in a wide symptomatic range, mimicing peptic ulcer, gall bladder and duct disease and even lesions outside the abdomen, for instance the kidney. A hasty diagnosis with removal of the appendix for vague abdominal symptoms has often led the surgeon into error. The appendix because of its intimate relation with the caecum, in which stasis and toxic absorption of the bowel content occur, and its prevalent circulatory hindrance is prone to a chronic career. Patients, giving a history of definite attacks more or less resembling the classical acute appendicitis and showing a tendency to relapses, can cause but little doubt as to the diagnosis.

There is another class in which pain is variable, often referred to other parts of the abdomen and in which the symptoms are largely reflex. It is in this particular group that a complete diagnostic survey is of necessity, and the evidence must be carefully analyzed. The history is often of little value except to show the absence of definite evidence. The physical examination is frequently negative and we must seek the report of the roentgenologist. This study should include the entire gastro-intestinal canal, the examiner showing familiarity with the rôle played by the appendix as a forerunner of disease of the bile tract and peptic ulcer. Sensitiveness and fixation of the caecum are commonly produced by inflammatory disease of the appendix, if one excludes tuberculosis and pelvic inflammatory

disease in women. The visualization of an appendix filled with barium that does not empty in 24 hours associated with dyspeptic symptoms has surgical significance. Shadows of concretions, malpositions, evidence of adhesions, spasticity of the colon, tender points on pressure constitute a collection of diagnostic evidence about the appendix that will justify surgical measures.

*Tuberculosis of the Intestine.*—This condition assumes an important place in the diagnostic consideration of digestive tract disease. Necropsies on subjects succumbing to pulmonary tuberculosis reveal that 80 per cent. have tuberculosis of the intestine. The lesion is usually located in the caecum and caecal segment of the ileum and may be of the ulcerated, nodular or hyperplastic type. It occurs in the earlier years of life, ordinarily between the fifteenth and thirtieth years, and is associated with tuberculosis of other organs, particularly a pulmonary process. A patient, complaining of indefinite abdominal symptoms with positive physical signs, tendering a suggestive history with palpable tenderness and demonstrable nodular or tumorous formation in the caecal area, and showing the roentgen ray evidence of filling defects, spasticity and obstruction of the intestinal lumen, strongly suggests a diagnosis of intestinal tuberculosis.

*Cancer of the colon.*—This condition occurs usually after the fortieth year, although cases have been observed occurring earlier in life. Again we are concerned with timely diagnosis, for it is agreed that the prognosis following *dissection en bloc* for early malignancy of the colon is more favorable than for almost any other part of the body. The cancerous process may be found from the ileo-caecal valve to the anus. The distribution is instructive for it increases in frequency in the various anatomical regions from the caecal valve onward and reaches its maximum in the rectum. The development of cancer of the colon is necessarily accompanied by tumor formation and we find that the essential pathology might be considered in four stages, tumor, ulceration, stenosis and dissemination. It is apparent that the clinical manifestations should be studied under these heads. Tumor formation can be palpated in most cases unless the growth occupies the pelvic colon or a highly placed splenic or hepatic flexure. Tumors can be palpated before serious narrowing of the intestinal lumen has occurred. More than 50 per cent. of colonic cancers are found in the pelvic colon, frequently called the silent area of the bowel, since a growth there is often not palpable either by abdominal or rectal examination.

Diagnosis, before mechanical obstruction, infection and dissemination has occurred, can be reasonably assured, if all available diagnostic methods are utilized. Patients, who are in the cancer age and complain of intestinal symptoms however vague, should be critically observed. A history of abdominal discomfort, frequent, small

bowel movements, a feeling of dissatisfaction as if the bowels were not properly emptied is suggestive. The abdominal palpation revealing a tumor and the free practice of the rectal digital exploration will offer valuable assistance. The presence of blood, mucus and pus in the stool strengthens this evidence. An electric illuminated procto-sigmoidoscope will reveal infiltration, narrowing and ulceration in the pelvic colon.

The barium clyisma introduced and observed through its course by the horizontal fluoroscope, confirmed by stereo-radiograms will add to the evidence already obtained and further impart diagnostic enlightenment in cases of doubtful palpatory examination.

*Other Conditions.*—There are other disorders which should be called to the surgeon's memory in studying lesions of the gastro-intestinal tract. Polyposis, diverticula, congenital or acquired and their sequelae diverticulitis, colitis, foreign bodies and anomalies. It must also be born in mind that multiple symptoms often signify multiple lesions and efforts should be fulfilled as to their recognition. Associated disorders and the differentiation of pathologic processes producing symptoms assignable to the gastro-intestinal tract can generally be determined by the utilization of the methods described. If on occasions further elucidation is desired a wider application of the methods narrated in supplement with additional diagnostic measures will furnish the necessary differential evidence.

#### CONCLUSIONS

In conclusion I would suggest the following topics for your consideration:—

1. The present day methods in gastro-intestinal

diagnosis have distinct advantages for patient and surgery.

2. Exploratory laparotomy, although not as commonly employed as in former years, is still practised too frequently.

3. Surgical judgment will be re-enforced by a more intimate knowledge of the acuity of the lesion and extent of the pathologic process.

4. Early malignancy of the gastro-intestinal tract has no definite symptomatology.

5. It is only through the correlation of clinical facts, laboratory investigations and the evidence obtained by the roentgen ray that the perplexing and indefinite symptomatology, associated with gastro-intestinal disease, will be converted into practical and life-saving diagnostic truth.

9300 KINSMAN RD.

#### BIBLIOGRAPHY

Frank Smithies: Contributions of the Twentieth Century toward a Better Understanding of Gastro-intestinal Ailments. Oration in Medicine delivered at the 34th Annual Meeting of North Dakota State Medical Society, May 12, 1915, Bismarck, N. D.

A. A. Goldsmith: The Clinical Aspect of the Diagnosis of Diseases of the Alimentary Tract. III. Med. Journal, May, 1919.

Russel D. Carman: The Roentgen Diagnosis of Diseases of the Alimentary Canal.

Arthur Stein and William H. Stewart: Roentgen Examination of the Abdominal Organs following Oxygen Inflation of the Peritoneal Cavity. Jour. of Surg., July, 1919.

Le Wald: Experimental Study of Duration of Artificial Pneumo-peritoneum. Am. J. Roent., Oct., 1920.

F. G. Leonard: Surgical Aspect of Chronic Lesions of the Pylorus and Adjacent Viscera. Ohio State Jr., Jan., 1921.

James T. Case: Examination of the Alimentary Tract by Means of Stereo-Radiography.

Henry K. Pancoast: The Value of the Roentgenologic Study of the Gastro-intestinal Tract. Penn. Med. Jr., Dec., 1919.

H. H. Cheney: The Use of X-ray in Gastro-intestinal Diagnosis. Canadian Med. Ass'n. Jr., March, 1919.

## Heart Size in Relation to Thorax Size\*

ALFRED FRIEDLANDER, M.D., and SAMUEL BROWN, M.D., Cincinnati

*Editors Note.*—Drs. Friedlander and Brown have worked out a formula for the estimation of heart size as measured by the total transverse diameter in relation to thorax size. Teleo-roentgenograms are taken at seven foot distance and heart tracings made therefrom. The transverse diameter is then compared with the estimated heart size as determined by the formula. The method is applicable to individuals of all ages, and the various types and weights. It offers an additional method of determining the existence of hypertrophy or dilatation of the heart.

**I**N THE study of disease of the heart by modern graphic methods the Roentgen ray has come to play an important part. The information afforded by the fluoroscope is valuable, and within limitations, definitive. Dilatation of the aorta, pericardial effusions, pleuro-pericardial or pericardial-diaphragmatic adhesions can be detected. Cardiac displacements resulting from pneumo-thorax, pleural effusions or tumor can be seen. The motility of the heart and the actions of the various chambers can be studied to advantage by the fluoroscopic method.

#### ORTHO-DIAGRAMS AND TELEO-ROENTGENOGRAMS

While it is possible to detect gross hypertrophies of the heart by the fluoroscope, it is evident that the fluoroscopic method cannot lend itself to accurate studies of heart size. For this purpose another series of adaptations of the X-ray is available. Two methods of study of heart size by means of the X-ray have proved themselves of value. These are the ortho-diagraphic and the teleo-roentgenographic. The ortho-diagram gives definite information as to heart size.\* But the apparatus is not generally available and the technique of its use is somewhat difficult.

The teleo-roentgenogram on the other hand is

\*Read before the Medical Section of the Ohio State Medical Association, during the Diamond Jubilee Meeting, at Columbus, May 3-5, 1921.



Fig. 1 Apparatus for taking chest measurements

easily made and, within limits, gives accurate information as to heart size. With modern machines, accurate heart silhouettes can be taken quickly, and with proper distance between target and plate, the error due to divergence of the rays can be reduced to the minimum.

#### CLINICAL VALUE OF HEART SILHOUETTES

A great deal of work has been done by various investigators with reference to estimation of heart size by means of the X-ray. The most important contribution to the subject has been made by Bardeen,<sup>1</sup> who in 1918 published the results of his comprehensive studies, including a critical review of known facts and theories.

*Bardeen points out that of all the organs, the heart is normally the most closely related in size to the size of the body as a whole. Thus a noticeably enlarged heart usually means some lesion either of the heart itself or of the blood vessels. From the clinical standpoint, therefore, the determination of actual heart size in relation to body size assumes very real importance.* A consideration of certain anatomic and physiologic facts is necessary in the evaluation of X-ray heart silhouettes. Some of these are here briefly summarized from Bardeen's studies.

Teleo-roentgenography demands that proper allowance be made for enlargement of the heart due to divergence of rays. This is accomplished by having the distance from target to plate two meters, the patient facing the plate.

The average distance of the heart contour

from the front of the chest is approximately one third of the distance from front to back of thorax measured at the lower part of the sternum. The greatest transverse diameter of the heart lies in a plane parallel to the thorax. Of course the contour of the apex, in the heart silhouette, is nearer the plate than are the contours of the right and left atria. But it has been definitely proved that the transverse diameter of the heart—and thus the average contour—is in a plane parallel to the front of the chest.

The *position of the body* is of importance in teleo-roentgenography of the heart. It is diffi-

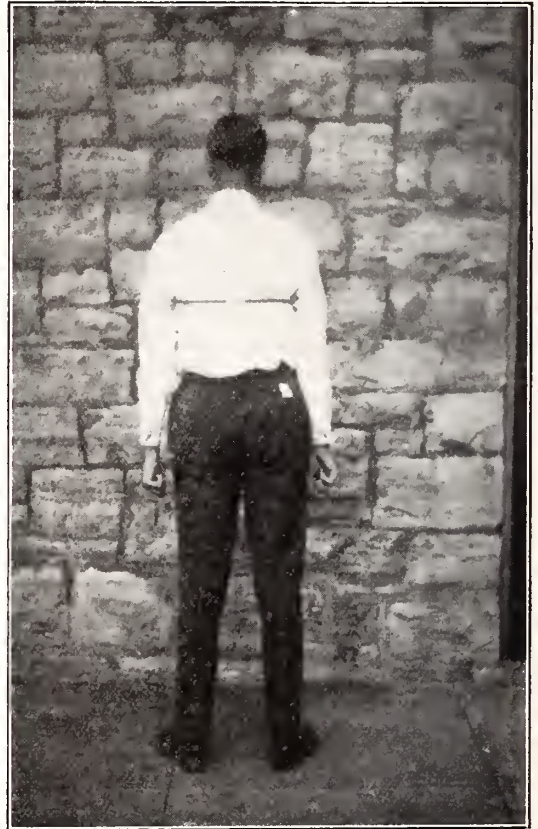


Fig. 2 Method of taking chest measurements

cult to place the tube two meters from the plate unless the patient be either sitting or standing. The prone and supine positions are not workable.

Now it has been shown by various observers that the heart is larger in the supine than in the sitting position, and larger in the sitting than in the standing position. Bardeen has been able to confirm these statements by a carefully controlled series of studies.

The *effects of respiration* on the heart seem to vary. During quiet respiration the heart apparently does not change in size. In the standing position Bardeen found that the heart was larger during expiration than during deep inspiration.

*Bardeen finally came to the decision of taking*



his heart silhouettes with the patient sitting, leaning forward against a plate holder with an inclination of 20° from the vertical. This position is comfortable and throws the heart forward toward the plate.

#### METHOD OF MEASUREMENTS

Methods of measuring the heart silhouette vary. As a rule the right and left margins are clearly defined. Above, the heart silhouette merges with that of the great vessels and vertebral column. Below it merges with silhouette of diaphragm, liver and stomach.

Bardeen admits that it is necessary to make the upper line of his silhouette a purely arbitrary one, since there is no simple line of demarcation between heart and great vessels. So too in drawing the lower line a purely arbitrary choice must be made. It is thus apparent that there are two possible sources of error in drawing the upper and lower limits of the heart arbitrarily. And these errors may be great enough to invalidate, to some degree at least, the calculation of the size of the heart silhouette in comparison to body size.

Bardeen expressly states that the most objective measurement that can be made of the heart silhouette is that of the greatest transverse diameter. As a matter of fact this is the measurement most frequently made. Studies of the relation of the transverse diameter of the heart shadow in comparison with the transverse diameter of the chest have also been made, notably by Kreuzfuchs.<sup>2</sup>

Comparisons of heart silhouette areas to body weight and height are difficult because of the inherent difficulty of determining the heart silhouette area satisfactorily—for reasons given above. Furthermore the formulae for computation are involved, and do not lend themselves readily to clinical application.

#### AUTHORS' OBSERVATIONS AND METHODS

The problem as it presented itself to us consisted in attempting to discover if possible some simple method of determining heart size, using the transverse diameters as the most trustworthy index, for all kinds of individuals irrespective of height or weight.

*Studying hundreds of cases while in the army, and latterly in civil practice, the writers have been impressed with the fact that the size of the heart bears a closer relationship to the size of the thorax, than to weight or height of the individual.* This being true, the next question that arose was what are the available factors by which such relation could be expressed. Measurement of the thorax thus suggested itself and we have now been enabled to derive a formula which gives the needed information.

*We have found that by definite thorax measurement it is possible to pre-determine the normal size of the heart in a given individual, as*

*expressed in its transverse diameters. A teleo-roentgenogram is then taken, according to a fixed method, and it is thus possible to ascertain whether the heart is normal in size or larger than it should be.*

The procedure is as follows:

With the patient standing, two chest measurements are taken with the appliance as shown here (Fig. 1). The antero-posterior and the lateral diameters of the thorax are ascertained. (Measurements in centimeters). Both measurements are taken on a level with the fourth rib anteriorly. This is a matter of importance, particularly in measuring women, in whom the mammae would interfere if measurements were taken on a lower level. By experiment we have found that the formula for heart size in relation to thorax size may be ascertained by multiplying the two chest diameters and dividing this figure by their sum, *e. g.*, if in a given case the lateral diameter is 30 c.m., and the antero-posterior diameter is 20 c.m., the formula would be thus expressed,

$$\frac{30 \times 20}{30 + 20} = 12$$

In the given case the transverse diameter of the heart should not exceed 12 cm.

A teleo-roentgenogram is then taken. We have used a target plate distance of seven feet so as to be sure of eliminating error due to divergent rays.

The patient stands, facing the plate, and exposure is made with the patient holding his breath in deep inspiration. Exposure varies from three to six seconds, depending on the size of the individual. We use a 5" spark gap and a 20 Ma. current.

After the film has dried a tracing of the heart silhouette is made, and the transverse diameters determined. Their sum is then compared with the quotient obtained from our thorax measurement formula, and a measure of cardiac hypertrophy or dilatation, if such be present, is immediately had.

#### RESULTS OF STUDIES

We have tested out this procedure in a carefully studied series of over five hundred cases, and it seems reasonable to say that the method affords definite information.

It is admitted of course that the right and left borders of the heart can be mapped out with a very considerable degree of precision by careful percussion. But the silhouette adds an additional form of accuracy to our diagnostic methods. And of course there are cases—*e. g.*, where *marked emphysema* exists, where percussion of relative cardiac dullness is extremely difficult, and where the cardiac conjugates as outlined by percussion can give us very imperfect knowledge of actual heart size.

We have included persons of all builds and of all ages in our series, and wherever the history, the symptoms and the physical signs have led us to the conclusion that cardiac hypertrophy or dilatation exists, the heart-thorax formula has confirmed the diagnosis. Moreover in early cases of *myocardial degeneration*, with or without slight emphysema, the method has enabled us to say that a particular heart was hypertrophied or dilated with a degree of assurance not to be had by simple physical examination.

In cases of phthisis with small *dropped heart*, the formula has worked out also, and we have been able to confirm the well known fact, clinically observed, that the heart in such cases is actually smaller than normal.

Our series of examinations of children's hearts is at yet relatively small, but the formula is apparently correct even in early childhood. Further comment on this phase of the subject is reserved for future study.

## SUMMARY

A formula has been worked out for the estimation of heart size as measured by total transverse diameter in relation to thorax. Teleoroentgenograms are taken at seven foot distance, and heart tracings made therefrom. The transverse diameter is then compared with the estimated heart size as determined by the formula. The method is applicable to individuals of all ages, and of various heights and weights. It offers an additional method of determining the existence of hypertrophy or dilatation of the heart.

4 WEST SEVENTH ST.

1. C. R. Bardeen: Determination of the Size of the Heart by Means of the X-rays. *Amer. Jour. of Anatomy*, 1918, Vol. 23, p. 423.

2. Kreuzfuchs: *Muenchener Med. Woch.*, 1912, Vol. 59, p. 1030.

## The School Child---The Future Citizen\*

By P. B. BROCKWAY, M.D., Toledo

*Editor's Note.*—Real basic and easily absorbed health-habit education is a necessary safeguard for our democracy. Health habits and social hygiene, in the estimation of Dr. Brockway, should be taught in preference to anatomy and physiology in the schools. Such instruction is calculated to be of far more benefit to the school child as a future citizen. While correction of defects in physique or health is a tremendous problem in itself, it only scratches the surface of what needs to be accomplished in preventive medicine. In the Toledo schools the system of revised health instruction is already beginning to show results.

**T**HERE is a period in the life of every child when he is most subject to impressions, be they good or evil. This period is considered as existing in the early part of his grammar school life.

In Toledo the work of health supervision in the public schools has progressed in the last ten or eleven years so that we are thinking in new terms. Perhaps, in the beginning, we had the vision but did not fully comprehend the responsibility or understand our opportunity for approach to the child in the formative period.

Health work in the schools was inaugurated so that school attendance would be improved, and that there would be full opportunity for a child to secure greatest good from the teaching scheme. The idea of disease prevention by removing or alleviating the handicaps of childhood was basic. There has been a full realization that focal infections had an immeasurable influence on health.

We have sought to detect the various defects of nose, tonsils, and teeth, also the poor functioning eyes or ears. We have endeavored to diagnose the heart, the lung, or other body disabilities that are a menace to the child's future welfare. After learning the presence of a handicap, the parent has been informed of the lesion and

urged to take steps to secure treatment and alleviation. Such a program has been amplified by working with some corrective agencies of a more or less philanthropic character, such as the District Nurses and Thalian Dispensaries.

When impossible to secure aid for the handicapped child through the family, it has been possible through our dental clinics and also by using various altruistic specialists, along eye and ear or orthopedic lines.

### PREVENTION AND CORRECTION

The corps of physicians and nurses has been increased from time to time and yet it has been felt that the results were not all that we wished to achieve. With all our efforts, we were only correcting a small portion of the defects that were preventable. This was made evident when examinations for working certificates were begun. Then it was that we learned how many boys and girls had not received proper treatment, and therefore were not ready to take a place in industry without being menaced thereby.

We believe that the child of today should have ideas of health and life so definitely a part of his character that his future family will have the benefit. Only by such training will our future citizens be the men our country deserves to have. One may ask, what of the mentally deficient and the physically crippled? We believe

\*Read before the Medical Section of the Ohio State Medical Association, during the Diamond Jubilee Meeting, at Columbus, May 3-5, 1921.

they are a problem that is being solved through segregation, and training to their limit. But, of course, the vicious feeble-minded need reproduction control, while those with substandard brain tissues can be trained to perform many of our mental tasks. As was once said, there is no cure for feeble-mindedness and it is fortunate that the world has work even for these.

However, the fact remains that many of the handicaps we now discover, are preventable through education. I mean education in the broad sense. We are giving the children and parents, present and future, data regarding proper habits of eating, and making plain the value of being in a condition of perfect nutrition.

We preach the gospel of wholesome, properly cooked food. We teach that food taken into the mouth where mastication is performed by healthy, pus-free teeth, aids in raising the body vitality and gives greatest resistance to disease.

We show the relation of good sleeping conditions, with requisite ventilation, to the resistance of the lungs to tubercular infection. The open-window room demonstrates the virtue of air as a stimulant to the white corpuscle, in its fight against the disease of childhood. The disease incidence has been markedly lessened among the pupils in these rooms.

Education concerning vaccination has been placed in the background. Our people are told regarding its protective value in every way, but there is no compulsory law for pupils. The present status will continue, I am sure, until many innocent persons experience needless illness. I wish that the state law made vaccination mandatory for school admission, or else removed all quarantine barriers, so that those who desire might have full privilege to secure this disease.

#### TEACHING HEALTH

There is no well considered plan, so far as I know, of teaching health habits in a definite way in any school system in this country. The physiology and hygiene as taught are usually so dry and uninteresting that children abhor them, and seldom realize that in those studies, lies the keystone of their future efficiency.

Last year, Toledo was given the opportunity to do some pioneer work in revamping and modernizing the facts of health, hygiene and physiology. A physician, with several years' experience in grade teaching, was employed to devote her time to the task. There was no idea of casting out the text book or skeletons, but rather to keep them in the background and build upon them a real and practical teaching plan that would cause the children to learn health habits and make them a part of themselves. By so doing it is certain that diseased tonsils and adenoids, imperfect articulation of the teeth and carious teeth themselves, will be vastly less frequent, to say nothing of the anaemia and poor nutrition, with its frequent accompaniment of lung, heart or other body lesions.

The time that is allotted in the school schedule to physiology, 15 minutes a day, is used to present

a planned series of ideas along real health and hygiene lines. Health habits rather than anatomy and physiology are taught.

An outline and suggestions for each month are sent to the teacher. The topics include the use of the handkerchief to guard against infection from sneezing and coughing, the proper protective treatment of the teeth, the virtue of cleanliness, fresh air, and good, properly prepared food.

#### SOCIAL HYGIENE

The work is interwoven with the instruction in home economics and manual training. The nurses emphasize the teachers' efforts by devoting an hour or more each day to teaching the facts of health habits from a professional point of view. The "Little Mothers' Clubs" presided over by the nurses, have given an opportunity for the implanting of some ideas concerning social hygiene.

We believe that the social hygiene problem is most properly to be solved by the parent. However, few parents are ready for, or will accept, the responsibility. We are endeavoring to reach the future parents and give them the basic principles, so that they may be guarded and informed and ready to assume the rightful responsibilities of parenthood.

I believe we are taking part in a constructive scheme to show the use of sex in human individuals. We are endeavoring, through education, to give the proper relation to behavior or conduct and character.

If we can inculcate proper ideas that will become the fabric of life of our boys and girls, we shall have made them able to absorb the most from their school environment. Whether heredity or environment are of greater influence is a mooted question, but in the United States, which is a democracy, every man is supposed to do his own part.

What that part is, can only be determined by training the mental capacity to the limit. The ideals as well as ideas must be guarded and guided, for only by so doing can we have citizens who will be "fit to fight" and "carry on" in civilization's progress. Civilization is a strenuous affair with impulses or appetites and compulsions which are difficult for the primitive man to coordinate, and I fear many of us are still, by inheritance, primitive men.

As a result there is frequently a struggle between the primitive instinct and high ideals, and we are approaching the time when one or the other must give way. Either the responsibilities of life must be reduced and the march of civilization stayed, or a better race of men with greater hereditary abilities must be bred.

Civilization must be and will be preserved and if society is really to advance from age to age, the nature of men, must improve as well as his environment.

Real basic and easily absorbed health-habit education is, for our democracy, a necessary safeguard.

# Working of the Hughes-Griswold Health Law in Lucas County\*

By CHARLES KOENIG, M.D., Toledo

*Editor's Note.*—In his paper Dr. Koenig attempts to evaluate the problem with which county health officers were faced with the passage of the Hughes-Griswold health law; to estimate what has been accomplished in their solution in his own district and to consider what remains to be done. Existing conditions in county health work are as yet far from satisfactory. There is not complete cooperation between the officials, the profession and the public. Such cooperation must be secured to accomplish the best results. Dr. Koenig details his experiences in accomplishing this purpose. He emphasizes particularly the value of using common sense in dealing with all difficulties and in surmounting them with the help of all concerned.

**P**REFACE.—A few introductory remarks are necessary. My paper may sound very cynical but it is all for the best. If I seem to antagonize anyone it is without malice but with sincere honesty and altruism. Any criticisms I shall make are constructive and for the larger good. The only selfishness about my work is the fact that I need my salary. And yet that is very unselfish because government positions of this sort are not permanent, there is no pension, no insurance against disability as is assured in factories and in labor unions; still I work at this without looking for any future private practice. I can never be accused of trying to "make" patients during my travels. I confer no favors upon anyone in particular but on all alike; I have no grudges against anyone but grievances against many. Whenever I attribute good qualities I hope you will interpret them as relating to my office rather than to myself personally. I wish to emphasize this point because some things I will say may sound egotistical; as though I had the "superior complex." While I think every man must have confidence in himself, I shall criticize myself severely and show you every side of the work.

This paper is to be a sort of annual report of my work together with a discussion of it. In preparing this paper I asked myself three questions. (1) What was to be done? (2) What have I done. (3) What remains to be done?

## THE HUGHES-GRISWOLD HEALTH LAW

The Hughes Act, passed in the spring of 1919, provided for health districts with full-time men, to be selected from civil service lists and graded according to experience and age of the health commissioner and according to the size of the district of which he could take care. Examinations proceeded until December when the same legislature amended the Hughes law with the Griswold amendment taking the selection of the health commissioners away from the civil service board. It left the choosing of the health commissioners and the determination of his salary and eligibility solely with the local board of health. Otherwise the law remained as originally planned; that

is, the formation of the general and city health districts. This law went into effect January, 1920. Advisory councils composed of the mayors of the villages and the presidents of the townships' trustees of each county met and appointed boards of health. It was with great difficulty that the district supervisors of the state department of health could get these advisory councilors together to have meetings. Finally five men in each district were appointed to serve on the boards of health. Then the boards selected the health commissioners. In the case of Lucas County the commissioner was not appointed until the middle of June, 1920.

The state department of health prescribes certain mandatory duties for the district health commissioner and many more optional duties. The district supervisor helps the district health commissioners with advice and an occasional visit; the state department of health sends out bulletins which keep the health commissioners informed on matters and which are of great service.

## WHAT WAS TO BE DONE

What was to be done? Everything. A health department had to be formed and set in motion. There was no office, no headquarters; only a few pieces of mail from Columbus at the county auditors' office. Fortunately in Lucas County the Red Cross put a nurse in to help the health commissioner. In the absence of the health commissioner she covered every school in the county, weighing, measuring, and inspecting about 5,000 children including eye tests for reading. So the Red Cross allowed me to use this nurse's office as my own. There were desks, chairs, a typewriting machine and office supplies of which I promptly took possession.

Here was a county with about 35,000 people without any health protection. They had never heard of health centers, baby clinics, school examinations or diagnosticians for communicable diseases. Large villages using unpasteurized milk; no provision for food inspection nor for taking care of garbage. Health was never thought of as a civic problem. The old health officers carded and fumigated houses on the orders of physicians and probably others, and took care of nuisances. In spite of the fact that we have a sanitary engineer whose duty it is also to

\*Read before the Section on Public Health and Hygiene of the Ohio State Medical Association, during the Diamond Jubilee Meeting, at Columbus, May 3-5, 1921.

take care of nuisances, local townships were paying their health officers to bury dead animals and take care of nuisances. The people to a large extent oppose the centralized schools because of the danger of communicable diseases; children traveling in busses as many as 65 in one bus. In spite of that danger the drivers of the busses would bring children from quarantined homes to school. They still need orders to the contrary. These schools did not give any more trouble in this respect than the one-room schools.

I was told I could have deputy health commissioners. I tried to think how I could use them. Here is what I thought of. With two or three doctors in each section of the county how could I employ one and retain the friendship of the others? How far could I trust them? If this work required a specialist then there were none in the county. To card houses is not the most important duty. The history of the case, from an epidemiological point of view, is necessary. Taking a culture is necessary. Could I expect a deputy to bring the cultures to me? Could I have the deputy take release cultures every two or three days for four weeks? Would he be fair with others as with his own patients? How much could I offer them as salary? Would they work piece work or by the year? One county has 12 deputies who receive altogether \$800.00 per year. It would take more nerve than I have to offer 12 men \$800.00 to divide among them for a year's service. One district health commissioner told me that he had to go over much of the deputy's work. Here is how one health commissioner naively tells a story: He went and found smallpox and smallpox contacts. He went home and sent the deputy to put a card on each house where he had been. Why he didn't card the houses right then and there I do not know. That is his system. To use deputies with reports coming only to the health commissioner means calling up the deputies every day on the long distance phone with much time and money lost. My decision to do without deputies thus proved to be the most logical.

*After working for a city health department, where policemen card the houses, where a nurse takes the history, where the health department's physician is only a diagnostician or investigator, it seemed queer for me to go out with a hammer and tacks and card houses myself. But look how advantageous that system is. I go to a suspicious case; diagnose it; take an epidemiological history; give instructions for observation of isolation and quarantine; card the house, and the job is complete in one visit.*

When there are cases scattered all over the county, I cannot reach all myself. For that reason I have two nurses. Each nurse has an auto. Each nurse does exactly as I do. They understand the work. They never go to suspicious cases. They go to cases diagnosed by the private doctor and do the other part of the work as well as I can. Thus we have three people working

full time and we can cover the whole county in any day and they are constantly under my orders and observations. When I describe how much work we have done besides carding houses you will see what advantages we have over the deputy service and how much better we can do the necessary work.

Do not think that it is all smooth sailing. Many sections, particularly the near ones were opposed to the new health department for the following reasons: *First* that under the new system they paid their money to the county treasurer in Toledo. In other words they do not pay directly for the service and they are terribly afraid of what happens to their money. *Second*. I have to live in or near Toledo, and therefore I am a foreigner to the county. I was even thought of as an enemy alien. There were about 18 health officers in the county doing considerable damage to the health of the county and even today there is some talk about how satisfactory the old system was. It is human nature for ignorance to breed contentment.

In the way of medical care there are 14 physicians living in the county; about 8 bordering the county; then the Toledo doctors: two chiropractors, and a county infirmary. There are about 80 school buildings with about 150 rooms; six large parochial schools; in all about 6,000 school children. There occurred last year about 900 births and 300 deaths. There is a large packing plant, three or four large oil plants, a few factories.

The ground is level, about half sand and half clay with a little limestone. There is the lake on the northern border and a large river on the eastern border with many small streams running into the river. In all the villages their water comes from deep wells. One village has a small disposal plant, a filter bed, the other villages have no method of sewage disposal. The roads are mostly good. There are very few inaccessible spots. In my opinion the county has the possibility of perfection in sanitary measures. There is a sanitary engineer who puts in sewers in that part of the county surrounding the city by about three miles. Thus parts of the county are continuously being improved (the real estate companies boosting or paying for these improvements) and as each improved section is annexed to the city the sanitary engineer stretches out three miles beyond that.

The population seems to be about half farmers and half suburbanite commuters working in Toledo. Mostly Americans and Germans and a few Polish people and quite a few Christian Scientists. Not very many poor people. The whole population ignorant of hygiene and sanitation. The physicians are not quite up-to-date as shown by their medical journals piled upon their desks with their wrappers on. Apparently they have no ambition to do more than is absolutely necessary to live. For this they are not altogether to blame. You must remember that

these men cannot be specialists and therefore they must read everything which is a very hard job. A specialist reads his special articles and incidentally sees other articles in passing. Most of the men do not belong to the medical society and the few that do seldom attend meetings. Hardly any ever used a laboratory; some men did not even know how to take a swab for a diphtheria culture. Not one saw Schick's tests nor cared very much. Many even feared vaccination. One doctor recently told one of my nurses that he would rather have smallpox than be vaccinated.

WHAT HAS BEEN DONE

In the first month, July, 1920, I received no reports of communicable diseases. The weather was hot and I did not care very much. I received one nuisance report asking me to get a ditch sewer. In August a couple of reports came in. The stories I wish to relate about these reports are typical. They occur over and over again even today. First a physician reported a suspicious case of diphtheria. He had been treating it for a week. I immediately got him some antitoxin. He gave less than 5,000 units. I urged him to give more. The patient died next day. Some more cases developed in the family at the same time. The doctor told them that they probably did not need antitoxin. One other case though got a swollen throat. About 5,000 units were given; after about seven days his cultures were negative; then he got up and started panting for breath; he died a few days later. A sister had a pathological nasal condition and had positive cultures for two months. Every other member of the family was positive at one time or another. I had to urge the physician to institute treatment for the noses of all in the house. The doctor who is practicing for many years later admitted to the family that he had never seen diphtheria before.

The next case proves the value of the new kind of health officer. This occurred early in September. I was in a village investigating a nuisance when a wide awake citizen informed me that a boy had died the day before of what the doctors called a "malignant sore throat." I immediately got in touch with the physician in charge. He signed the death certificate "streptococcic sore throat." I made a swab in his office and wanted to culture the body but it was embalmed. A sister was sick at the time and I cultured her. She had a typical diphtheritic membrane. Her culture was positive. Three other physicians who saw the boy never thought of diphtheria. One did suggest antitoxin for the sister who was given 5,000 units. The physician told me he gave antitoxin in the absence of anti-streptococcic serum which he really wanted but could not get. I quarantined the house and also had to quarantine some relatives who showed positive cultures.

We were then told that some other children in the same street had had sore throats in the past week or two. I had the nurse culture some of these. The ones who were sick were out of town. Those that we cultured were negative. The physician in charge of these other children were angry at me for snooping around their cases without their permission. I told them that when we suspect diphtheria we cannot wait for permission nor do we need it. As a matter of fact a few days later I received a letter from the health commissioner of another city saying he had a case of diphtheria in a child that came directly from my territory and that the physician in charge had diagnosed malaria, quinsy, and tonsillitis. This was one of the cases that was out of town when the nurse called.

In the other family that was out of town, after the first sick one returned, a member of his family took sick with diphtheria and while the diagnosis was made after a few days, he died. Anti-

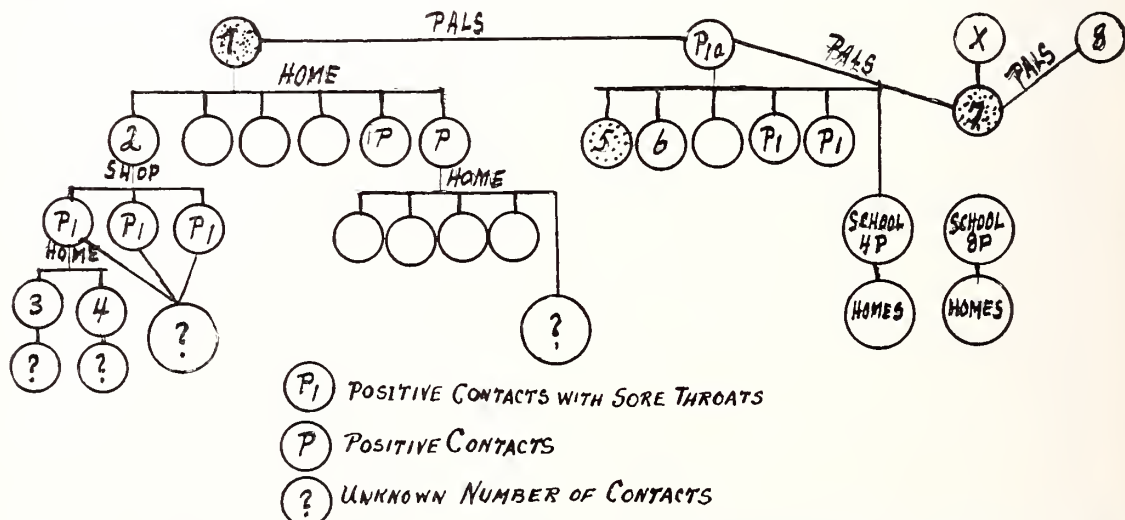


Chart 1. This chart shows all diphtheria cases and contacts in the village of M—, September, 1920. Circles with figures 1 to 8 are cases of diphtheria, recognized both by clinical symptoms and laboratory tests. Patients 1, 5 and 7, (dotted circles) died. Cases 3 and 4 occurred in Toledo. Case 8 was recognized out of town. All the patients lived close together and went to the same schools. In each school cultures were made from about 40 children. Cases 1, Pla, X and 8 had sore throats at about the same time.

toxin was not given in this case until about eight days after the onset of the disease. In the first case that died of the unknown cause, the sister, who had diphtheria, worked in a department store in Toledo. The city health department cultured her contacts and found three or four positives. These contacts were sick and had also carried it home to their families where the city health department found more cases. I am attaching herewith a little chart prepared by Miss Squire showing the number of cases and the number of contacts.

We had to culture one room in the public school and one in the parochial school and card the positive contacts and then follow them up to release time. This work took us altogether less than four weeks to release our last contact and the whole town was free from diphtheria. There was another case developed later with a few contacts but that was promptly controlled. You can see from what took place and with a look at the attached chart what would have happened if there were no health commissioner but a lay health officer or the old health officers to take care of this work.

The physicians of this town as well as those of another town in my county keep repeating to me the story that there has not been a case of diphtheria in their towns in over 20 years. I wish to quote from a paper by Dr. D. B. Armstrong, in the *Journal of the American Public Health Association* for December, 1920, which shows why diphtheria has not been present in these towns. He says, "In what percentage (of cases) are the laboratory and other technical 'instruments of precision' for diagnosis and treatment, although theoretically available for all actually applied? Why do many physicians everywhere, in spite of state provision, still make or fail to make diagnoses of diphtheria without throat cultures, or syphilis without a Wassermann." And I add to that, "How can these physicians make a diagnosis of streptococcus without a microscope but cannot make a diagnosis of diphtheria?"

I had the newspapers tell the county about our furnishing free antitoxin and about our having a local laboratory. It took over three months to get every doctor to know this. It is very sad to relate but at least three deaths in our county might be laid to the fact that the physicians were afraid to give antitoxin because they did not know who was going to pay for it.

#### PUBLIC HEALTH AT THE COUNTY FAIR

During the month of August our county had a fair. Together with the Red Cross we had a couple of tents. One was used as a rest room and playground for small children. Girl scouts took care of children while parents saw the fair. Boy scouts and the U. S. Army helped get the tents up. The other tent was made into a Child Welfare Clinic. Children were examined as carefully as possible and their physical condition reported to the parents. They were given the weight,

height, medical report, and literature on care of the children. Literature was furnished by the State Department of Health. Some children were also given tooth brushes which were furnished by the Red Cross. At this time I had printed a circular with the following information, which was given out to nearly everyone at the fair:

#### LUCAS COUNTY DISTRICT BOARD OF HEALTH

#### WHAT IT IS. WHAT IT WILL DO FOR YOU

1. *It is the official body appointed to take care of the health of the county, supported by taxes.*

2. *Can it do so? Here's how!*

We have a health commissioner who is a physician trained for his duty. We have two public health nurses and expect a third soon. Everyone works full time for the health board. Everyone travels by auto.

We see that every birth and death is properly recorded, at proper time.

We need your help to see that every disease is reported in time to prevent others catching it.

It is the duty of the physician in charge to report all diseases to us. If we get the report early we guarantee to prevent its spread.

If the physician fails in his duty—you do it.

Do not think it is a complaint you are making—it is your duty.

Report any disease in yourselves and in your neighbors directly to our office—See address below.

Our nurses shall visit every case of sickness which requires quarantine to give aid and advice.

We shall see that your milk, meat, food, water, are fit to eat.

We shall see that your neighbors commit no nuisances to endanger the lives of you and your children.

You know how the nurse inspected the school children? From now on a physician shall examine them with the aid of the nurse.

The health commissioner will address parents' meetings when necessary and upon request.

Our nurses are ready to give advice to the expectant mother.

We shall advise in the care of babies from birth up to school age, then again in the school.

We shall and can do much for people who work at dangerous trades.

There are six large villages in Lucas County. We would like to establish one infant welfare station with nurse and physician to keep healthy children healthy, in each village. Would also like to establish a clinic for tuberculous and suspicious tuberculous, with nurse and physician in each village.

These clinics are institutions which will live. They are absolutely indispensable in the cities.

We shall try to get you running water, sewers, have your garbage and other waste properly disposed of.

We shall carry our health propaganda to your legislators, councils, etc.

We are ready to give confidential advice on sex matters.

We expect to prevent much blindness by seeing that "running eyes" of new born babies are properly treated.

We have a state laboratory at our disposal—free.

We have a county infirmary and hospital.

We have a county tuberculosis sanatorium.

We have a county tuberculosis dispensary located in Toledo.

For advice, reports, complaints, address all official communications to the District Health Commissioner.

Smith & Baker Bldg.,

Toledo, Ohio

Home Phone, Main 2904

Bell Phone, Main 4430.

#### SECURING THE COOPERATION OF THE TEACHERS AND DOCTORS

Then I prepared (from a memorandum printed in the Journal of the American Public Health Association last year by Dr. Biggs of New York State) a list of symptoms, such as you have all seen and the county superintendent of schools had them mimeographed at his office and sent one copy to each school. I also had a smaller list made up from this, which gives a few symptoms for which I advised teachers to send children home. This included only fever, headache, sore throat, skin diseases, rash, swelling at the angle of the jaw, enlarged glands in the neck, discharging nose, ears, or eyes, and peeling skin. I then addressed the teachers at one of their meetings and explained the lists and how I wished them to use them.

Next I prepared the accompanying circular letter addressed to the physicians and later used as a guide by many of the physicians:

Toledo, Ohio, Oct. 16, 1920.

Dear Doctor:

When we receive a report of a communicable disease we proceed as follows:

Either the Health Commissioner or a Nurse (it should be only a nurse) visits the home and puts a card on the house. A slight explanation of the meaning of quarantine is given. A history of the family and probable source of infection is ascertained together with the names and addresses of contacts.

Then the following instructions are given: Keep the patient in a separate room in the house. Keep all his dishes in that room. Nurse him just as little as possible. Have only one person nurse him or wait on him (assuming they can not get a nurse). Allow no one else to enter the room of the patient.

Then there must be a basin of antiseptic solution placed on a chair near the door but inside the sick room and a towel must be hung on that chair or near the door also. The attendant, usually the mother, must wash her hands in the antiseptic solution and dry it right there every time she attends to the patient and comes out of the sick room. She must occasionally wash the patient's hands with the antiseptic solution also. Both the attendant and the patient are warned to keep the hands away from their noses, mouths, and from each other. The linens of the sick room must be dipped in a similar antiseptic solution before removal from the sick room and being mixed with other wash. A paper bag can be hung on the bed by means of a pin and into this bag is thrown all cloths or papers (napkins, toilet paper, or even newspaper squares) into which the patient spits or cleans his nose and when the bag is full it is easy to burn without having to touch any of the secretions. Same treatment to other excretions of the bowels and bladder where needed.

I am sending this to you with the entreaty that you help in the work of controlling communicable diseases. The above instructions while not at all complete in every detail are absolutely necessary. By the time you are called to see a patient; by the time you make a diagnosis; by the time I receive your report; the patient is mixing freely with the family and damage is being done, especially where the family handles and sells milk and food. If you could only give a few such simple instructions as outlined above you would be helping your family and helping the community and when we get there to emphasize these instructions it will not seem like something new to them; it will not seem to them that we are telling them something that you do not know or which you should have given them but you didn't; it will show them that we, you and I, both believe in communicability of these diseases; it will not give the people a chance to think that as long as we do not agree on such matters that therefore the Christian Scientists may be correct while we are both wrong. A little thing like hanging a bag on the bed to catch the secretions which may be put on cloths or papers will make a hit with people. Help us to help you.

Respectfully yours,

Charles Koenig, M. D.,

DISTRICT HEALTH COMMISSIONER.

OUR CHILD WELFARE CLINICS

On January 18, 1921, we opened our first perm-



anent Child Welfare Clinic. This is located in the Council Chamber of the village of Maumee. There is a pediatricist from Toledo in charge of the work. I took copies of the birth certificates for about a year back and addressed a letter to the mothers of the children, inquiring as to their health and asked them to come to our free clinic. Without the nurses visiting these mothers to ask them to come in we got a very good response and the number attending is growing constantly. This clinic is open every Tuesday from 10 to 12 A. M.

On April 8, 1921, we opened our second permanent Child Welfare Clinic at Sylvania. This is also located in the council chamber. There is another pediatricist in charge of this clinic. This one is open every Friday from 10 to 12 A. M. I advertised these clinics as health centers as we expect to have other activities in them later.

#### SCHOOL EXAMINATIONS

On days when we had none or just one house to card, I had the other nurse go with me to a school and we did some physical examinations. Sometimes we would start out the three at a time and go to a school. In this way we have examined so far, five one-room schools, one three-room school, one centralized, eight-room school, in all about 500 pupils and have sent reports and recommendations to the parents. We invited the parents to see the examinations but got little response. Some parents objected to the examinations and so their children were not examined. The boards of education did not require physical examinations and there could be no compulsion. The above mentioned school work took us about 20 full days of work.

Besides this work many school rooms were inspected for evidence of communicable diseases. About 38 schools were visited in this way. These visits were made only in case of suspicion and meant going to from one to six homes to see sick absentees. Many schools were visited a great many times. The nurses visited more schools than I have mentioned. I have mentioned only the ones to which I went.

#### CONTROLLING EPIDEMICS

During all this time we have gone through a severe epidemic of diphtheria with about 85 cases and about ten times that number of contacts. We have also had a severe epidemic of scarlet fever with about 160 cases, besides this much chickenpox, mumps, whooping cough, and now smallpox. We have not asked for outside aid at all. We visited every case as often as necessary. We took release cultures every second day. We cultured several schools.

I can truthfully report that we have controlled the spread of diphtheria and smallpox wherever we found it. This can be best shown in the large villages. Here the physicians used to say like the Christian Scientists, "You presume too

much when you say that more cases would have developed if not for your interference." But now that we see it in retrospect, they are giving proper credit for what was done. I cannot say that for chickenpox, nor mumps, nor whooping cough nor for scarlet fever. This is because scarlet fever is not diagnosed and the others are not reported. There are too many mild or missed cases of scarlet fever to ever expect to control its spread.

#### COOPERATION WITH THE PROFESSION

I tried to get one conference of physicians. Many promised to attend. Only three showed up. At this conference we decided to use a local laboratory, for which I immediately contracted. I tried to explain my position in relation to reporting and diagnosing cases. I asked them what they expected of me and I assured them I was working entirely for their benefit because I believed it the only way I could help their patients,—the public.

These are the ways in which I have tried to help the physicians:

1. By furnishing local laboratory service free.
2. By furnishing free antitoxin and vaccinia virus.
3. By assistance in diagnosing communicable diseases.
4. By free nursing service in some cases, particularly ophthalmia.
5. By occasional transportation of patients to the physician or to clinics.
6. By assistance in getting poor patients to the county or other hospital.
7. By informing physicians of the presence of communicable diseases in other parts of the county.
8. By relieving the physician of the responsibility of determining the length of quarantine.
9. By urging those needing medical care to go to physicians, especially in connection with our school examinations.

Supplementing assistance in diagnosis, I think the greatest service of the new health commissioner to the medical profession at large, lies in the fact that he can say to people with a suspicious case, that he does not know what diagnosis to make and that he will call again. What I mean is this: Our physicians have adopted the methods of quackery for business reasons. They think that they must make a diagnosis at the first visit and very quickly. They think that their reputations are jeopardized if they should say, "I do not know what ails the patient, I shall have to see him again." As a matter of fact the only men I ever heard say that were consultants who had large practices and good reputations and men working in free clinics. On the other hand I have had people tell me they thought doctor so-and-so a "sucker" because he makes more calls than they think he ought to. If a physician says he does not know the diag-

nosis and the diagnostician says the same thing, is it not saving that doctor's reputation? Is not that teaching the people what to expect? Many times I have explained to people that diagnoses are very difficult and at times impossible, just like "influenza" becoming "smallpox." In my comments I shall speak of this with reference to the relation of the physician to his patients.

#### SOCIAL SERVICE

We have also tried to act as social service agents in a small way. We have been the intermediary between patients and doctors; between quarantined men and their jobs; between poor people and relief both medical and financial (not communicable diseases either). The district nurses, the truant officer, and the schools have all referred cases to us which had nothing to do with the health department directly, and in each case something was done on our part.

#### WHAT REMAINS TO BE DONE?

In the first place we have to continue what we are doing. Nothing is complete nor ever will be. Next we must do the things which should have been done but which were not. These are still many in number but secondary to what has been done. You will notice from the foregoing that certain divisions of an ordinary health department were not mentioned because we haven't got them; such as departments for milk and food and drug inspection and examination of food handlers. I have asked the board of health to provide for the licensing of milk dealers but the board thought we had enough to do already.

There has been very little nuisance work done. There have been very few complaints. I have seen but one or two privy vaults built in conformity with the law. Outside of incorporated villages the sanitary engineer takes care of nuisances. Most nuisance complaints were not due to the individuals exactly, but to the fact that the villages had no provisions either for sewage or garbage disposal. There are many illegal drains emptying into the river and streams but I do not see how I can go and look for them. I have had some newspaper publicity but I should have had regular weekly bulletins. I think we need a local sanitary code. Our health departments are new; it means added work for the county auditors and prosecutors and they do not like it. The state code we found is hard to follow. If we had a local code which the prosecutor helped to draw up, he would know it and be more anxious to enforce it.

We need means of transporting sick children from schools to homes. We need a hospital for communicable diseases. We need tuberculosis clinics. We did not finish our school examinations. I forgot to send lists of symptoms to the parochial schools although I intended to work with them as with the public schools and I did examine the children of one parochial school.

#### COMMENT AND CONCLUSION

The original Hughes Health Law with the state control of the health commissioners is in my opinion the best law for all concerned. The Hughes-Griswold law permits very good health protection but it also permits very bad work. I cannot say how long things will continue as they are. I got a slight increase in the budget for 1921 over that for 1920 and my board has concurred with me in asking for a slight increase for 1922 over that for 1921. The health law seems to be working fairly smoothly in Lucas County; any objections to it are mere grumblings. I think that the people of the county have sense enough to know that they do not know very much about the work and therefore cannot object. Aside from all this, I sometimes think that all health laws are superfluous and dangerous. They stir up anger and hatred for all governments. When nearly 100 per cent. of the people object to being quarantined and when nearly 100 per cent. of the physicians repeatedly break the laws, it does seem as though there is something fundamentally wrong, because our laws are only good insofar as the majority want them. There are two things that counteract that thought of mine. Just one of these however, is sufficient. In the first place I believe with religious fervor in the work I am doing. Secondly, 100 per cent. of the people think that the laws are excellent, if applied to the other fellow.

I shall conclude with a few reflections on the nature of my work and with a special message to the private practitioner. I have shown in what ways the district health department has tried to assist the physician. I have not mentioned every way; I only spoke of the ways we tried. The health departments of the big cities do much more for their physicians.

What is a health commissioner? He is the person responsible for the carrying out of the sanitary code or health laws. But that is not all. He is generally the kind of man who draws up the laws. In order to do these things properly he must know medicine. He must know the philosophy of medicine. He must know the causes of disease and the methods in which the disease acts, or if it is a communicable disease how it travels. He must be a very good observer of disease. He must be able to analyze the findings of his colleagues in the light of public use for public benefit. He is the man who must explain it to the laity. In fact from recording the movement of diseases and knowing how to interpret his observations and classifying them, the health commissioner is of great service to the medical profession. While every physician learns the cause of disease insofar as we know them, and the methods of prevention, yet it takes a specialist in public health work to put into practice our knowledge. Let me illustrate.

In the *New Public Health*, Hill says that communicable diseases come from sick people who

have those diseases. He tells how we must avoid the sick to avoid the sickness. No matter how healthy an individual is, if he comes in contact with the cause of disease, he will get sick. Then he goes on to describe the most important method of transmitting germs from the sick to the well about as follows: If germ life requires heat, moisture, and darkness, how can a germ live on a piece of paper, or on clothing? It can live a number of hours or perhaps days but not more than a few days. And yet most people believe in the fomite method of transmitting disease, entirely overlooking the personal contact. On the other hand a person's nose, mouth, and intestines are warm, moist, and dark; excellent breeding ground for germs once they get in. Our fingers are constantly going to our noses and mouths. The fingers are constantly putting germs into our noses and mouths and *vice versa*. Our fingers thus being constantly reinfected and being fairly warm and moist, are the greatest and most common means of spreading communicable diseases.

That explains contact. Simple! There is nothing new about it. But how many practitioners have thought of it just that way? Every layman and a great many physicians I have thus far dealt with believes that typhoid fever comes only from drinking polluted water. Even in sporadic cases they look to the well. When I tell them that if the well were the cause there would be more cases in the house, they sort of feel themselves slipping but insist upon searching the well anyhow. I have been able in two out of our six cases to trace sporadic cases to contact but unhappily the laboratory does not prove me. The laboratory has never yet returned a "positive" report for typhoid bacilli. That is unfortunate because it is difficult. It is difficult to explain this difficulty to the laity. Even the physicians become panicky and do not trust the laboratories. This was brought out during the last diphtheria epidemic. Some men did not know whether a positive report meant diphtheria. Some waited for two positive reports before they believed it was diphtheria. Some believed the laboratory implicitly; they even waited three days for an answer and when that answer was "positive," immediately gave antitoxin.

To get back to the finger tips. Inasmuch as it takes an actual contact to produce disease, I propose that we use the word "contact" whenever we mean it and never use the word "exposure." I know that "contact" is a little more awkward term. But the word exposure is misleading. In our work we are trying to explain to everyone how to isolate a sick person. We have to explain the word "contact." Everyone knows of "exposure" but "contact" seems to be entirely new. For the benefit of those who do not have to personally explain these things to people I will say it is like trying to convert unwilling people to a new religion. The difference between exposure and contact explains why one person being near

a sick one will not "catch it" while another will. I have very good proof that contacts are necessary rather than mere exposure. In schools it takes much longer for a disease to travel from one child to another than it does in the home. Sisters and brothers catch diseases from one another after the usual incubation time whereas in the school there will be cases developing after longer lapses of time. The fact is that the opportunity for contact has been delayed. Another thing is that in slight contacts it probably takes more than one contact to produce the disease.

The following has been our experience with diphtheria: When a case is reported and our cultures show just the patient alone to be positive and the rest of the house negative; when the patient is well enough to be up and isolation is no more observed (that is before the patient has shown two negative cultures) sooner or later, one after the other, the whole family will become positive. Where the isolation was observed until two negatives were found the families never became positive.

This brings up the next comment. In the presence of an epidemic everybody, including physicians, uses antiseptic washes two or three times a day for the nose and throat. When a case occurs in a family, small or large, does the physician give everyone in the house who is susceptible a nose and throat wash? Very rarely. He usually tells them to keep the other children away from the sick one, and that in all probability they would get it anyhow. When I get to one of these cases I urge the usual isolation and then I urge them to ask their physicians for a nose and throat wash both for the patient and for prophylaxis. I do not think I am butting into the physician's business. I am merely preaching prevention. I cannot shut my eyes when I see things. I am positive that most of the complications of communicable diseases are due to lack of treatment. I have in this way, since so many deaths have occurred from diphtheria, taken the liberty of checking up the physicians and have watched their diagnoses, urged the use of specialists in consultations and urged the use of the laboratory. I believe that I am helping both the physicians and the patients.

What I have always urged is that the people should use physicians more and more. A very interesting incident in this respect occurred when I visited a sick absentee from school and found him with a running ear. It just started to run a few days ago. The parents were well-to-do American farmers. They had not had a physician to see the child, because as the father said, "We did what any doctor could have done, we used common sense." And I had the nerve to take that man to task for using the expression "common sense" in that superior manner, and then tried to scare him into getting a physician immediately, and we parted friends. That is the kind of work which requires much energy on our

part and which is hardly appreciated. All our school examinations and our clinics are for the purpose of urging greater use of the physician. I believe in medicine; I believe it is scientific; I believe in the communicability of some diseases; I believe we can prevent much sickness. I am saying these things this way because I want to go on record that way. Too many physicians are wobbly in their beliefs in this respect. Too many physicians do not try to impose these beliefs on the laity.

It is my duty to tell people the truth about medicine. I consider it an honor to have to do that. Does a physician have to lie to his patients? Many, if not most of the physicians seem to think so. I think that because it is a quack trick to keep secrets and act mysterious, physicians should not imitate it. Of course people may not ordinarily be able to understand the physician's explanations of things but the physician fully understanding his greater knowledge should try to explain things in as simple a way as he can. Besides, it is my duty to explain a little to the people so that they will understand what the physician tells them. The city of Cleveland has issued a booklet with definitions of words and information about communicable diseases which in my opinion will go a long way towards helping both the health department and the physician in their relations with the public.

Physicians are considered mysterious by many people. These people generally believe in their physicians. More than once I have stood with a blank expression unable to make a diagnosis and not knowing what to say and the patients have said, "I'll bet you know all about it but you refuse to tell us." That is quite flattering. But there is another class of people. Those whose faith in physicians has been shaken. They have turned to every form of quackery for advice. Under the guise of intelligence they are really the most ignorant and narrow minded people. It is my duty to explain to these people that our physicians cannot diagnose or cannot cure everything but surely no uneducated quack can do what we cannot. Not everyone is willing to believe this statement. Quacks search the whole world over to try to disprove it. I believe it though. I know that not every physician has the same amount of knowledge or skill. But every physician should know where to get the necessary added knowledge. I mean the use of specialists and the proper consultants. I believe that physicians should keep their eyes open for mechanical defects and not try to cure them with medicine. I believe much in the effect of mind over body; not like the Christian Scientists see it but the way our mental hygienists see it.

I wish to assure all physicians who practice in Lucas County that I do not permit any physician to knock another physician by making quack remarks or doing quack tricks. Also if a physician treats smallpox and says the patient has "thick

blood" or "bad blood" or treats "scarlet rash" as "stomach rash," I never hesitate to tell the people what my diagnosis or suspicion is. I also believe that I have a right to make a mistake on the side of safety. I think the fact that I am on full time and am not competing with the private practitioner makes all this possible to the entire benefit of the private physician and his patients. I can go on indefinitely citing instances of our experience. I have not always been very diplomatic but tact has to be acquired. In the meantime, because I have to explain things to the laity, because I have to urge the people to use physicians, and because I have to be a diagnostician, I think it behooves the physicians to tell as much truth as I tell, and to use the health department more and more. If the physician tells a lie or makes a quack remark, I am right there to contradict him and that does not boost him any. I have to take this attitude because I must help raise the standard of medicine and because physicians have always hidden or missed cases and they think they can hide them from the health department now too. One failure to report a case of suspicious smallpox made it necessary for us to vaccinate a shop, five school rooms, and quarantine forty contacts in forty different homes and several that lived in the city were referred to the city health authorities. One of the patients in this family drove a bus for awhile. How much damage was done can never be estimated. One failure to diagnose scarlet fever caused an epidemic of about 65 cases, and so on *ad infinitum*.

It is only because physicians do not know everything that quacks exist. It is only by absolute honesty, by speaking intelligently on what we do know that we can convince the people that we are rapidly progressing towards a more complete knowledge and that it is only by science and not by quackery that we learn. I think that the people get enough stories from quacks and neighbors which make the practice of medicine difficult enough without the physicians telling any lies or diagnosing unheard of or impossible conditions. There is much more I would like to say on this subject but I think I shall postpone it for some other time.

1166 SYLVANIA AVE.

---



---

#### NEW AND NON-OFFICIAL REMEDIES

Xeroform—S. and G.—A brand of bismuth tribromphenate—N. N. R., for a discussion of the actions and uses of bismuth tribromphenate see New and Nonofficial Remedies, 1921, p. 71. Schering and Glatz, New York (Jour. A. M. A., Dec. 17, 1921, p. 1971).

Theobromine and Sodium Acetate—P. W. R.—A brand of theobromine sodium acetate—N. N. R. For a discussion of the actions, uses and dosage of theobromine-sodium acetate, see New and Nonofficial Remedies, 1921, p. 363. Powers-Weightman-Rosengarten Company, Philadelphia (Jour. A. M. A., Dec. 24, 1921, p. 2061).

# The Requisites of Modern Obstetrics and the Professional, Social and Moral Obligations of the Present Day Obstetricians\*

By WM. D. FULLERTON, M.D., F. A. C. S., Cleveland

*Editor's Note.*—The obligations of present day obstetricians, in the opinion of Dr. Fullerton, begin with eugenics and the healthy development of the female child as a potential mother. The sheer economic loss of women from childbed complications makes prenatal care, better obstetrics and after care imperative, if lives are to be saved and better babies born. Obstetrics as a branch of medicine cannot come into its own until its teaching and field embraces gynecology. Broad visioned teachers must be developed and practical obstetricians and gynecologists sent out into practice. The coming obstetrician must be a skilled surgical operator. Furthermore the tremendous increase of women in industry presents a medical problem that relates very especially to the sphere of the obstetrician and gynecologist.

**P**ERMIT ME at this first opportunity, to express to you my great appreciation of the honor conferred upon me at our last meeting, at which time I was made your presiding officer. Feeling that such a position demands some contribution, I fear I have not lived up to my own standard, for I have given to you little or nothing, whereas from you I have received much of great value in the realization of my own defects and my obligations to you and to society. All that I can now do in the way of atonement, is to give you the results of my thoughts and I only hope that they may be to you, some integral part of the value they have been to me.

## THE PROBLEM OF REPRODUCTION

There is no doubt in the mind of anyone, who gives the matter the least consideration, that the successful reproduction of mankind, in the fullest meaning of the word, is the most important problem before the world today. Just what does this problem embrace?

*Education.*—Our first obligation is to realize that the female child must be considered a potential mother. From earliest childhood, in addition to her general care and education, this factor should be constantly borne in mind. From time to time such oversight and direction should be given, as is called for to render or keep her young body best prepared for its future function. Parents of these children should have explained to them the necessity of careful attention in the common diseases of childhood, especially tonsillitis, rheumatism and adenitis, which are so often followed in the young adult with such distressing sequelae. The value of fresh air, proper clothing, correct posture, nourishing food, rest, regulation of bowels, and general hygiene should be taught. They should be advised and instructed in gradually unfurling to their daughters the process of reproduction, so that these girls will receive such knowledge in a clean, dignified manner by the time they reach puberty.

*Eugenics,* insofar as it is practiced or can be

made so as civilization advances, is of paramount importance. Those absolutely and permanently unfitted for reproduction should be restrained legally or socially. Those temporarily unfit should be made fit, through proper medical or other care with the least delay. The most ignorant breeders of stock will not allow mating of unfit animals. What care or precaution do we take; what catastrophies in the reproduction of the human race do we sanction by our silence?

So long as the unfit mate, their progeny will constitute no inconsiderable part of preventable human defectives. The ways and means of reducing such defectives are a problem unto themselves, but who, unless the obstetricians, can be looked to for advice in such matters?

*Obstetrical Obligations.*—The pregnant woman is in the prime of life; she has reached her greatest economic value and is most essential at this time, to her family and community. Her risks of life and health are, at this time, greatly increased. She should now have the highest degree of skilled care of her existence. Does she get it? If not, it is our duty as obstetricians, to provide such care for her. Under present conditions, more than fifteen thousand women die annually in the United States in the process of reproduction. Almost half of this terrible casualty list die from infection at the time of delivery. With the realization of the advance in medical science, the errors of omission and commission in the delivery room, cannot be justified by anyone who will give the matter careful analysis. We must better the results which we are now obtaining as they are far from satisfactory and show no material decrease in mortality in the past twenty years. Almost every woman feels, at least during some part of her pregnancy, that she will not survive delivery. Perhaps there is some justification for this intuitive fear. Let us hope that the day is not far distant when we can ourselves feel the assurance which we now give our patients.

The mortality and morbidity of labor is entirely too great, and we must, with the aid of every faculty we possess or may acquire, improve present conditions. Difficulty with the so-

\*Chairman's Address presented before the Section on Obstetrics and Pediatrics of the Ohio State Medical Association, during the Diamond Jubilee Meeting, at Columbus, Hay 3-5, 1921.

called normal case should be almost unheard of, and the frequency of accident, in even the most complicated well handled cases, should not exceed that of major surgery. Our greatest energies should be directed toward prevention, since we recognize that the vast majority of conditions ending in disaster are preventable by careful observation, study, patience and good judgment.

I am afraid that too often we are satisfied if we deliver our patient and she does not have serious or fatal hemorrhage or infection, and is able to leave her bed after two weeks, although she may be in a deplorable condition and remain a semi-invalid for months or years to come. The time is past when such inefficiency will be tolerated longer by patient or public, and we have no claim to recognition or respect until, after normal puerperiums, we are returning our mothers to their families, undiscounted in health or physique, on account of their recent confinement.

*Better Babies.*—We cannot consider that we have more than half fulfilled our obligations, even though we return the mother in perfect condition, unless she takes home a normal, healthy baby. The greatest common risk which any of us have ever run, has been the danger of being born. In that we have survived our birth, we are fortunate, and we can express our thanksgiving in no more appropriate way than through the expenditure of our united endeavor to render the birth route less perilous for the untold horde that are yet to come.

#### IMPROVED TEACHING OF OBSTETRICS AND GENERAL GYNECOLOGY

The practice of medicine has become a most exacting science, as well as an art. In order to advance this science beyond the point where our fathers carried it, we must fit ourselves by years of intensive study and application. Not only must we make use of the knowledge which we acquire, but we must pass this knowledge on to others who will shortly take our places; *we must teach.*

How many of those occupying teaching positions today are really competent to and do fulfill their obligations? A recent critical review of this situation by a recognized authority, showed of 43 professors of obstetrics answering a questionnaire sent 120 schools, 17 indulged in general practice; 21 combined obstetrics and gynecology, and 5 limited their work to obstetrics. Quite a number of these men admitted they were unable to cope with major surgical conditions. Many of them had assumed their duties without any preparation, and many others were poorly equipped. Only twenty per cent. had hospital connections where the capacity was five hundred patients or more per year. This condition of affairs is certainly not satisfactory.

In the early development of modern medicine, obstetrics and gynecology were firmly bound together. Many of the great advances in medicine

have been contributed from these fields. In teaching, as well as in practice, the fields of obstetrics and gynecology are inseparable for the best results. In about half of the medical schools, there is no co-operation between the departments. This is most unfortunate from the standpoint of training students and assistants, and developing broad-visioned teachers able to cope with any complication of the female generative tract.

Let us now consider the preparation of the medical men for the future. Those of us in position to do so, should consider most seriously, the selection of medical students. Admission to medical schools should be sufficiently difficult and exacting to have already shown some determination of purpose on the part of the applicant. The minimum requirement for admission should be a collegiate education including advanced work in biology, chemistry, physics and modern languages, as well as a special aptitude for the future work. From the very day of admission, the medical student should realize that the practice of medicine is a rare privilege, which carries with it the respect, trust, confidence and welfare of the community. He should prepare and always conduct himself so as never to cause his patients or the community to lose faith in the profession.

The medical curriculum should give the student a good foundation in the fundamentals of medicine, especially physiology and pathology. He should be given a substantial training in general medicine and in his last year allowed to major in whatever subjects appeal to him most strongly. Well equipped laboratories should be constantly used. A liberal number of beds in a well organized hospital, with a well attended dispensary, should provide clinical material. Nothing so stimulates the student as bedside instruction. The teacher at this time has great responsibilities, as I believe it is here the student's future is largely determined. If he can be taught to observe, and properly analyze what he finds, to think for himself, his future is assured.

The immediate post-graduate training is now to be considered. I question whether any man on graduation is really fitted or prepared to properly care for even uncomplicated pregnancies or simple gynecological conditions. Certainly if there is to be any claim to specialism, at least five years should be spent in further preparation in hospitals where the organization offers the best facilities. Hospitals in which teaching is done and in which the young physician may take some part, as he is able, are greatly advantageous. The first year may very profitably be spent on a straight medical service or a rotating general service. The next four or five years should be devoted to special training in gynecology and obstetrics. The hospital in which these services are organized under one

head, and in which service is given alternately in both branches, is most to be desired. In lieu of such a service, a continuous gynecological service may be found at one hospital and a similar obstetrical service in another, neither for less than two or three years' training.

After such training, one should be able to skillfully handle the great majority of conditions met with, and recognize conditions in which he may be timid in assuming responsibility. For these, he need feel no loss of self-confidence in seeking advice or assistance. A consultation is more often proof of excellent care than of ignorance. Men with such training as outlined, will recognize abnormalities outside their special fields and refer the patient to the one best fitted for further diagnosis and treatment.

Well trained men of this type will have a broad, general view of their responsibilities to the profession and community. They will give willingly of their time and knowledge to research and teaching, and to solving physical, moral and civic problems of the community.

#### THE OBSTETRICIAN AS AN OPERATOR

The general surgeon is ordinarily able to do the technical operation dealing with pelvic pathology, however, when it comes to diagnosis from the history and physical examination, when and how most conservatively to operate, macroscopic and microscopic examination of the tissues inspected or removed, it is here that the trained obstetrician-gynecologist excels the general surgeon.

Discontinuing, or never having had the more arduous practice of obstetrics, numerous gynecologists have extended their narrow field of surgical activity until it merges with that of the general surgeon, who now contends there is no longer any reason for the specialty of gynecology.

The obstetrician must be a competent surgical operator. Most satisfactorily by practicing gynecology, may he obtain and retain this necessary surgical experience. It is also the only way in which he may see, follow, and understand the late results of his obstetrical work, learn of his mistakes, and improve his obstetrical technique accordingly.

Promising young men refuse to enter a field of most exacting requirements, where the remuneration is so very insufficient, and in which they are so often scorned and considered merely as man-midwives. Through these actions all fields have suffered severely, and as a result, womankind has not had the care and attention required or deserved.

The only logical conclusions are that obstetrics and gynecology should be inseparably united, studied, taught and practiced. In this way only we expect to obtain the desired improvement in either subject, and in so doing we

will retain, maintain, and advance the science devoted most particularly to the care and improvement of the health of womankind.

#### CARE OF WOMEN IN INDUSTRY

Industrial medicine, wherein it applies particularly to employed women, has scarcely begun. When we realize that ten million women and girls are employed in the United States, of whom 3 to 4 per cent. are absent daily due to sickness, 24 per cent. of which is headache and 18 per cent. dysmenorrhea, our interest should be at once aroused. And we find that rest rooms, accessible toilets, correct posture and shoes, slight supervision and suggestions in hygiene, will very greatly improve these conditions of physical unfitness and economic loss. The effect of employment on childbearing, and employers' responsibilities are other questions of great importance. In some few establishments employing large numbers of women where physical examination is required before hiring, almost 20 per cent. of applicants were rejected as unfit. The benefit to the establishment in employing only those fit for occupation, and in maintaining medical supervision, is enormous. The unfit should be referred to the proper channels for their physical improvement.

#### PROPHYLAXIS

The special field of obstetrics may be approached from many angles for ways and means of improvement. Eighty per cent. of all deliveries are conducted by the family physician or a midwife. We cannot expect expert obstetrics from these well loved men or from midwives. The family doctor may, however, look for and recognize gross deformities of the pelvis, early signs of toxæmia, cardiac and pulmonary complications, and cases showing such complications, as well as those with a history of dystocia, should be referred to a specialist for hospital care.

More careful attention to antiseptic technique at the time of labor, substituting abdominal palpation and rectal examination for vaginal exploration during labor, and unhesitatingly asking for help and advice if labor does not progress and terminate normally, will do much toward reducing morbidity and mortality of mother and child and will incidentally add honor and appreciation to the position of the family physician.

To all of us interested in the process and organs of reproduction, the great necessity of preventing trouble, is of paramount importance. We should strive to avoid pathology rather than combat it when established. Prophylaxis is the ideal and possible treatment in the great majority of obstetrical complications. In no other practice will prophylactic measures give such universally satisfactory results and improvement.

*Toxæmia.*—A few illustrations may be men-

tioned of what prophylactic care will accomplish. There are several types of nausea in early pregnancy. Careful consideration and study of the case usually enables us to classify the conditions, and often eliminate or greatly relieve this most disagreeable and distressing symptom. True toxic vomiting unrelieved by treatment, requires termination of the pregnancy. Early diagnosis adds greatly to the mother's safety. Toxaemia, the most common and most dreaded complication of pregnancy, is almost always heralded by definite signs and symptoms. Blood pressure findings have proved to be of great importance as perhaps the earliest sign. A normal pressure for the pregnant woman, irrespective of age, should not exceed 125 mm. Hg.

A higher pressure indicates an impending toxæmia or cardio-vascular-renal complex. A blood pressure of 150 mm. has been found to have reached the danger mark, and demands immediate and careful study and treatment. A pressure, normal at first and found suddenly or gradually rising, resisting treatment, is more to be feared than an equally high constant pressure. The blood pressure almost always shows an elevation, days and weeks ahead of albuminuria, which may usually be anticipated. Careful observation and frequent examination during pregnancy for these two signals of trouble; with appropriate treatment, will almost always eliminate one great source of disaster.

#### AVOIDING HEART, LUNG, KIDNEY AND OTHER COMPLICATIONS

Early in pregnancy the patient should have a complete and careful physical examination, with special reference to heart, lungs, kidneys and blood. With abnormalities of these organs, the obstetrician must assume a tremendous responsibility in advising women who seek his advice or come under his observation, before or after conception.

With hearts which are functionally inefficient or have a clear history of broken compensation, pregnancy should be prohibited. Termination is in order unless shortly before viability of the child, in which instance, every effort should be made to prolong the pregnancy in the interest of the child. Prognosis in heart cases is so uncertain, and the complication offers such a diversity of problems, that the best solution will always tax our resources.

The most pernicious influence of pregnancy on tuberculosis, as well as the detrimental effect of the disease on the pregnancy being well known, gives us another serious problem for solution in the individual case. Briefly, no tuberculous woman should bear children. If pregnancy is well advanced, it may be continued in the interest of the child, though we recognize with what detriment to the mother.

Of most importance in the blood study, is the subject of syphilis. The history will often give

us a clue, the disease being the most common cause of repeated abortion or miscarriage. Careful statistics show from seven to twelve per cent. of pregnant women are luetic, though the Wassermann may not infrequently be negative. This blood test on women just delivered, and newborn children, is so unreliable as to be undependable. The test should be done on all patients and early in their pregnancy. When syphilis is discovered radical treatment will do much toward reducing infant mortality, as one child in five that dies shortly before or after labors, succumbs to syphilis.

Whenever the urine of the early pregnant woman contains albumin or casts, and especially if accompanied by an elevated blood pressure, functional tests should be carried out on which to base the treatment and subsequent action. In these cases, treatment is often richly rewarded and the woman carried safely through her pregnancy.

*Pre-Delivery Examination.*—About one month before the calculated date of delivery, the patient should have another thorough physical examination, with special reference to the position and presentation of the child and the pelvic measurements.

The usual measurements are of value, but of most importance is the thorough vaginal examination. The diagonal conjugate should be carefully taken and the true conjugate estimated. Whether the head is engaged, length, thickness and dilatation of the cervix; prominence of the promontory of the sacrum, ischial spines and coccyx, are all points of great importance. It is at this time, when abnormalities are discovered, that the practitioner should ask the advice of those with special training, as to the probable outcome of the case, and what should be done in event of trouble.

#### PROBLEMS OF THE PUERPERIUM

To even mention the many complications of labor and the puerperium is impossible within the time allowed me, however, some general problems of greatest interest confront us. The more general study of the types of contracted pelvis, with the mechanism of labor for each, demands our attention. The relative size of pelvis and child needs more extensive consideration. The course to pursue in border-line pelvis is a problem, taxing our every resource and varying with every case.

The advisability of premature induction with large children or border line pelvis, is a subject to be carefully studied. Should we allow primiparae, especially, to go beyond calculated time, or should we induce labor, and if so, when and how?

A most important subject is the choice of the anesthetic. When, how long, and by what method is it best administered?

The careful obstetrician will vary the anes-



thetic, depending upon the needs of the case. No single anesthetic is universally satisfactory. Nitrous oxide is most helpful in the majority of cases, for all but the termination of the second stage, when ether or chloroform should be substituted or added. In average hands, ether is perhaps the most universally satisfactory and safest anesthetic. Chloroform may be used with great satisfaction but only for very short periods and never in toxic cases. Local and spinal anesthesia have their limited use. Morphine and scopolamine in experienced hands, and with rigid oversight, may be found useful in some instances, but it is generally known that risk to the foetus is materially increased.

When labor is unduly prolonged, due to causes which may be more quickly overcome by careful intervention, than by nature, may we wisely shorten labor and save the mother exhaustion of the cerebellum and body, both of which diminish her immunity? In such cases the baby may be saved the effects of prolonged pressure, which is not infrequently the cause of serious complications.

The third stage of labor is most often mismanaged. Undue haste and interference are almost universal. After the birth of the child, the fundus should be carefully watched and only palpated, never massaged, unless there is undue bleeding. Unless separation takes place before, expression should not be attempted for at least one hour. The result will be less average bleeding, fewer incomplete separations and retained cotyledons, no sore, bruised abdominal walls, or uteri partly paralyzed from the vigorous massage, with resulting postpartum hemorrhage.

During labor and the puerperium, we have the greatest opportunity for the preventive treatment of gynecological affections. The proper management of labor will prevent many accidents which are etiological in subsequent gynecological conditions.

When unavoidable accidents do occur, it is most important that their relationship to pelvic disease and the reproductive function, be thoroughly understood, and that the damage of such accidents be cared for in the most approved manner to preserve the function of organs and health of the patient. The obstetrician should always be prepared and competent to immediately care for the damage of such accidents. With what has already been said, it seems, therefore, imperative that the obstetrician should be so trained and prepared as to be able to handle all or any condition peculiar to women. Such requirements necessitate his being a trained gynecologist.

No set rules can be made governing the detailed care of the patient during the puerperium. Every patient is a problem unto herself and her treatment must vary depending upon her individual needs. It is, however, essential that to improve present conditions, we keep definite

track and accurate record of our patients after they leave their beds. Every case should at least be carefully examined vaginally one month after delivery, again in two months and again in three months. No patient should be discharged from our obstetrical care until involution of the uterus is complete, this organ in a normal position and without referable symptoms. The result of all repair work should be most carefully noted, and if not satisfactory, should be made so. Complicated cases frequently require longer observation and more constant attention.

Not only should some definite follow-up system be applied to our private cases, but every clinic should have such a system, which should function intimately with a well organized, efficient social service, and through the combined efforts of ourselves and these organizations, we may do much to elevate the standard of obstetrics, which will reduce infant mortality, protect the health, add to the comfort and increase the happiness of womankind.

465 ROSE BLDG.

---



---

#### NEW AND NONOFFICIAL REMEDIES

During December the following articles were accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies: The Abbott Laboratories—Neocinchophen—Abbott. Powers-Weightman-Rosengarten Co.—Mercury and Potassium Iodide—P. W. R. Schimmel and Co.—Oil of Cypress—Schimmel and Co. E. R. Squibb and Sons—Liquid Petrolatum—Squibb; Food Allergens—Squibb; Pollen Protein Allergens—Squibb; Animal Epidermal Extract Allergens—Squibb; Bacterial Allergens—Squibb. Winthrop Chemical Co.—Chaulmestrol. Nonproprietary Article—Chaulmoogra Oil.

The Council has directed that the description of Cresatin (New and Non-official Remedies, 1921, p. 94) be revised to show that the name has been changed to Cresatin—Dr. N. Sulzberger, and that it is manufactured by the Intravenous Product Company of America, Inc.

Bromipin 10 per cent.—A bromine product of sesame oil, containing from 9.8 to 11.2 per cent. of bromine in organic combination. It acts like the inorganic bromides; but since it yields its bromine more slowly, it is thought to have less tendency to produce brominism. Bromipin 10 per cent. is said to be more lasting in its action than the bromides. The dose is 4 cc. (1 fluidrachm), which may be increased in cases of epilepsy to from 8 to 30 cc. (2 to 8 fluidrachms). Bromipin 10 per cent. is a yellow oily liquid, having an oleaginous taste. Merck and Co., New York (Jour. A. M. A., Dec. 3, 1921, p. 1819).

Amylzyme.—An extract containing all of the digestive enzymes of the fresh pancreas of the hog. It has the power to digest starch and protein and to split fats. It is claimed that it is of value in digestive disturbances resulting from a deficiency of pancreatic secretion. Amylzyme is sold only in the form of 2 grain capsules. G. W. Carnrick Co., New York, (Jour. A. M. A., Dec. 10, 1921, p. 1891).

Mercury and Potassium Iodide—P. W. R.—A brand of potassium mercuric iodide—N. N. R. Powers-Weightman-Rosengarten Company, Philadelphia (Jour. A. M. A., Dec. 17, 1921, p. 1971).

# Medical and Public Health Phases of the Salem Typhoid Fever Epidemic\*

By R. M. SCHWARTZ, M.D., Salem

*Editor's Note.*—The doctors, nurses and consultants, who worked so heroically during the Salem epidemic, made what is perhaps a world record for low mortality, when out of 885 cases they saved the lives of all but 27 patients. The health department itself was beset with many problems, the most important of which were providing for free anti-typhoid inoculation, medical and surgical service, private duty nursing, free laboratory examinations, securing and grouping of voluntary donors for blood transfusion and its successful use. The lessons learned from this epidemic point to the vital necessity of a public water system for every community so constructed and maintained that no contamination can enter it; with an up-to-date map record of all water mains, sewer lines and extensions that may become sources of contamination. There is also a great deal of advantage from the health work viewpoint if cases of typhoid are reported as soon as they can possibly be diagnosed.

THE ABOVE TITLE would permit of an almost unlimited discourse but it is my desire to bring before you the outstanding features, from both the medical and public health standpoint, of the recent epidemic in Salem.

The medical phase of the work will no doubt be of more interest to this body, but I trust that the preventative and engineering measures adopted will arouse a like interest, for it is a fact that there are still a few medical men who apparently do not realize the importance of preventative and public health measures. The above is perhaps an unwise statement on this occasion, but if it is possible to even partially establish a closer relation between the medical profession in general and public health officials, I will feel that a great amount of good has been accomplished.

You will undoubtedly feel that some of my remarks in this connection are biased but is it not true that each one of us who chose some particular line of endeavor in our profession, come to see more clearly the importance of that particular line? I therefore desire that a proper construction be placed on what I have to say.

## MEDICAL MEASURES TAKEN

Under the head of medical measures the following is an outline of the most important steps taken:

1. Free anti-typhoid vaccine provided.
2. Free inoculation service provided.
3. Free medical consulting service provided.
4. Free surgical service provided.
5. Private duty nursing registry provided.
6. Free laboratory service provided.
7. Voluntary donors for blood transfusion secured and grouped.
8. Blood transfusion performed.

The more important of these measures will be touched upon later.

## HEROIC WORK OF DOCTORS AND NURSES

The story of the Salem epidemic is widespread and its effect will be far-reaching. People near

and far know of it, know many of the details in fact, but I question whether they know or realize the noble work, tiresome unselfish work done by the medical profession of Salem. With fourteen physicians doing active practice, and as many as fifty cases appearing in one day, the vast amount of work these men had to do is readily seen. Due credit is given to those physicians from surrounding cities, who willingly volunteered their services during this stress, but the bulk of the burden fell on the resident physicians. Their work with that of the nurses on duty at that time has a lasting testimonial in the figures which show that out of 885 cases of typhoid fever there were but 27 deaths, either directly or indirectly attributed to typhoid fever. This is the lowest death rate known for any similar outbreak of typhoid fever.

We realize the importance of prompt, proficient nursing in typhoid fever. We believe that the nursing service was handled most efficiently in Salem and an effort to place each patient, regardless of circumstances, under the care of a competent nurse was made and carried out.

According to Dr. Henry Christian of the Peter Bent Brigham Hospital of Boston and Harvard College, 75 per cent. of the credit for the small number of fatalities belongs to the nurses. Such a statement from a man of his standing is evidence of the splendid work done by the nurses.

## SCOPE OF UTILITY TRANSFUSION

During the early part of the epidemic, the State Department of Health set aside a sum of \$5,000 for the employment of competent consultants to assist local physicians in combating the epidemic. Dr. Hoover of Cleveland, was obtained and he spent considerable time in making a survey of the most serious cases, in company with the attending physician. Dr. Hoover counseled on all cases in which the attending physician desired it and among other things suggested blood transfusion in several cases. Dr. Hoover was aided in this work by a surgical team which Dr. Crile sent to Salem.

Transfusion, in cases of typhoid fever, has its defenders and its objectors. In cases of active

\*Read before the Section on Hygiene and Sanitary Association, during the Diamond Jubilee Meeting, at Columbus, May 3-5, 1921.

haemorrhage it is questionable whether or not transfusion is justifiable. This view is taken because of the likelihood of an increase in the blood pressure caused by the introduction of a quantity of blood, breaking down what clots might have formed, in an effort to check haemorrhage and encouraging new haemorrhages. In those cases, however, in which there was a profound toxæmia present, the introduction of a foreign blood supply proved of great value. This fact is attested by the remarkable recoveries made by some very critical cases. Recoveries after transfusion resulted in 75 per cent. of the cases. Dr. Hoover and the surgical team rendered efficient service in consulting and surgical work and are also responsible for the surprisingly low death rate.

Dr. Henry A. Christian was later obtained and spent about two weeks in Salem. He too, made a survey of the most critical cases in Salem and the surrounding territory. He stated at the end of his work that he had seen every complication of typhoid that had ever been recorded and some that he had never seen or read of. Perhaps the most striking unusual complication was that of a unilateral ophthalmus in a young girl. This phenomenon was, at the outset, unexplainable but later Dr. Christian stated that he believed it to be a phlebitis of the veins of the eye, as the condition disappeared along with a phlebitis of the leg. No unfavorable conditions resulted from this complication.

#### SYMPTOMATIC TREATMENT AND DIETETIC REGIME

As to the medication, it might be stated that the usual lines of treatment for typhoid were used extensively, with, of course, especial treatment for complications. Dr. Christian, in a meeting arranged for the local and county medical societies, answered the question, "What medicine do you advise using in treating typhoid fever?" by stating that he advised no medicine except in the handling of acute special symptoms. This statement aroused some comment and was looked upon as extremely radical.

Dr. Christian's forte in the handling of cases of typhoid fever is the diet. He stated that a typhoid patient, having a regular course of the disease, should receive from 2,500 to 4,000 calories per day. In accomplishing this effect he advised the generous giving of eggs, milk, broths, stewed fruits, from which all fibrous material had been removed, bread and butter and any combinations of milk and eggs, such as custards, etc. A notable result was accomplished by this apparent daring departure from the regular form of treatment, in a case of a woman, in a neighboring city, who had contracted the disease in Salem. Upon investigation it was found that she was receiving about 200 calories per day. She had been sick for about nine weeks previous to this time, was extremely toxic, and had been in a state of coma for possibly three weeks, and had suffered intensely from a general neuritis. Her diet was gradually changed

until she was receiving about 2,000 calories per day and her recovery began almost at once, and the recovery, although slow, was uneventful.

I trust that I will be pardoned for using Dr. Christian's experiences so freely but I feel that it is the newer phases and the different ways of handling such a disease as typhoid that are of most interest to the profession in general.

#### ANTI-TYPHOID VACCINATION

In connection with the use of anti-typhoid vaccine we figure that about 4,000 persons availed themselves of the free distribution of this vaccine through the inoculating center established. The vaccine used was for the most part that furnished by the State Department of Health and was the triple typhoid (Typhoid and Para Typhoid A and B) given in varying doses at intervals of from seven to ten days.

It is a little difficult to state definitely the amount of good resulting from this inoculation but surely some credit is due it judging from the extremely small number of actual contact cases. This small percentage is due in part, of course, to the excellent nursing service and the other preventative measures which were put into effect. A most striking example of the efficiency of anti-typhoid inoculation was brought to light by the survey of ex-service men. Of 305 ex-service men interviewed, but three developed typhoid fever, and some of these men had received their inoculations as early as 1918.

#### THE PUBLIC HEALTH PHASE OF THE EPIDEMIC

We, who know of the severity of the epidemic, the rapidity with which it effected so many people and the public health problems that were present, realize the wonderful effect that the preventive measures instituted had. You too can realize their effectiveness by noting the chronological chart of the dates of taking to bed of individual cases, and seeing that with such a mass of cases the epidemic took a decided drop within the expected time, and has remained on the zero line since January 28th, the date on which the last case took to bed. When compared with the Rockford, Illinois, epidemic it presents a most favorable picture. In fact, none of the other large typhoid epidemics were so quickly stamped out.

We know that most epidemics of typhoid fever present engineering problems in the location of the source of the trouble. This trouble once found and remedied, temporarily at least, the problem of the prevention of secondary cases arises.

We were fortunate in Salem in receiving aid from a sanitary engineer from the U. S. Public Health Service, and representatives of the engineering, communicable disease, and laboratory departments of the State Department of Health. I cannot refrain, at this time, from stating that the value of this assistance cannot be computed. When you hear the physician or layman complain that the Federal Public Health Service or State

Department of Health are not on the job with both feet, refer them to the records of the Salem epidemic and we will prove such statements unfounded.

After a rather hasty survey of existing conditions, by these men, the following program for the prevention of the spread of the disease was planned and was worked out as rapidly as possible.

*First.*—The water having been determined, by extensive bacteriological examination, to be polluted, chlorinators were installed at once and all the public water supply thus treated, and the section of the water system, through which the contamination was thought to be entering the system, was disconnected as soon as a parallel line could be laid.

It might be interesting in this connection to know that one of the lines through which the water was conveyed to the central station by gravity had been constructed in 1900 of vitrified tile. It was this part of the system that was condemned, and further investigation proved that this condemnation was just.

*Second.*—The next step was to make a complete survey of the sanitary conditions of the city. This was made by volunteers, who had been on war work teams, and was accomplished in the short period of 24 hours.

Each house in the city was visited and recorded as to the number of occupants in the house, present and past cases of illness among members of the family, the water supply, and the manner of the disposal of sewage.

This gave the investigators an opportunity to pick up a great number of cases of typhoid fever which had not been reported previously and gave them a true idea of the danger points (outside toilets and dug wells) that existed in the city.

*Third.*—With this information at hand the work of chlorinating all outside toilets and dug wells was started.

*Fourth.*—The next matter considered was the possibility of the spread of the disease by milk and other food stuffs. A milk chart, which had been kept, showed that the cases were almost evenly distributed among the routes served by the two large distributing plants and the five smaller farm dairies.

As an added precaution against the occurrence of a secondary milk borne epidemic, all milk was ordered pasteurized. Other preventative measures regulating the sale of milk were also instituted. Strict sterilization of all utensils and bottles from houses where typhoid existed. All such homes were plainly placarded, both for the protection of milk men and to prevent unnecessary going in and out of such houses.

*Fifth.*—Because of the definite knowledge of the occurrence of food borne epidemics, all food handlers were ordered inoculated.

*Sixth.*—Leaflets, bearing warnings to boil all

water, and directions for disinfection of all discharges, were placed in all homes.

#### SOURCE OF CONTAMINATION

Enough for the measures instituted during the active stages of the epidemic. With the lessening of the stress caused by the existence of so many cases at one time, there was a general desire to know exactly how the water became contaminated. As stated before, the tile gravity line was condemned and its use discontinued. When not engaged in the supervision of new construction of the water system, the engineers had been working incessantly on this and many other plausible theories as to the probable point of contamination.

As the investigation proceeded, more and more suspicion attached to the gravity line, which had previously been condemned. Running above and parallel to this line at different points was an old private sewer, which was intended, at this time, to carry nothing but storm water. It was ascertained during the summer, however, that sewage was entering the line. In an effort to determine the properties connected into this line, this sewer had been plugged and the possibility of the material in this line being forced out toward the gravity water main line under pressure was recognized.

To determine definitely the possibility of such a happening, a quantity of uranine, a bright orange colored vegetable dye, was placed in this plugged sewer above the plug, and a rainstorm, such as was known to have occurred about the time the sewer was plugged was imitated by means of water pressure from a fire hose.

When uranine is placed in water, a brilliant green solution results and in one hour and forty minutes this green solution appeared coming out of the tile gravity line at a point four blocks away from the place where the uranine was introduced. The exact case, which was responsible for the presence of typhoid bacilli in this sewage, has not and perhaps never will be definitely ascertained.

#### CONCLUSIONS

I realize that there has been much of minute detail in this last section, but I will reciprocate by writing *finis* after citing a few lessons which have been learned from such an experience as Salem has passed through:

1. The public water system of every community should be so constructed and maintained that no contamination can enter it.

2. An up-to-date map record of all water mains, all sewer lines, and all extensions or connections made to either, should be kept.

3. Physicians should diagnose and report promptly all cases of communicable diseases. A study of a triple chart, showing the dates of onset of cases, dates of taking to bed, and dates of reporting cases, will show definitely the advantage of prompt reporting. The laxity in this respect

we feel is due in a great part to the great amount of enteritis which was prevalent just preceding and during the early stages of the epidemic. This fact undoubtedly hampered physicians in the prompt diagnosis of actual cases of typhoid.

Let us trust that such lessons were learned from our experience in Salem, that every community will do its utmost to prevent a like occurrence, and that never again in the history of this country will such an outbreak of typhoid fever occur.

## Diagnosis of Twin Pregnancy by Means of a New Stethoscope

By JOHN PATTERSON GARDINER, M.D., F. A. C. S., Toledo

*Editor's Note.*—By attaching two or more diaphragms to the ordinary ear piece of a stethoscope Dr. Gardiner has been able to diagnose twin pregnancy as well as to differentiate between the foetal and maternal circulation. The same device may be used to compare heart action and respiration.

**D**URING THE latter months of pregnancy it is not infrequent, while auscultating the abdomen, to find two points where the foetal heart sounds are distinctly transmitted with equal intensity and it is with the greatest difficulty that one determines whether the sounds are produced by one or two foetal hearts. The differentiation is dependent upon the variation in the number of foetal heart beats counted at the one point as compared with the number counted at the other. This method is, aside from palpation, the only method of arriving at a diagnosis. Much labor and time are spent in making the diagnosis and then the result is inconclusive as the foetal movements may cause a temporary increase in the rate of the foetal heart, thus making an error in the count. Such an error is absolutely impossible with the new stethoscope.

### THE NEW STETHOSCOPE

The stethoscope consists of the ordinary ear piece to which two diaphragms are attached. In using this stethoscope one diaphragm is placed over one of the points above described and the second diaphragm over the other. If auscultation at the two points shows that the foetal heart sounds are not synchronous there is a twin pregnancy and such a diagnosis is immediately made.

### OTHER USES

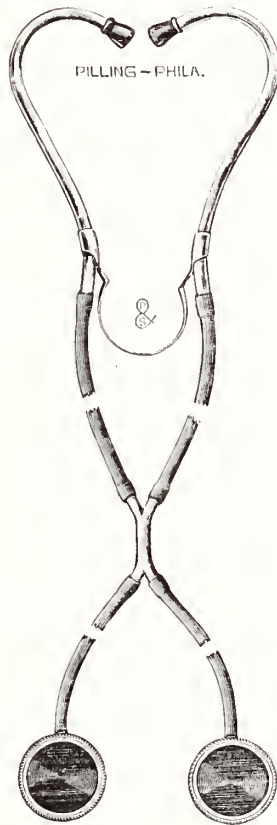
There are times during pregnancy and labor when it is desirable to differentiate between the foetal heart rate and the maternal heart rate. It can easily be accomplished with this instrument by placing one diaphragm over the foetal heart and the other over the maternal heart. The difference between the two heart sounds is quickly discerned.

Scientific care of the pregnant woman demands that the abdomen be examined by auscultation as is the chest in disease. If a diagnosis of twins is made and there is still a point on the abdomen at which the sounds must be differentiated, a third diaphragm may be placed upon this point to determine whether the sounds are from the heart of one of the twins or from a third foetal heart. As the ear of the mechanic is trained to catch a miss in one of the cylinders of an eight-cylinder motor so will the sounds heard by this stethoscope be readily interpreted.

The use of the stethoscope is not confined to the pregnant abdomen only but may be used wherever it is necessary to compare two sounds, as in the examination of the lungs and heart.

At present the stethoscope is especially recommended for its assistance in the differential diagnosis between a single and a twin pregnancy.

356 W. BANCROFT ST.



### NEW AND UNOFFICIAL REMEDIES

**Diphtheria Toxin-Antitoxin Mixture-Squibb.**—Each cubic centimeter of the mixture represents 3 L+ doses of diphtheria toxin and three units of diphtheria antitoxin. It is marketed in packages of three 1 cubic centimeter ampules representing one immunizing treatment; also in packages of thirty

1 cubic centimeter ampules. For a discussion of the actions and uses of diphtheria toxin-antitoxin mixture, see *New and Non-official Remedies 1921*, p. 282. E. R. Squibb and Sons, New York (*Jour. A. M. A.*, Dec. 17, 1921, p. 1971).

**Oil of Cypress—Schimmel and Co.**—A brand of cypress oil—N. N. R. For a discussion of the action and uses of cypress oil, see *New and Non-official Remedies, 1921*, p. 95. Fritzsche Bros., New York (*Jour. A. M. A.*, Dec. 17, 1921, p. 1971).

# Simplified Infant Feeding by the Caloric Modification of Cow's Milk\*

By P. F. SOUTHWICK, M.D., Sandusky

*Editor's Note.*—Feeding babies on patented prepared foods is usually a hit and miss procedure and few mothers understand the complicated formulas of percentage feedings. Dr. Southwick has found the caloric modification of cow's milk an easy and successful way out of the difficulty. This method of feeding is based on combinations of milk, sugar, flour, and malt soup in proportion to the caloric needs of the baby to be fed, its age, weight and general condition. By determining the caloric requirements it is simplicity itself to apportion the ingredients according to the caloric values desired.

I SERVED an internship in an Infant Asylum where we handled a large number of artificial-fed infants. We also had a large number of milk formulas, which were adapted to the individual infant, not always with very good success. Most of these formulas were made up of various percentages of cream, top milk, bottom milk, skimmed milk, water and milk sugar,—a process so complicated that only a physician could prepare them. When I started private practice I found it almost impossible to get the average mother to understand these formulas, which I was hardly able to understand myself, and to prepare them in the proper manner. I thus found great difficulty in deciding what was the proper milk mixture and especially in making the necessary changes in these formulas to meet the development of the child, until I began to use this caloric method of feeding.

I believe one of the great reasons why so many infants are fed on the various patent foods is because we do not thoroughly understand the modification of cow's milk. I know it was so in my case. These foods undoubtedly play their part in infant feeding, but to my mind it should be a very small part, not alone from the standpoint of the infant but from a financial standpoint as well. How often have we told the mother to put the baby on malted milk, following the directions on the bottle, and that is the last time we have seen the youngster for possibly a year, the mother in the meantime continuing to follow those directions.

*The chief disadvantages in these infant foods lie in the fact that they are all cooked foods and they do not contain the nutritional elements as they exist in breast or cow's milk.* For instance, all growing infants need a certain amount of fat and we know that it is next to impossible to have much fat in a patent food without the fat becoming rancid, nor can we always place much reliance on the published formulas of these foods. Scurvy and rachitis are not an infrequent result of their use.

## MAIN POINTS IN PRESCRIBING INFANT FOOD

There are four main points for consideration in prescribing a food for any infant. (1) It should contain the proper elements to maintain nutrition and to allow growth. (2) It should be

digestible. (3) It should contain the proper quantity of food, (4) It should be easy to prepare. The above requirements are best met in the very great majority of cases by cow's milk. The ideal food should be one that imitates breast milk. Chapin has found that it is impossible to modify the milk of any of the lower animals to duplicate mother's milk. He further says that nature has provided each of these mammals with milk suitable for the digestive apparatus of their offspring. We know that breast milk is the ideal food for the infant. But, when for any reason the breast milk fails what are we to do? In my opinion we should use cow's milk, for it meets all the requirements mentioned, in a great majority of the cases. It can be always procured and is reasonably cheap compared to the patent foods on the market. But cow's milk must be modified or changed to meet the digestive apparatus of the infant, for although it contains all the ingredients of mother's milk, it is much harder to digest. This is the stumbling block, but if with understanding we use the following method of modification we will meet with much better success in the artificial feeding of infants and certainly have more satisfaction.

## CALORIC VALUES IN INFANT FEEDING

It is a well known principle that every individual needs a certain definite quantity of food to meet the requirements of the body, which is best expressed in terms of calories. It is a difficult matter to know the number of calories that an adult needs, because the food is so varied and the amounts are so difficult to measure. With an infant, however, it is a simple process, for its food is limited to milk, sugar and possibly the cereal flours. We, therefore, only have 3 or 4 caloric values to remember, *namely*—

1 oz. milk.....	20 calories
1 oz. sugar .....	120 calories
1 oz. flour .....	100 calories
1 oz. malt soup.....	90 calories

We now can estimate the caloric value of the food. The next question to be determined is how many calories per pound weight the infant needs in 24 hours. I shall not discuss how these requirements have been figured out, but it has been found, that:

*A fat infant over 4 months of age needs from*

\*Read before the Erie County Medical Society, May 3, 1921.

40 to 45 calories per pound per day. Average infants under 4 months of age and moderately thin infants of any age need 50 to 55 calories per pound per day. Emaciated infants need 60 to 65 calories per pound per day.

When we see an infant for the first time it is a matter of judgment just how many calories it will need, but with the above standards to help us out it is fairly easy after a little experience.

Now knowing the caloric value of the food and the caloric requirements of the infant we must next ascertain the quantity to be given at each feeding and the number of feedings in 24 hours.

A good rule as to the quantity to be given at a feeding is as follows:

*An average sized infant should have at each feeding 1 or 2 oz. more than the number of months of its age.*

*The undersized infant should be given an ounce for each month of its age.*

This rule has two limitations.

(1) *It is never necessary to give more than 8 oz. at a feeding or more than 48 ounces in 24 hours.*

(2) *During the first few weeks of life the quantity at each feeding should be increased as rapidly as possible, up to 3 or 4 ounces, the guide being the amount the infant will take.*

It will be seen from the above rule that the quantity of feedings depends upon the infant's age, although some allowance should be made for its size. For example: A good sized infant at 4 months of age will take about 6 oz. of food. An undersized infant at this age will probably take only 4 oz.; while a small feeble infant may only take 2 or 3 oz. The quantity of food given at each feeding does not depend upon the actual holding capacity of the stomach, for, as it takes about 20 minutes for the child to take the ordinary feeding, part of the milk will have passed out of the stomach. This has been determined by X-ray examination and is an established fact.

Now as to the number of feedings in 24 hours. There has been considerable discussion as to the time that should elapse between feedings. Some authorities advise feeding every 4 hours, while others prefer the two hour interval. This of course depends upon the amount that can be taken at each feeding. The majority, I believe, agree that, with the normal healthy infant up to 5 or 6 months of age, the 3 hour interval is to be preferred,—that is, 7 feedings in 24 hours, at 6-9-12-3-6-9 and 2 a. m. After this age the 2 a. m. feeding can often be dispensed with.

#### FOOD DILUTION FOR PROTEID DIGESTION

There is one other question for consideration. It has been found from experiments that the infant cannot digest the proteids and fats of cow's milk. It therefore has to be diluted to such an extent that the infant can take care of the proteids and fats. But in this process of dilution we have also diluted the carbohydrates, the one ele-

ment in cow's milk that can usually be digested. As this is important in furnishing heat and energy to the infant thus conserving the fat and proteids, we must add sugar to the formula. Here again, the following rough rule may be followed, based upon the infant's weight:

*A well infant under ten pounds in weight may receive one ounce of sugar, for over 10 lbs. in weight 1½ oz. sugar in 24 hours. Of course this amount is based upon the power of assimilation of the given infant.* We now have all the data necessary for the caloric modification of cow's milk.

#### TYPICAL FEEDING FORMULAS

Take for instance the example of a fat baby weighing 12 pounds at 4 months of age. We estimate that he needs 50 calories per pound per day or 600 calories. An infant weighing 12 pounds or more can take 1½ ounces of sugar a day, equivalent to 180 calories, leaving 420 calories to be made up by milk. As one ounce of milk equals 20 calories, 21 ounces of milk would equal our 420 calories. We would then have milk 21 ounces and sugar 1½ ounces.

Now from our rule we will assume that this infant can take 6 ounces at a feeding, two ounces more than its age, and 7 feedings in 24 hours, or a total of 42 ounces. Hence we would have to add 21 ounces of water giving it the finished formula:

Milk, 21 oz. ....	420 calories
Water, 21 oz. ....	
Sugar, 1½ oz. ....	180 calories
Total .....	600 calories

for the 24 hours.

Now suppose this infant had gained one pound in a month, when he returns to us (and right here comes in our financial returns, as the milk cannot be intelligently changed without the advice of the physician), we would have the following problem: Weight 13 pounds, age 5 months. Weight 13 pounds, 650 calories, less 180 calories of sugar, leaving 23 ounces of milk, or the difference of 470 calories, the fraction being disregarded. At 5 months he would take 48 ounces in 24 hours, 23 of that being milk and 25 water with a finished formula of—

Milk, 23 oz. ....	460 calories
Water, 25 oz. ....	
Sugar, 1½ oz. ....	180 calories
Total .....	640 calories

in 24 hours.

As a second example, imagine an emaciated infant 5 months old, weighing 7 pounds, with no serious digestive disturbance. According to our working rule this infant would need from 60 to 65 calories, per pound a day or 455 calories in 24 hours. Of this 455 calories, 120 calories may be given in the form of sugar, leaving 335 calories to be furnished by the milk or 16 ounces. Assuming that this infant could take 35 ounces of food in 24 hours, sufficient water must be added to

make up this amount; hence the finished formula would be—

Milk, 16 oz., or.....	320 calories
Water, 19 oz.	
Sugar, 1 oz. ....	120 calories
Total .....	440 calories
in 24 hours.	

In this manner knowing the weight and age we can rapidly figure out a formula for any infant.

#### POINTERS IN CALORIC FEEDING

One of the principles of caloric feeding is not to give the full caloric requirements in certain classes of infants, which may be enumerated as follows:

1. In new-born infants.
2. Normal infants abruptly weaned from the breast, until their tolerance for food can be gradually increased.
3. Infants whose previous food has not contained cow's milk (until the milk and sugar can be gradually increased.)
4. Infants who have been over fed, until their digestive apparatus has had a chance to recuperate.
5. Infants who have been underfed, until their tolerance for food has been gradually increased.
6. Infants who have had diarrhoea or who have recently recovered from diarrhoea, until their stools have become normal and the tolerance for food has been gradually increased.
7. Infants who have excessive vomiting or have recently recovered from excessive vomiting, until their vomiting has stopped and the tolerance for food has been increased.
8. Infants with loss of appetite, until all food is greedily taken.
9. Infants who are partially breast fed, until they are entirely weaned, because it is not known how many calories they are getting from the breast.

#### THE QUESTION OF SUGAR AND BOILED MILK

In placing an infant on artificial feeding for the first time it is always well to begin with a weak dilution of milk and gradually increase up to its caloric requirement. After it has taken the weak milk dilution for a few days, sugar may be added, a little at a time until the proper amount of sugar is being taken. Sugar is one of the most important elements of the infant's food, yet is capable of producing severe gastro-intestinal conditions, therefore should be added slowly. The sugar acts in several ways. It not only supplies a large amount of nourishment but it helps make up any deficiency of the fats in the food, and besides this it usually acts as a laxative keeping the bowels in good condition. There has been considerable discussion as to the kind of sugar that should be used. While formerly milk sugar was extensively used, it seems to have been proved the harder form to digest, so that now, cane or granulated sugar and Dextro-Maltose is in more frequent use. Dextro-Maltose is the most easily digested, but on account of its cost is not used so much, except in cases of sugar indigestion. I have found cane sugar very satisfactory as it is always on hand and is cheap.

There is just one more question of interest and that is the question of boiled milk. There has been more discussion over this subject than almost any other subject in infant feeding. Until the last few years, it has been considered almost a crime to feed an infant boiled milk for more than a day or two at a time, because of the fact that scurvy or rickets might develop. Many now are recommending the boiling of all milk, for two principal reasons:

(1.) It renders the milk sterile, and (2) there is no question but it renders the milk easier of digestion. Therefore, it would seem well when placing an infant on artificial feeding for the first time to boil the milk, and if artificial feeding must be continued for some time, the addition of some fruit juice to the diet will prevent all nutritional derangements.



## NEWS NOTES OF OHIO

*Kent*—Portage County physicians who are wintering in Florida are Drs. W. C. Ramsey and B. H. Jacobs, of this city, and Dr. J. J. Waite of Deerfield.

*West Lafayette*—Dr. Wilmer Hammond has been employed as physician at the Coshocton County Home for the coming year.

*Cincinnati*—Dr. Walter M. Leonard who has been connected with the U. S. Veterans' Bureau here has been transferred to Cleveland as medical relief officer of the northeastern Ohio district.

*Ironton*—Dr. Dan Gray is spending three months in New Orleans, where he is engaged in post-graduate work along general surgical lines.

*Canton*—Dr. Elias Rapoport has been appointed city physician. He is the first to hold office under an ordinance recently passed providing that the duties of city and jail physicians be combined.

*Wilmington*—Dr. R. J. Judkins has discontinued practice here to accept a position with the United States Veterans' Bureau.

*Dayton*—Dr. James C. Walker, formerly of the orthopedic department of the Mayo Clinic, is now associated in practice with Dr. Robert C. Austin here.

*Carbondale*—Dr. M. Z. McKibben has moved to Wilkesville, Vinton County.



## Steps Taken for Placing in Operation in Ohio the Provisions of the Sheppard-Towner Maternity Legislation

Based on a policy of an extensive educational program the Division of Hygiene of the State Department of Health has drafted a tentative outline of the types of service, the personnel and the form of administration suggested by the State Department of Health to carry into effect the provisions of the Sheppard-Towner Act in Ohio.

This measure itself announced in its purpose for the "promotion of the welfare and hygiene of maternity and infancy and for other purposes" would permit of practically any activity which might be conceived.

As previously stated and as quoted editorially in this issue of *The Journal*, Dr. H. H. Snively, State Director of Health, has evinced a desire to have the provisions of the maternity legislation carried out in Ohio along practical and proper lines without encroachment into the field of private medical practice and based on a program of education carried out through the cooperation of the local medical societies.

While the type of work and the personnel required in Ohio will be governed largely by the size of the appropriation available, the general policy is expected to be followed whether only ten thousand or one hundred thousand dollars is available for this work in the state. It is made plain by the State Department of Health through its Division of Hygiene that in no instance will curative work be undertaken by any agency other than the medical profession, with such professional contact as may be necessary with hospitals and with the dental and nursing professions.

It is the intention of the State Department of Health to develop in the main two types of service—individual and community, based on education and prevention.

In the tentative and preliminary plan which has been considered by the State Department of Health five main sub-divisions have been made: I. Home Service; II. Primary Health Center; III. Secondary Health Center; IV. Education; V. Administration.

While a more acceptable and accurate term might have been used instead of "health centers" it is explained by the officials of the State Department of Health that this designation is more in the nature of a geographical distinction for carrying forward the program of education in the several communities than a definition of the kind of service to be attempted.

Under the heading of "Home Service" is a plan for carrying into the homes a more general education on (a) signs and duration of pregnancy; (b) hygiene of pregnancy; (c) dietetics, elimination, clothing, exercise, care of teeth; (d) complications of pregnancy and how to avoid

them; (e) preparation of layette; (f) care of breasts; (g) importance of breast feeding and (h) preparation for delivery, personal and home.

Under the heading of "Correction" are (a) improvement of home conditions, and (b) advice concerning home budget.

Under the heading of "Curative" is emphasized the necessity of the correction of minor complications during pregnancy.

Under the general heading of "Primary Health Center" the type of community work for every town or village, depending on the nature of the locality, are grouped activities on publicity, facts and news pertinent to maternity and infancy welfare, and educational lectures on (1) causes of infant mortality; (2) importance of early engagement of the accoucher; (3) community and home sanitation; (4) personal hygiene; (5) safeguarding the milk supply; (6) signs and symptoms of common diseases and other allied subjects; to the advocacy of complete examination in early pregnancy and internal examination before term. Other work to be undertaken as a community activity includes home visits by nurses and instruction in feeding, dressing and bathing the baby, and in care of breasts, nipples and baby's mouth, preparation of foods and advice to mothers relative to the general care and feeding of infants and young children.

Under the general heading of "Secondary Health Center" a plan is outlined for cities in which facilities for equipment and a staff of specialists can be obtained to handle cases referred for diagnosis and treatment, this sort of activity to be used as a basis for educational propaganda and as illustrating and demonstrating the necessity of certain elementary and fundamental procedure in handling cases of maternity, caring for the expectant mother and safeguarding the new born.

Under the general heading of "Education" is included the preparation of educational bulletins and lectures devoted to prenatal care, infant care and based on model exhibit material for primary and secondary health centers.

Under the heading "Administration" as a central control for directing and supervising the activities outlined above, will be the central supervision in the Bureau of Child Hygiene of the State Department of Health, with local supervision suggested in the hands of an advisory committee consisting of the local health commissioner, an officially delegated representative of the local medical society, a representative of the nursing profession and two laymen, one preferably an official of the county or smaller political subdivision, with the idea of the first contact with with local cooperating agencies through health commissioners.

### Prohibition Prescription Sentiment

(Continued from page 92)

hibition question, the laws will be modified somewhat to make it less inconvenient and difficult for physicians who believe in the efficacy of alcoholic stimulants as medicines to obtain them for the use of their patients. The drags may view this probability with complacency for, the more reasonable and sensible the prohibition laws are made, the less violent will be the resentment against them and the better they will be enforced in their real and rightful purpose."

As in the earlier days of prohibition enforcement, the policy of prohibition officials is being frequently questioned. There was a time, it will be remembered, when little if any concerted effort was made to curtail the traffic in intoxicants masquerading as patent medicine tonics. In order to make some sort of a showing prohibition officials issued periodic statements reflecting on doctors who were writing prescriptions for intoxicants. Everyone knows that the very small per cent. of physicians who prostituted their practice through the issuance of improper prescriptions for intoxicants, was an infinitesimal minority both compared to the total number of ethical physicians and in comparison to the vast amount of liquor which was being trafficked in through other channels.

Even yet there seems to be a disposition on the part of underlings in prohibition headquarters to belittle and even insult physicians who have official business with those departments. While the law is clear and definite against the use of intoxicants as beverages, and while there is no disposition to argue against the principle of prohibition, physicians who conscientiously in the practice of their profession and because of red tape restrictions must have occasion to come in contact with prohibition administration, are entitled to courteous and prompt service in these transactions. Ignorance and intolerance if permitted to taint the spirit and purpose of prohibition enforcement will eventually defeat itself.

### Unwholesome Pity

The activities of those who oppose animal experimentation in the effort to bring disease under control are persistent and reprehensible. Well-meaning, congenitally supersensitive and super-sympathetic they may be, but the bald facts must be translated into this question: "May or may not the lower forms of life properly be sacrificed for the welfare of the higher?"

To some minds a cat, a guinea pig, a dog or rabbit may be of equal importance with a death-grappled child, but to the reasonable mind the life of one child is worth all the cats in creation.

Animal experimentation does not presuppose cruelty, nor always serious suffering. There is not one surgeon in ten thousand who is not by nature gentle and humane. But to the surgeon there never is any question as to what his duty requires when death hovers over his patient, or threatens millions of human beings, if, by the cul-

ture of a serum, he may be able to save a single life.

These good folk who are so tender of the "rights" of rats and smaller animals, selected to serve in the interests of science, probably would have forbidden Alexis St. Martin to exemplify his human sacrifice for other generations; they would, perhaps, have restrained Father Damian from immolating himself in the leper isles; they would, most likely, have hurried that Philadelphia surgeon, who a few weeks ago accidentally inoculated himself during an operation, to seek personal prompt relief. The patient would have died, but the doctor would have been saved! The doctor saved his patient.

If men and women thus freely give themselves to science for the sake of suffering humanity—and this sacrifice constantly is being made—why should this mawkish miserere constantly be sung because animals are undergoing experimentation to the end that multitudes of men, women and little children may have life?

Metchnikoff, Brown-Sequard, Pasteur, Koch, Carrel, Boone, Hamilton—these men battled constantly to benefit humanity. They set a man's life above that of a monkey. The benefits of such research have been incalculable. But for such research, rabies, yellow fever, cholera, typhus, smallpox, bubonic plague, scarlet fever, spinal meningitis, diphtheria and other plagues would hold their ancient terrors, whereas they now are controllable, curable.—*Cincinnati Enquirer*.

### Dr. Bland New Inspector for Veterans' Bureau

Dr. Morton W. Bland of Columbus has been appointed medical director for Ohio under the United States Veterans' Bureau, with headquarters at Columbus. The appointment was announced by Colonel C. R. Forbes, chief of the bureau, with the approval of William M. Coffin, district manager of the bureau at Cincinnati. Dr. Bland, whose home formerly was at Bellevue, came to Columbus in 1915 as state registrar of vital statistics and since his termination of that service has been located in Columbus. He has been active in organization work both in politics and medical societies. He is the present chairman of the legislative committee of the Columbus Academy and a member of the council of the academy.

### THINK—ACT

Doctor, if your 1922 membership dues—state and local—are unpaid, you are temporarily without medical defense protection and your name will be removed from the Journal mailing list at an early date. You can't afford to be counted "out".

## Policies, Annual Meeting Plans and Committee Work Crowd First Councilor Meeting of the Year

### MINUTES

Council of the Ohio State Medical Association held its first session for the year 1922 in Columbus, January 8, 1922. The following officers and councilors were present: President Teachnor, President-Elect Carothers, Ex-President Lukens, Treasurer Platter; Councilors Haines, Hussey, Hendershott, Waggoner, Updegraff, Stevenson, Brush, Rardin and Goodman, and Executive Secretary Martin. Dr. H. H. Snively, State Director of Health, and Dr. L. L. Bigelow, chairman of the Publication Committee, were also present.

Drs. Haines and Carothers reported on the preliminary local plans for the annual meeting of the State Association in Cincinnati on May 2, 3 and 4, 1922, and announced the appointment of local committees and preliminary arrangements for the entertainment of those who will be in attendance. This report was endorsed and approved by the Council.

Dr. Goodman, chairman of the Program Committee for the annual meeting, reported in detail the progress for the general sessions and section meetings so far announced by the section officers. Conforming with the policy previously adopted by the Program Committee, and approved by the Council, the papers by Dr. G. F. McKim, Cincinnati, on "The Absolute Necessity of a Thorough Understanding of a Prostate Lesion by Modern Methods", and Drs. P. A. Jacobs and William Rosenburg, Cleveland, on "The Surgical Treatment of Acute Epididimitis" secured for the Surgical Section, were transferred, on motion by Dr. Waggoner, seconded by Dr. Hendershott, to the Section on Dermatology, Proctology and G. U. Surgery. On motion by Dr. Rardin, seconded by Dr. Waggoner, the tentative program in other details as presented, was approved by Council.

On motion duly seconded, the Council requested Dr. Goodman to urge the section officers to complete their programs at the earliest possible date, and to submit to him the full titles of all papers, the name and address of the essayists, and discussants, with a brief outline of the subject matter of the papers from each essayist.

A petition for a section on Clinical Laboratory Diagnosis in the State Association, with a formal request for privilege to prepare a program for such section, was submitted to Council. On motion by Dr. Waggoner, seconded by Dr. Hussey, Council recommended such request to the House of Delegates for action at the forthcoming meeting, it being stated and understood that Council could not authorize such additional section until the by-laws of the Association are amended by the House of Delegates.

A communication was submitted from Dr. F. H. McMechan, medical editor of *The Journal*, re-

questing that Council and the Program Committee adopt a rule that the addresses of section chairmen and visitors be submitted for publication in advance of the meeting. Upon motion by Dr. Carothers, seconded by Dr. Haines, this suggestion was put to a vote and lost, it being the consensus of opinion, in conformity to the policy in previous years, not to provide a formal place on the program for addresses by section chairmen.

Dr. H. H. Snively, State Director of Health, submitted to Council his preliminary program for placing in operation in Ohio the Sheppard-Towner maternity and infancy legislation. He requested the advice of the Council and the members of the medical profession, and pledged the cooperation of his department in harmonious alignment between public health administration and the medical profession. He stated his desire in compliance with a formal request previously presented to him by the Committee on Public Policy and Legislation of the State Association, to define in Ohio a definite policy on the proper relation between the medical profession and public health administration with the idea such policy should set an example for such inter-relationship in other states, and avoid encroachment by official public health administration into the realm of private medical practice.

Dr. R. G. Leland, director of the Bureau of Hygiene of the State Department of Health, spoke briefly on the plans for the Sheppard-Towner bill, stating that it would be the desire of the State Department of Health to use existing agencies properly coordinated, rather than to attempt to create additional mediums for placing the law in operation. He further emphasized the policy of cooperation, and distributed to the members of Council, a tentative plan as a basis for consideration. It was announced that a conference for more definite determination of a policy on the provisions of this law would be held at the State Department of Health on Friday, January 13th.

Dr. Goodman and Dr. Hussey discussed the plans set forth by Dr. Snively and Dr. Leland, approving the general provisions and policy. Upon motion by Dr. Updegraff, seconded by Dr. Hendershott, Council expressed its warm appreciation to Dr. Snively and Dr. Leland, and pledged the cooperation of Council to the State Department of Health.

After careful consideration, the report and recommendations of the Auditing and Appropriations Committee for the 1922 budget for the State Association were unanimously approved, on motion by Dr. Carothers, seconded by Dr.

Hendershott. The report of the Auditing and Appropriations Committee thus formally adopted by Council for the current fiscal year is set forth below:

"The Auditing and Appropriations Committee in submitting a tentative budget for 1922 is pleased to report that on all the larger items of expense during the past year the affairs of the Association have been conducted in an efficient manner, well within the budget determined at the outset of the year. By a careful scrutiny of bills and by careful management, the cost of operating and publishing *The Journal* was well below the anticipated expense, in spite of the fact that *The Journal* has been constantly improved and notwithstanding the fact that printing costs have not been materially reduced.

In recommending the items for the budget for 1922, set forth below, the Committee on Auditing and Appropriations reiterates its intention to carefully scrutinize all expenditures and if physically possible, to keep well within the appropriations recommended here:

ACCOUNT	ESTIMATED BUDGET FOR 1922
Journal .....	\$10,000.00
Annual Meeting .....	500.00
Treasurer, Salary .....	300.00
Executive, Salary .....	5,000.00
Executive Secretary, Expense.....	500.00
President, Expense .....	200.00
Council, Expense .....	400.00
Legislative Committee .....	1,000.00
Auditing and Appropriations Com.	200.00
Medical Education Committee.....	500.00
Committee on Medical Defense.....	5,000.00
Other Miscellaneous Com. Expense	400.00
Stationery and Supplies.....	700.00
Postage and Telegraph.....	700.00

"It has been the purpose of the Auditing and Appropriations Committee in the past, and it will be the policy in the future to keep the financial affairs of the Association in a business-like and up-to-date fashion; to see that all bills against the funds of the Association, as appropriated in the budget, are forthcoming as soon as the indebtedness is incurred. In this connection even the members of Council themselves have been especially dilatory, many of the requisitions for councilor expense extending back a year or two. This is not only poor business, but disrupts efficient book-keeping and requires an open account from year to year. It will be the purpose, therefore, of the Auditing and Appropriations Committee from this time forth, provided it meets with the approval of Council, to approve only those requisitions from Councilors and committees of the Association when presented not later than sixty days following the date the expense is incurred, in order that all accounts may be closed bills must be rendered before December 31, whenever possible.

"The Auditing and Appropriations Committee is aware of the present general economic situation, and while your committee feels that the Association should 'live within its income' it believes that the affairs and activities of the Association provided for in the foregoing budget are of such importance that few if any reductions can safely be made. While the budget total of \$25,400.00 exceeds by approximately \$3,000.00 the estimated income from membership during 1922, the substantial balance on hand appears to justify the appropriation. The committee takes this position even in the face of a possible decrease in membership and a resultant falling off of the Association income during the present year.

Respectfully submitted,  
Auditing and Appropriations Committee.  
S. J. GOODMAN, M.D., Chairman,  
J. S. MCCLELLAN, M.D.  
J. S. RARDIN, M.D."

Dr. L. L. Bigelow, chairman of the Publication Committee, presented comprehensive ideas for a modification of the advertising policy for *The Journal*, based on recommendations for the elimination of all advertisements, special and classified, which are understood to be and included under the general character of "personal" advertising. After thorough discussion by various members of Council, on motion by Dr. Goodman, seconded by Dr. Carothers, Council voted to request the President to appoint a committee of three, composed of Dr. Bigelow and two members of Council, to formulate a definite report and recommendations, on matters of publication policy in the operation of *The Journal*, and report to Council at an early meeting. President Teachnor stated that he would announce the personnel of this committee in the near future.

A communication was submitted to Council from the Executive Secretary of the Ohio Public Health Association accompanied by communications from the Secretary of the National Tuberculosis Association and newspaper articles which pointed out the danger in the issuance of a proposed executive order by the President to abolish the Medical Reserve Corps of the United States Public Health Service, and to place its members on a civilian status. It was stated in the communications that practically all federal hospitals are at present staffed by Medical Reserve Officers and that return to civilian status, with a reduction in pay would result in wholesale relations and less efficient service for the patients now being treated and cared for in federal hospitals for ex-service men.

After discussion by members of Council, approval was given the correspondence already had between the president of the Association and the Ohio members of the United States Senate, and on motion by Dr. Waggoner, seconded by Dr.

Goodman, the Council went on record as protesting an executive order which would abolish the Medical Reserve Corps of the United States Public Health Service, and the Executive Secretary was instructed to telegraph word of this action to the United States Senators from Ohio.

The following communication to the Council of the Ohio State Medical Association from Dr. Lester Taylor, Secretary of the Cleveland Academy of Medicine, was presented for consideration:

"At the last meeting of the Council of the Academy of Medicine the question was brought up for discussion of the attitude of the State Association toward the nurse anesthetists, and I was requested to write you, as Secretary of the State Council, and find out your policy in regard to submitting this question to further discussion in the State Medical Journal.

"It has seemed to us that it is still something of an open question and should be allowed further comment by anyone who so desires, but before going any further we desire to know the attitude of the State Council on the question."

After discussion by members of Council, with detailed reference to previous formal action taken by the House of Delegates and Council of the State Association, the Council without dissenting vote, on motion by Dr. Brush, seconded by Dr. Carothers, instructed the secretary of Council to reply to the communication from the Cleveland Academy of Medicine, stating that Council hereby authorizes the use of space in *The Journal* equal to that occupied in the August (1921) issue by the statement from the President of the Ohio State Medical Association, on the subject of the nurse anesthetists, for a formal presentation of facts and arguments to the contrary, but personalities and personal animus shall not appear in such communication for publication. At the same time the Council reaffirmed its action at the last meeting on tabling a previous communication from Dr. W. E. Lower to the President of the State Association.

Dr. Goodman read to the Council the circular communications recently sent to the secretaries of county medical societies by the "Medical Advisory Committee", and signed by F. H. McMechan, M.D., as secretary. Additional correspondence between the President of the Ohio State Medical Association and Dr. McMechan relative to those circulars, was also read. Following discussion by Drs. Brush, Hussey, Stevenson, Lukens, Carothers, Updegraff, Hendershott, Goodman, and Haines, Council by unanimous vote adopted a motion by Dr. Brush, seconded by Dr. Haines, for the absolute endorsement by the Council of the following communication under date of December 30, from Dr. Teachnor, President of the State Association, to the presidents and secretaries of county medical societies:

To Presidents and Secretaries of County Medical Societies:

You have undoubtedly received a circular

communication accompanied by a form resolution, from the "Medical Advisory Committee" signed by "F. H. McMechan, M.D., Secretary."

Due to the fact that Dr. McMechan is employed as medical editor of *The Ohio State Medical Journal* there may be some misunderstanding regarding the status of the "Medical Advisory Committee", there being no committee of that name within the State Association. Inasmuch as the origin, personnel, activities, functions and objects of the "Medical Advisory Committee" have not been made known, and in view of the fact that the statements set forth in the communication and resolution are in the nature of general conclusions rather than information or positive facts, I, as president of the Ohio State Medical Association, respectfully suggest that action on the resolution be deferred until inquiry and investigation have been made.

I am quite sure that the members of Council of the State Association, which meets in Columbus in the near future, will give careful thought and study to the propositions set forth in the communication of the "Medical Advisory Committee", after which you will be advised of findings and action of the Council.

You may be assured that the officers, Council and committees of the Ohio State Medical Association are keenly alert to existing conditions and definite problems with which the medical profession is confronted, and that those who have been chosen by you to formulate policies, promulgate activities and to investigate such conditions are conscientiously and constantly striving for the advancement of the profession and for a proper recognition for it by the public and the state.

You may be assured that the importance of any and all questions affecting medical practice is not being neglected or overlooked by the officers, members of Council and the committees of the State Association.

Yours sincerely and fraternally,

December 30, 1921. WELLS TEACHNOR,  
President.

The same motion by Dr. Brush, seconded by Dr. Haines and unanimously adopted by Council, authorized the publication in *The Journal*, and communication to the secretaries of county medical societies, of a statement endorsing the communication set forth above from Dr. Teachnor and the statement that the propaganda sent out by Dr. McMechan was entirely in an individual capacity and not in any way as an officer or employe of the Ohio State Medical Association, with the further statement that while members of Council, the officers of the State Association and the active committees are aware of the controversy occasioned by the general propositions set forth in the communication from the "Medical Advisory Committee", that definite steps are being taken constantly and consistently through the regular channels of the Association to meet whatever problems do exist, and to represent impartially the interest of the members of the State Association, individually and collectively.

Based on the foregoing action, Council authorized the following formal communication to the presidents and secretaries of county medical societies:

"To Presidents and Secretaries of County Medical Societies and Academies of Medicine:

The Council of the Ohio State Medical Association at its meeting in Columbus on January 8, endorsed and approved the contents and policy of the communication which you received from Dr. Wells Teachnor, President of the Ohio State Medical Association under date of December 30, 1921, regarding the activities and propaganda emanating from the so-called 'Medical Advisory Committee.'

"After careful consideration and thorough discussion, the Council wishes to emphasize to you and through you, to the entire membership of the Ohio State Medical Association, that individually and collectively, we know that the officials and committees of the Ohio State Medical Association are working for and serving the best interest of the profession in Ohio; that whatever problems exist, with relation to the policies and personnel of the leadership in the A. M. A., with relation to medical education, foundation subsidies, the interrelation of the state medical societies, questions of state medicine, legislation, medico-political situations, cults and other propositions which were set forth in the circular recently issued by the 'Medical Advisory Committee' are being and have been given conscientious, consistent attention by your Council, the officers and committees of your State Association.

"We know that solution of any and all such problems can best be arrived at *through the proper organization channels*, and that you may be assured of all possible interest and attention to these problems by your Council, officers and committees, and by your delegates to the Ohio State Medical Association and to the A. M. A. to the end that your ideas and wishes, and those of the great majority of our membership are faithfully carried out.

"Communications from the 'Medical Advisory Committee' represent the opinions and expressions of *individuals*. Statements on behalf of that group signed by F. H. McMechan, M.D., should be construed only as *individual expressions* and with no authority or official sanction from the Ohio State Medical Association, under which Dr. McMechan is employed as Medical Editor of *The Journal* of the Association.

"This letter is a disavowal of any official responsibilities for the utterances of Dr. McMechan. Very sincerely,  
Council of the Ohio State Medical Association,  
WELLS TEACHNOR, M.D., President.  
S. J. GOODMAN, M.D., Sec'y. of Council."

A report to date, January 8, from the secretary-treasurer of county medical societies shows a total of 2829 members with dues paid and in good standing for the calendar year of 1922. Following a discussion of the membership situation, members of Council expressed their desire to emphasize to the county societies in their respective districts the imperative need of constantly strengthening the membership by securing for active membership all eligible members of the profession in the respective counties. Council instructed the secretary to urge each county society secretary to secure as soon as possible, the payment of dues for the year.

A tentative report by Dr. Haines, chairman of the special Council committee on Publicity, rec-

ommended the employment of an assistant executive secretary. In discussing his report, Dr. Lukens, a member of the committee, elaborated further on the desires of the committee. Upon motion by Dr. Carothers, seconded by Dr. Goodman, the Council approved and ratified Dr. Haines' report, and authorized the committee to attempt to secure a well qualified person for the new position.

Dr. Stevenson, chairman of the special committee from Council on Medical Defense and Liability Insurance, reported on the general findings of his committee after lengthy correspondence and considerable inquiries. Upon motion by Dr. Waggoner, seconded by Dr. Lukens, the Council authorized the continuance of the committee and requested specific recommendations and a report from the Committee at an early meeting.

Dr. Teachnor reported briefly the comprehensive plans and activities of the Ohio Committee on Hospitals. He pointed out that the investigations being made by the committee touched various phases of medical practice, including curriculum in medical and pre-medical education, hospital service and training, and the question of more even distribution of medical practitioners to the end that a shortage of physicians in some communities, and an over-supply in others, might be remedied.

Upon motion by Dr. Carothers, seconded by Dr. Haines, Council adjourned to meet in Columbus on Sunday, March 5, 1922.

S. J. GOODMAN, M.D., Secretary of Council.

### Technicality Settled

Unless law other than that prohibiting a member of the legislature from holding any other lucrative office with the state is found, Dr. C. F. Talley, Powell, representative from Delaware County, will continue to act as physician for the Girls' Industrial School at Delaware. The question had been raised that probably Dr. Talley was barred from professional practice at the school by reason of his being a member of the state legislature.

It developed, however, that Dr. Talley is not on the state payroll at a specific salary, but that his services are paid for only as rendered, he having been employed on a per visit basis after the woman physician at the institution had resigned and no other woman physician could be found to do the work.

### For Research in Cardio-Vascular and Kidney Diseases

Donors who wish their names withheld have recently given to the Cleveland Clinic Foundation the sum of \$100,000, the income of which is to be used in the investigation of the causes and treatment of diseases of the heart, arteries, kidneys and diabetes. The gift was actuated, it is said, by the fact that these diseases are responsible for the deaths of so many people during the most useful period of their lives.

## PUBLIC HEALTH NOTES

The results of the mental hygiene survey which the National Committee for Mental Hygiene have been making in Cincinnati will be presented in a series of free lectures under the auspices of the public education committee of the Woman's City Club of Cincinnati. Subjects announced are: "The Mental Survey and a Program for Cincinnati," Dr. V. V. Anderson, medical director of the National Committee; "What Is Mental Hygiene?" Dr. T. A. Ratliff; "The Retarded Child in the Public Schools," Dr. Mabel Fernald; "The Problem of the Difficult Child," Dr. Louis Lurie; "Practical Eugenics," Dr. William Ravine; "The Feeble-Minded Problem," Dr. T. A. Ratliff; "Mental Diseases," Dr. Emerson North; "Mental Mechanisms," Dr. Ralph Reed; "Mental Abnormalities in Relation to Delinquency," Judge Charles W. Hoffman; "The Constitutional Psychopath and His Role in Society," Dr. Edmund Baehr.

—Dr. W. M. Smalley, head of the medical department of the Miami Conservancy, has assumed his duties as supervisor of industrial medicine at Antioch College, Yellow Springs. In his new position Dr. Smalley advises the student body in medical matters and inspects the sanitary and hygienic conditions of the factories in which students spend part of their time.

—The majority of recipients of care given by the Instructive District Nursing Association of Columbus are Americans. A recent monthly report showed there were 992 American patients dismissed during the month, as compared with 18 Russians, 14 Italians, five Germans, one Greek, one Englishman, two Hungarians, one Polish, one Canadian and two Norwegians. Of the group 267 were white and 165 colored.

—Dr. D. W. Iford is the new health commissioner of Toledo, having succeeded Dr. C. W. Waggoner, who filled the office with distinction during the past few years. Dr. Iford served in the same capacity during the administrations of two former mayors of Toledo.

—Health education was described as the "key-

stone" of the educational arch in a program submitted to school authorities of the state by the State Department of Education recently. Among ten planks suggested for measurement of school systems three laid particular stress on the health angle—adequate provision for health education; special classes or schools for special types of children, and courses of study and methods adapted to the scientifically studied capacities of children.

—Health Commissioner W. H. Peters of Cincinnati, reports that the death rate of that city for 1921, per 1,000 of population, is approximately 14.1, compared to 15.1 for 1920. The average rate for the decade prior to 1918 was 16.7. In nearly all of the principal causes of death there has been a sharp shrinkage of fatalities. The total from tuberculosis was under 600, compared to 619 in 1920, and an annual toll of 950 a few years ago. Forty-three deaths from influenza were recorded. Heart disease, cancer and cerebral hemorrhage claimed tolls of 892, 485 and 442, respectively. There were only 14 deaths from typhoid, 10 of which were among imported cases. The number of births recorded is the largest since the war, the total of 8,225 representing an increase of 400 over the previous year.

### December Was Record-breaker

The healthiest month of December in the history of the student health service of Ohio State University, is what Dr. H. Shindle Wingert, director of the service, says of December, 1921. Although 161 more students received treatment during the month, less than one-half of the usual number of school hours were lost, showing that the ailments were mostly mild. The decided increase in number of calls also shows the increasing interest in the prevention of disease. The service distributes some effective instructions on correct breathing, walking, posture, etc., and some small cards with pertinent messages such as "Prevention is Greater Than Cure, HEALTH FIRST", and "When You Feel You Are 'Losing Ground,' Every Trifle Magnifies, Annoys and Irritates, Relax."

### Ohio's Big Seven

Totals of the 52 Weeks in 1921 Taken from the Weekly Health Index of the U. S. Bureau of the Census

CITY	Population	Total Deaths	Death Rate	Deaths Under 1 Year	Provisional Infant Mortality Rate 1921	Infant Mortality Rate 1920	Mortality Data for Calendar Year 1920		
							Total Deaths	Death Rate	Deaths Under 1 Year
Akron .....	229,195	1,619	7.1	336	68	84	2,443	11.3	452
Cincinnati .....	403,418	5,691	14.1	602	77	82	6,073	15.1	664
Cleveland .....	831,138	8,681	10.5	1,463	73	87	9,985	12.4	1,692
Columbus .....	245,358	3,158	12.9	360	73	96	3,546	14.8	453
Dayton .....	158,119	1,707	10.8	237	77	85	1,883	12.2	275
Toledo .....	253,696	3,041	12.0	406	76	89	3,413	13.8	473
Youngstown .....	139,432	1,607	11.6	365	93	95	1,738	12.9	375

## Suggestions for the Operation of a Doctors' Exchange in Communities of Thirty Thousand or Over

The local medical societies and academies of medicine in a number of Ohio communities have given considerable thought recently to the inauguration of a central information bureau with a twenty-four hour continuous service.

Believing that some of the ideas set forth in a paper by A. J. DeLong who is in charge of a Doctors' Exchange at Lafayette, Indiana, may be of interest, his discussion is here reproduced:

"Before discussing the unique combination of circumstances which has made a Doctors' Information Exchange a possibility in a city of less than thirty thousand it might be well to explain what is meant by this service. Just what is its purpose? How is it maintained and operated?

"The fundamental purpose of a Doctors' Information Exchange is to supply a permanent telephone service for each physician. Especially during evenings and on Sundays there are times when a doctor's telephones are unattended. Ordinarily a patient might call intermittently for several hours but could receive no answer until either the doctor or his family returned. At times this obvious lapse in service might be annoying, sometimes it would be alarming, and again it might prove fatal. Any number of reasons might account for a physician's telephones being unattended. In these instances, when a lapse in service would otherwise occur, the Doctors' Information Exchange is available to answer all calls and give the matter immediate attention. This arrangement gives the physician greater freedom. He and his family can go at will, knowing that no call need go unanswered. Whenever a doctor leaves his telephones without attendance it is his duty to report his whereabouts to the Exchange. On the other hand, the public is directed to communicate with this Exchange should no one answer from the regular telephone numbers. In this co-operative manner the absence of any physician can usually be explained. When a member reports himself at his club or at any place accessible by telephone it is an easy matter to direct calls to this number. If the doctor is not within telephone reach an effort is made to retain the call. In case the patient cannot wait, or should the physician be away for too long a time, it is preferable that the matter be directed to an associate; that is to say, to another doctor with whom arrangement has been made to temporarily care for this member's patients. Should the patient wish to summon a physician of his own choice rather than the one suggested he is free to do so. In either case the matter is reported, as the absent party will be interested to know of the call.

"This service does not aim to do away with office girls. It is primarily intended to supple-

ment prevalent methods. Efficiency rather than economy is the object. Nevertheless it might be admitted that in many instances this system has made an office girl unnecessary. The fact that this arrangement leaves no telephone calls unanswered does not imply that a doctor cannot seek rest or attend amusement without being liable to disturbance. The Exchange is strictly a confidential agency. What the physician says *goes*. Quite frequently a member will ask not to be disturbed unless it is absolutely necessary. By questioning a patient one can usually ascertain if the need is sufficient to call the doctor away from his interest.

"An Exchange is also subject to inquiries of a general nature. Questions regarding office hours are perhaps most numerous. All accidents and calls for medical assistance are given immediate attention and are handled quicker than would be the case if calls were made promiscuously. The various departments of health, the coroner, the disposition of charity patients, etc., must be explained. Information will either be given or obtained.

"The purpose and scope of this service now defined there comes the matter of operation and maintenance. The essentials of this system consist of a telephone (business line), an operator in charge all the time, the cooperation of the physicians, and the publicity. Inasmuch as the operation is exclusively telephone work, no public office is needed. Indeed, a private home is fully adequate. Two telephone lines are better than one for the simple reason that when calling out, incoming messages are delayed. The writer uses one line exclusively for incoming calls and retains the other for outgoing messages.

"It will be found that the operator or person in charge of an Exchange is really the hub of the system. He (or she) must have patience, be willing and persistent, and always ready to safeguard the interest of any physician. Should a member who neglects to report his whereabouts be needed the operator must endeavor to find him. By referring to records of previous reports this is not a difficult undertaking. Human beings unconsciously move in the same circle. I have had doctors ask in surprise: "How did you know I was here?" To show a phase of the work I will cite one instance: It was a case of obstetrics ready for attention and the doctor had neglected to leave a report. I assured the party I would locate their physician immediately. First I called the office girl at her home, and fortunately she remembered the address to which the doctor had gone. But investigation showed no telephone at this number. Were my efforts in vain? With the aid of 'central' I was able to call next door to the address. They in turn were



kind enough to call the doctor to the telephone.

"The reports given by the members of the Exchange make an interesting record. You soon learn a doctor's friends, his clubs, his politics, his religion, his favorite sports, and his other interests. You know where he sits in the theater and the kind of shows he likes best.

"A Doctors' Information Exchange is entirely new to a community upon its inception. Before it can be successfully operated the public must understand its purpose. The people need to be educated to the idea. This was the greatest difficulty with which we had to contend here in Lafayette. There was no precedent to follow. To give the matter publicity newspaper advertisements were used but did not produce the desired result. Office display cards helped. The plan that did finally work is set forth in the clipping below which has been taken from the local telephone directory:

1191 Armstrong, C. W. Res. 923 N. 15th St.  
 711 Armstrong, G. V. Res. 2017½ N. 16th St.  
 336 Arnett, Dr. A. C. Off. 716-18 LaF. Life Bldg.  
 480 Should no one answer from 336 or 3600 then call 480.  
 3600 Arnett, Dr. A. C. Res. 516 S. 7th St.  
 2346 Arnett, Ed. R. Res. 100 E. Wood St. W. I.  
 6287 Arnold, A. G. Garage. Dayton, Ind.

"This notice advertises the proposition permanently and places the publicity at the finger tips of anybody who looks for a doctor's number. The line of wording is used in connection with each physician's name, and the listing appears thirty-eight times in the text of the directory.

"It is my candid belief that Lafayette is the only city of its size that maintains an exchange of this nature. The large city with its scores of physicians can easily support an Exchange. But the smaller city cannot pay for an elaborate system. What has kept the service away from these places is the belief that the enterprise is not practical outside of the larger cities. Granting that the undertaking has been found practical in one small community, will not the plan be of interest to a great many other places? Perhaps many cities have within their surroundings a similar solution. At least it ought to be of general interest to know how we have put the idea across.

"To fully explain how an Exchange has been made possible here I must get personal. Five years ago an illness left the writer an invalid and practically a shut-in. At the time I initiated the Doctors' Information Exchange I had no income outside of a small magazine subscription business. My telephone was always within reach, having installed same for my magazine work. In other words, I was confined to my home, with a telephone already installed, and greatly in need of something to do. What circumstances could be more favorable for the establishment of an Exchange? It was not only convenient for me to always be on the job but rather a necessity.

"An arrangement of this nature requires the services of but one person, and consequently

there is but one salary to pay. This amount is figured pro rata and might be estimated at the cost of a good office girl. Unless a person is confined from some other cause or circumstance he would not want this work at any price, as it would demand too much. The biggest requirement for a one-man proposition is the matter of confinement. The work itself is very interesting.

"Some may think this solution more unique than typical; that what exists here might not be found elsewhere. There is no foundation to this argument. Every community has its shut-ins and elderly people. In this city there are persons who will gladly take up the work should I decide to devote my time entirely to other interests. To many it would be a veritable god-send to have something worth while to do. I know that the work came mighty welcome to me.

"In this city the Exchange has been a success in every way. The physicians have repeatedly commended the service, the public is appreciative, and there have been inquiries from other places. Personally I am pleased with the enterprise. The undertaking renewed my interest in life when it had waned considerably. With the work my health improved, and through the publicity gained by this connection, my other business has prospered. In fact we have all gained something by the adventure.

"Herewith are reproduced the application for the service and the card used in members' offices:

#### DOCTORS' INFORMATION EXCHANGE Application Blanks

Doctor: Dr. John R. Smith.  
 Office phone: 723. Res. Phone: 722. Office-girl's Phone: 1023 (Res).  
 Office Hours (Day): 1 to 4 P. M. (Evening): Mon., Wed., Sat. 7 to 8 P. M.  
 Sunday Office Hours: By appointment only.  
 Home Hospital Hours: 10 to 11 A. M.  
 St. Elizabeth: 9 to 10 A. M.  
 Regular Calling Hours: 8 to 9 A. M., 11 to 12 A. M., 4 to 6 P. M.  
 At Home (Res.): 329 Oakwood Boul. Tel. 722.  
 Remarks: Club 79, Country Club 130, Church 4323.  
**EMERGENCY:** If I cannot immediately respond to an emergency call please notify the following physician (inform me of such calls as well as telling other doctors that same is MY call):  
 Doctor: Dr. Wm. Brown or Dr. Chas. Jones.  
**INSTRUCTIONS:** Whenever a doctor leaves the above routine he should call exchange and place such information.

Membership fee is one dollar (this assessment is to defray expense involved in installing business phone, advertising, etc.) Service fee is two dollars a month, payable every three months, and due the 15th of the first month. No change in fee can be made unless authorized by Medical Association.

This application properly filled and returned with membership fee is an agreement. Service will be opened at once.

#### MEMBER DOCTORS' INFORMATION EXCHANGE Please Notice

Whenever the doctor is not in his office, or at other times does not answer at his regular telephone numbers, call 480 for information regarding his whereabouts, when he will return, to leave your number, etc. This is a permanent telephone call, and an operator is in charge at all times.

Doctors' Information Exchange"

#### NEW BOOKS

*Pitfalls*, by A. J. Caffrey, M.D., instructor in Physiology at Milwaukee Medical College from 1901 to 1910. Assistant Professor of Medicine at Marquette University School of Medicine, from 1913 to 1920. Richard G. Badger Publisher, The Gorham Press, 194 Boylston Street, Boston, 17.

## DEATHS IN OHIO

*William Alexander Beane, M.D.*, University of Pittsburgh School of Medicine, 1895; aged 49; died of apoplexy, December 10, in East Liverpool. Dr. Beane was formerly coroner of Columbiana County. He retired from practice some time ago. His widow, one daughter and one son survive.

*James Magee Bentley, M.D.*, University of Cincinnati College of Medicine, 1912; aged 34; member of the Ohio State Medical Association and Fellow of the American Medical Association; died in Baltimore, December 12. Dr. Bentley served with the First Ohio Field Hospital Corps for ten months on the Mexican border and later served in the World War, in which he was commissioned to organize the First Ohio Motor Ambulance Company, later the 147th Ambulance Company of the 37th Division, and then promoted as a major and transferred to the 136th Field Artillery, of which he was regimental surgeon. Dr. Bentley was formerly connected with the faculty of the Medical College of the University of Cincinnati, the College of Pharmacy and the pediatric staff of the Children's and Cincinnati General Hospitals. He leaves his parents, three sisters and one brother.

*Dexter W. Boone, M.D.*, Columbus Medical College, 1883; aged 63; member of the Ohio State Medical Association; was found dead at his home in Bellaire, December 6, of apoplexy. Dr. Boone was city health officer in Bellaire, a position he had held for many years, and at one time operated a hospital in Bellaire. His wife, one daughter and one son survive.

*Marion C. Foulks, M.D.*, University of Wooster, Medical Department, Cleveland, 1876; aged 69; member of the Ohio State Medical Association; died at the home of his son, Dr. Wallace S. Foulks, Canton, December 27, after a five months' illness. For ten years after his graduation Dr. Foulks practiced in North Georgetown, Columbiana County, after which he removed to Canton, where he continued practice until the Spring of 1921. Surviving are his mother, widow and one son.

*Edward J. Hill, M.D.*, Cleveland University of Medicine and Surgery, 1897; aged 52; died at the home of his brother in Elyria, November 18, after an illness of nearly a year. Dr. Hill spent ten years of his medical career in China. On his return to America he located in Cleveland. He is survived by his mother, three brothers and one sister.

*Charles N. Huston, M.D.*, Medical College of Ohio, Cincinnati, 1887; aged 65; member of the Ohio State Medical Association and Fellow of the American Medical Association; died at his home

in Hamilton, December 11. Dr. Huston was at different times city physician and health officer of Hamilton, councilman and member of the Board of Education, county infirmary physician and a former member of the United States board of pension examiners. He leaves his widow, two sisters and a brother.

*John S. Jenkins, M.D.*, Eclectic Medical College, Cincinnati, 1875; aged 71; died suddenly, December 7, while driving his automobile in Lima. One daughter and one son survive.

*John C. Jones, M. D.*, Ohio Medical University, Columbus, 1901; aged 51; member of the Ohio State Medical Association; died in his office in Dillonvale, December 2. Dr. Jones had practiced in Dillonvale for 20 years. He was also a druggist. He is survived by five children.

*Lester Wilson Olney, M.D.*, Starling Medical College, Columbus, 1906; aged 41; member of the Ohio State Medical Association and Fellow of the American Medical Association; died at his home in West Jefferson, December 10. Dr. Olney had practiced in West Jefferson for 14 years, having come to that city from Kingston after his first year of medical practice. He leaves his wife, parents, two brothers and two sisters.

*Andrew J. Simpson, M.D.*, Cleveland College of Physicians and Surgeons, 1898; aged 45; died at his home in Cleveland, December 7, following a long illness. Dr. Simpson served as health officer of South Newburg until ill health forced him to abandon the work. Previously he had been district physician and house physician at St. Alexis Hospital and later he was superintendent of the detention hospital. He is survived by his widow and a daughter.

*William Henry Tippie, M.D.*, Starling Medical College, Columbus, 1885; aged 61; died at his home in Tremont City, December 11. Dr. Tippie practiced in Clark County for 37 years, five years of which he spent in Tremont City. He leaves his wife, one son and one daughter.

*Thomas A. Young, M.D.*, Ohio State University College of Medicine, 1915; aged 34; member of the Ohio State Medical Association; died at his home in Toledo, January 8, from loss of blood following the extraction of teeth two weeks prior. Dr. Young was a native of Dundee, Scotland, and came to this country 11 years ago. He is survived by his wife and a small son.

### Dr. Heuer Accepts Chair of Surgery

Dr. George J. Heuer, former associate professor of surgery at Johns Hopkins Medical College, has assumed his duties as professor of surgery at the College of Medicine, University of Cincinnati. During the past ten years Dr. Heuer has done noteworthy work in brain surgery at Johns Hopkins. His coming gives the Cincinnati institution a full time chair in surgery for the first time since the reorganization started by the late Dr. C. R. Holmes.

## Physicians May Take Into Account Various Exemptions In Submitting Income Tax Returns

In addition to exemptions for dependents and other general deductions, practicing physicians may take into consideration the legitimate outlay incident to their practice in formulating income tax returns for 1921, which must be properly executed and returned to the Collector of Internal Revenue before March 15 of this year.

### GENERAL EXEMPTIONS

If married, the physician may first record a deduction this year of \$2,500, if his income is \$5,000 or less in place of \$2,000 last year from his gross income. If single, he may deduct \$1,000. For each child or dependent under the age of eighteen he is allowed a further deduction of \$400, instead of \$200, as last year.

### OFFICE RENTALS

If the physician owns his own house and has his office in one room of that house, he may *not* claim a deduction for office rent. But if he pays rent to another person, for the use of office space, he is permitted to deduct the amount expended for the rent of that office.

### AUTOMOBILE

Exemption may be claimed for the cost, repair and upkeep of automobile or other vehicle which is used exclusively in the conduct of a physician's business. The salary of the chauffeur, if most of his time is spent in driving to professional calls, may also be deducted. Amounts spent for the hire of taxicabs, and also street carfares, *on business calls*, may be taken off.

### ASSISTANTS

Exemptions may be claimed for the salary of a nurse, laboratory assistant, stenographer, or clerical worker in the office, whose work is connected with the doctor's professional duties. Deduction may also be made for the salary of a maid or other person who spends her time in opening the door or answering the office telephone. Deductions may be made for that proportion of wages or salaries paid to employes in return for service directly in connection with practice or in connection with the care or treatment of patients.

### MEDICINES, INSTRUMENTS, SUPPLIES

A doctor may take off an item for medicines used in the office in the treatment of patients. Bandaging, laboratory material, and all other supplies necessary to the running of the physician's office are permitted to be deducted.

On surgical instruments, he may charge off on an instrument with a fair average life of five years, one-fifth of its original cost each year.

### GENERAL OFFICE EXPENSE

Telephone bills in their entirety may be de-

ducted, because it is understood that the telephone in a doctor's office, even when that office is in his home, is almost entirely used for professional purposes.

Exemption is permitted for the correct proportion of expenditure made for light, heat and water. Depreciation of 10% of the original cost each year is allowed upon office furniture, it being considered that furniture should last about ten years.

### LIBRARY

Most doctors have a medical library more or less extensive. In the courts it has been decided that after ten years a medical book is out of date and therefore worthless. For this reason the doctor is allowed a depreciation item of ten per cent. each year on his medical library.

### TAXES, LICENSES

Any taxes which a doctor may be required to pay upon materials required for his work may be deducted, and all licenses which he is by the nature of his business required to take out, may be taken off of his gross income reported. This includes his license to prescribe alcohol, narcotic license, automobile tax, local occupational taxes and so forth.

### PROFESSIONAL DUES

Also, a doctor may deduct dues paid to professional associations to which, in the interest of his business, he belongs, and exemption is also allowed for subscriptions to all medical newspapers and journals.

### WHEN TO DEDUCT UNPAID DEBTS

If his books are kept according to the "Cash Receipts and Disbursements" system, he may not charge off any unpaid debts, because as explained in the tax manual, "if his books are kept according to this system, he is only reporting as gross income those accounts which have proved to be good, and therefore bad accounts cannot be deducted because they have already been excluded.

If the books be kept on an "Accrual" basis (that is, on the basis of expenses actually incurred and payable even though not yet paid, or income earned although not yet collected), it is permitted that the doctor may charge on his income tax blank all debts which are definitely ascertained to be worthless during the year past.

In the same way, the doctor is permitted to claim deductions for all other expenses within the scope of his profession, and the amount of his tax is determined on the net income which remains after all of these items have been deducted.

# The Cancer Campaign

Andre Crotti, M. D., Chairman.....Columbus

F. E. Bunts, M. D.....Cleveland    J. Louis Ransohoff, M. D. Cincinnati  
C. W. Moots, M. D.....Toledo    Don K. Martin, Sec'y.....Columbus

## Cancer of the Stomach

F. E. BUNTS, M.D., F. A. C. S., Cleveland

*Editor's Note.*—Dr. Bunts stresses salient points when he maintains that “the control of cancers of those parts, in which precancerous conditions are recognized and early symptoms are well defined, is practically attainable, and rests in the final analysis upon the extent to which information reaches and is accepted by the public. Nevertheless, in order that still further progress may be made, it is essential that we should study most carefully those conditions, which under certain given conditions are known to eventuate in cancer. In other words, a knowledge of the precancerous state is more important to the patient than the recognition of the cancer itself, for the removal of a true cancerous growth puts an end to the fear of cancer, while the removal of the cancer itself is always attended by the danger of recurrence or metastases.”

**A**LTHOUGH STATISTICAL TABLES appear to show that the occurrence of cancerous growths in all parts of the body is increasing, nevertheless, with the extension of organized cancer propaganda, cancer of the external parts, such as the lips and breast, is progressively losing some of its terror, since the laity as well as the general practitioner are learning that definite and permanent cure is possible under one essential condition—*i.e.*, the early removal of the growth.

### THE NECESSITY OF DEALING WITH PRECANCEROUS CONDITIONS

Cancer of the female generative organs also is being conquered, since the primary symptoms and the age of greatest incidence is becoming more generally recognized. The control of cancers of those parts, in which precancerous conditions are recognized and early symptoms are well-defined, is practically attainable, and rests in the final analysis upon the extent to which information reaches and is accepted by the public. Nevertheless, in order that still further progress may be made, it is essential that we should study most carefully those conditions, which, under certain given conditions, are known to eventuate in cancer. In other words, a knowledge of the precancerous state is more important to the patient than the recognition of the cancer itself, for the removal of a precancerous growth puts an end to the fear of cancer, while the removal of the cancer itself is always attended by the danger of recurrence or metastases. In view of the great cancer mortality the world over, and of its increase rather than decrease under the policy which our profession has so long followed, of waiting for trouble to come rather than meeting it before it starts, it seems incumbent upon each of us to become not an alarmist—but a propagandist.

### PREVALENCE AND MORTALITY OF CANCER OF THE STOMACH

Cancer of the abdominal organs, of the stomach in particular, presents an especially dark picture because of its prevalence in both men and women, its late recognition, due to the absence or uncertainty of its early symptoms, and the difficulties and comparative danger of its removal.

Nevertheless, if the facts regarding cancer of the stomach can become as well-known as those regarding cancer of the breast or of the uterus, progress toward its control may be accomplished, although on account of the late appearance of symptoms in many cases, it will always, or at least until its cause is definitely established, be accompanied by a comparatively high mortality.

C. H. Mayo states that more than one-third of the cancers in men and more than one-fifth of the cancers in women appear in the stomach, and Hoffman's statistical studies indicate a higher mortality from cancer of the stomach and liver than from cancer in any other organ or tissue, not excepting the female breast.

The average age of death from cancer of the stomach and liver, as derived by Hoffman from his statistical studies, is 61.2 years, the age period of greatest incidence ranging from 40 to 75.

A study of the geographic distribution of cancer of the stomach does not seem to offer much of value excepting perhaps the possibly greater incidence in certain vegetarian nations—a point to which we shall refer later.

The paramount facts, gained from a study of statistics, are that in 10 years in the United States 128,734 deaths were due to cancer of the stomach and liver, and that we are justified in considering that from one-half to two-thirds of this total number were due to cancer of the stomach alone, a fact which renders at once ap-

parent, the urgent need of the extension of knowledge regarding this phase of the cancer problem.

#### ETIOLOGY

It is not our purpose to discuss the various theories of cancer causation and therefore this section might more appropriately be headed "predisposing causes."

Even so, there is little to offer, for no final judgment has been passed regarding the various points of view which have been advanced.

As regards cancers of the external parts of the body, the predisposing effects of chronic irritation appear to be well-established, but there appears to be no uniformity of opinion regarding the etiological significance of chronic irritation of the stomach as from the constant ingestion of highly spiced condiments, or of alcohol, or the presence of ulcer. In a recent paper Ochsner<sup>1</sup> calls attention to the high rate of incidence of cancer of the stomach in regions where vegetables are fertilized with manure, especially when, as with the Japanese, it is the prevailing habit to eat raw vegetables grown in soil fertilized by human or animal excrement; whereas the inhabitants of India, where the prevailing religions require that all food and drink be boiled, are practically free from stomach cancer.

"In studying the statistics, I have been impressed with the fact that cancer of the alimentary canal is uncommon wherever food and drinking water are not contaminated with sewage or manure. An interesting observation has been made in the case of the Chinese who drink no unboiled contaminated water but eat an abundance of vegetables fertilized with human excrement. As might be expected, they show a high mortality from stomach cancer."

Whether or not we are prepared to accept the view that cancer is an infectious disease, a point of view that is of increasing value in view of the recent researches of Nuzum<sup>2</sup>, the statistics cited are significant and may well lead to prophylactic measures of value.

It may be well to add the negative statement that there is no evidence that heredity plays a predisposing part in the production of cancer of the stomach.

#### SYMPTOMATOLOGY

Perhaps the most malignant of all the characteristics of a cancerous growth anywhere in the body is its insidious onset. Before the organism is aware that the enemy is approaching, the outer line of defense has been passed. In the case of cancer of the internal organs, the enemy may be within the citadel itself before his presence is suspected.

Nevertheless, just as the wariest beast of the forest leaves a trail which is evident to the experienced naturalist, so even in its early stages there may be certain signs which may suggest to the experienced physician the possibility of a cancer of the stomach.

Ochsner calls attention to the observation that—

"Cancer will develop very constantly on the proximal side of the pylorus, and on the distal side of the ileocecal valve, while it will develop only rarely between these two points. The fields in which it will develop contain substances, acid in reaction, while the intestinal contents in the intervening portion are alkaline."

If the growth is near the pyloric end, signs of obstruction with persistent vomiting will appear. As the walls of the stomach are increasingly involved, hemorrhage will ensue, either slight, and manifested only by the so-called *coffee-ground* appearance in the vomitus, or profuse. Cachexia and anemia are the necessary sequelae of the persistent lack of nutrition and loss of blood. If the cardia, rather than the pylorus, be attacked the general symptoms of indigestion and lack of hydrochloric acid will be present, but the advance of the disease may be more insidious until perforation, or direct extension to the liver, or peritoneum, or other adjacent organs, with increasing lymphatic involvement, has become apparent.

Perhaps the most positive outstanding symptom, upon which one is justified in entertaining at least a strong suspicion of the presence of a

#### Cancer Death Rate

The cancer death rate in Ohio in 1920 was the highest in the history of the state, according to statistics issued by the census bureau. It was 89 per 100,000 population, as against 85.7 in 1919, 85.6 in 1918, 87 in 1917 and 86.9 in 1916. In 1920 there were 5171 deaths, as against 4892 in 1919 and 4800 in 1918.

malignant growth, is a progressive and constant gastric disturbance in an individual—man or woman—within the age period of greatest incidence of gastric cancer. If there has been a previous history of recurrent attacks of dyspepsia and especially if the patient has had gastric ulcer the diagnosis is by so much the more certain. But the point to be emphasized is this: *No patient who complains of persistent indigestion, or gastric distress of any type should be dismissed lightly, especially if that patient be over 35 years of age.*

Such a patient should be kept under observation while ordinary measures are undertaken. If these do not give early relief an X-ray examination should be made at once. To be sure, gastric analysis will determine the presence or absence of free hydrochloric acid and the microscope will reveal the Oppler-Boas bacilli; palpation may disclose the presence of a tumor; cachexia and haematemesis may be present; but it should be borne in mind that *these are late symptoms*, and that when they are present there is every probability that the growth has become too extensive to be removed; or that metastasis and extension to neighboring organs have progressed to such a degree, that at the best, an operation can be but palliative for a limited period; or that the patient has become so reduced by lack of nutrition and anemia that even

the exercise of every possible restorative measure will fail to restore him sufficiently for post-operative recuperation to be possible.

Carman<sup>3</sup> has made a clear demonstration of the value, as well as of the limitations, of the X-ray in these cases. As he indicates, while the X-ray cannot determine the cellular diagnosis of any growth which may be present in the stomach, it can disclose any filling defect in the gastric contour. And since 95 per cent. of all tumors of the stomach are cancerous, the presence of a filling defect, plus the presence of gastric disturbance will lead to sufficient certainty of diagnosis to direct the treatment.

Carman calls attention to the lamentable fact that at present only about 50 per cent. of the gastric tumors disclosed by the X-ray are still in the operable stage.

"When routine examinations of persons presenting gastric symptoms become a reality, the X-ray should be able to increase the number of operative cases, for the inoperable tumors should be practically only those which cannot be resected because of cardiac location, and carcinomas of the cardia represent a small per cent. of gastric cancers."

One should bear in mind, moreover, that even a filling defect, especially at the pylorus, may be due to ulcer and not to cancer.

#### TREATMENT

The one and the only curative method of treatment of cancer of the stomach as of cancer in any other organ or tissue, is its early and complete surgical removal.

If the diagnosis is doubtful, and as we have indicated in the preceding section, the diagnosis must be made in accordance with *possibilities* not with certainties, an exploration should be made and the nature of the operation to be performed determined by direct inspection, whether the removal of an ulcer, the resection of a constricted pylorus, or a resection with wide excision of a malignant growth.

It is obvious that the operability of any given case depends also upon the presence and location of metastases, and the condition of the patient, *i. e.*, the extent to which he has been reduced by malnutrition.

It is not within the scope of this paper to discuss operative methods; nor the restorative methods which may avail in reduced cases; nor shall we discuss the possible—but improbable—value of radium or of the X-ray.

Our aim is rather again to emphasize the one and only rule which will avail in the treatment of cancer of the stomach—*early recognition and immediate surgical removal; and still better, the early recognition and efficient treatment, when possible, of the precancerous stage.*

CLEVELAND CLINIC.

1. Ochsner, Albert J.: Cancer Infection. *Annals of Surgery*, 1921, March, p. 295.

2. Nuzum, J. W.: A Critical Study of an Organism Associated With a Transplantable Carcinoma of the White Mouse. *Surg., Gyn. & Obst.*, 1921, August, p. 167.

3. Carman, R. D.: The Operability of Cancer of the Stomach as Determined by the X-ray. *Jour. A. M. A.*, 1919, Vol. lxxiii, pp. 1513—1516.



Thirty applicants for licenses to practice medicine in Ohio successfully passed the December examinations of the State Medical Board and have received certificates to that effect. Six candidates failed to receive passing grades. Following is a list of the new licentiates, their intended Ohio locations in italics, and their schools of graduation:

Lester M. Githens, *West Carrollton*, Eclectic Medical College, Cincinnati; Orlando E. Cress, *Cincinnati*, Eclectic Medical College, Cincinnati; Harold V. Phelan, *Cleveland*, Georgetown University; George H. Bigelow, *Yellow Springs*, Harvard Medical School; David Fisher, *Dayton*, Harvard Medical School; Joseph F. Toot, *East Liverpool*, Harvard Medical School; Davis C. Middleton, *Dayton*, Hahnemann-Philadelphia; William A. Gross, *Cleveland*, Jefferson Medical College; Ralph L. Slater, *Warren*, Jefferson Medical College; Alva R. Spindler, *Akron*, Jefferson Medical College; Ralph David Bergen, *Barberton*, Johns Hopkins Medical School; Clyde M. Fitch, *Columbus*, Johns Hopkins Medical School;

Clarence Fry, *Columbus*, Johns Hopkins Medical School; Wm. W. Baker, *Dayton*, Meharry Medical College; Edward J. Ross, *Alliance*, Meharry Medical College; Ketous T. Thompson, *Cleveland*, Meharry Medical College; Harry M. Luckey, *Wilberforce*, Marquette Univ. Med. School; Chas. O. Paradis, *Cleveland*, McGill University; Harold G. Haines, *Warren*, University of Pittsburgh; Louis S. Deitchman, *Youngstown*, University of Pennsylvania; Joseph Vadasz, *Cleveland*, University of Budapest; Louis S. Bardoly, *Cleveland*, University of Budapest; Bela Landesmann, *Cleveland*, University of Kolozavar; Enrico Di Iorio, *Youngstown*, University of Medicine and Surgery, Naples; Mildred Van Cleve, *Cincinnati*, Woman's Medical College of Pennsylvania; Verlay H. Dredge, *Cleveland*, Western Reserve University; John W. McCammon, *Toledo*, Western Reserve University; Ronald I. Ross, *Cleveland*, Western Reserve University; Chassea Goffin-Levin, *Cleveland*, Zurich University; Harry M. Robuck, *West Union*, University of Louisville.

Seven out of eight candidates who sought certificates to practice osteopathy passed the examination of the Board and have been licensed accordingly. Also three osteopaths received licenses to practice surgery.

Among the limited practitioners certificates to

practice have been issued to two out of three masseurs, two chiropodists, two cosmetic therapists, 13 midwives and one chiropractor. The latter is the first and only chiropractor to successfully pursue a State Board examination in Ohio and receive a license from it on the basis of examination.

#### HEARINGS IN REVOCATION

After notice and hearing the State Medical Board suspended the certificate of Dr. Wm. E. Wright, Newark, because of his conviction for illegal sale of narcotic drugs. Opportunity will be given Dr. Wright at the July meeting of the Board to show cause why his certificate should be restored.

—After notice and hearing the State Medical Board suspended the certificate of Dr. Leverne A. Badger, Toledo. Badger conducted an advertising office and was charged with lending his name and associating himself with an illegal practitioner of medicine, one DeFrancoise, who, more than a year ago, was prosecuted in the Municipal Court of Toledo for the illegal practice of medicine and escaped conviction on a technicality. DeFrancoise left the state before further service could be had. Opportunity will be given Dr. Badger to appear before the Board at its meeting in July and show cause why his certificate should be restored.

—The hearing of the revocation case against Dr. Moritz Loewenthal of Cleveland was continued until a later meeting. Dr. Loewenthal is at present serving a sentence at Atlanta, Georgia, for violation of the Harrison Narcotic Law.

#### PROSECUTIONS

George Gueth, Sidney, cancer quack, was convicted on two charges of practicing medicine without a license in the court of Justice Hess. Fined \$25.00 and costs on the first charge and \$50.00 and costs on the second.

—Mrs. Josephine Polis, Akron, was fined \$25.00 and costs in Municipal Court for practicing midwifery without a license.

—Chris Roeller, Cincinnati, arrested for illegal practice of chiropody, agreed to close his office, cease practice and remove from the state.

—Jacob Michaels, Forest, healer, arrested for illegal practice of medicine, was convicted recently when his case was heard by Mayor Sausley of Ada.

#### EXPANSION OF OLD ELECTRO-MEDICAL MANUFACTURER

The McIntosh Battery & Optical Company, Chicago, manufacturers of X-ray, electro-medical and physical therapy apparatus, has been re-organized with an increase of capital stock under the name of the McIntosh Electrical Corporation.

The company has established distributing agencies in almost every state in the United States in the hands of local men experienced and competent to render service to purchasers of these goods.



THE pride of the craftsman in his handiwork is exemplified in the zeal with which Parke, Davis & Company's pharmaceutical chemists, biologists, and physiologists maintain the unvarying quality of Adrenalin. And that quality is the natural result of highly specialized scientific skill gained through twenty years' experience in the manufacture of the original product.



THE NAME "ADRENALIN" IS LINKED INSEPARABLY WITH THE GOOD NAME OF PARKE, DAVIS & COMPANY

## ACADEMIES AND COUNTY SOCIETIES

### Cleveland

(Lester Taylor, M. D., Secretary)

A special organization meeting of the Council of the Cleveland Academy of Medicine was held December 30, at the University Club, with President Phillips in the chair.

Lester Taylor was unanimously reelected secretary-treasurer, and the following were elected as chairman of the standing committees: Legislative, George Follansbee; Public Health, J. J. Thomas; Civic, R. H. Birge; Membership, Dr. Harold Feil; Program, Dr. Lawrence Pomeroy.

On motion of C. L. Cummer, the chair was authorized to appoint a committee of three to consider a report on possible changes in the constitution, the report to be submitted at the next regular meeting. It was moved that the chair be given the power to appoint the chairmen of the following committees and assign to each his membership as he saw fit: Publication, Classification, Health Insurance, Hospital Relations, Communicable Disease, Nursing Relations, Milk Commission and Tuberculosis Commission.

#### FIRST DISTRICT

*Clermont County* Medical Society held its annual election of officers at Milford, December 21, with the following results: President, T. A. Mitchell, Owensville; vice-president, E. S. Haas, Marathon; secretary-treasurer, O. C. Davison, Bethel; program committee, F. H. Lever, Loveland, O. C. Davison, Bethel; A. B. Rapp, Owensville; legislative committeeman, T. A. Mitchell, Owensville; censors, R. C. Belt, Milford, J. L. Formoran, E. S. Haas, Marathon.—O. C. Davison, Secretary.

*Clinton County* Medical Society's officers for the new year are: Frank A. Peele, president; G. W. Wire, vice-president; Elizabeth Shrieves, secretary-treasurer, of Wilmington; and J. F. Fisher, Sabina, delegate, and C. A. Tribett, Westboro, alternate.—Elizabeth Shrieves, Secretary.

#### SECOND DISTRICT

*Champaign County* Medical Society, in regular session at Urbana, December 8, reelected David H. Moore and J. F. Stultz as president and secretary-treasurer, respectively, for 1922. Other officers elected were Mark C. Houston, vice-president; D. C. Houser, delegate, and E. R. Earle, alternate.—News Clipping.

*Hardin County* Medical Society met at McKittrick Hospital, Kenton, January 5, with 10 members present. The subject of hospital ethics was discussed and a number of cases studied. Hereafter the hospital staff will hold one meeting each month, when certain cases selected by a committee will be discussed.—News Clipping.

*Miami and Shelby County* Medical Societies

held their 60th joint semi-annual session at Sidney, January 5. Papers on "Treatment of Puerperal Eclampsia" by A. B. Gudenkauf, and "Glaucoma," by M. M. Brubaker, were presented before lunch, which was followed by an address on "Kidney Lesions," by G. F. McKim, Cincinnati.—Program.

*Preble County* Medical Society reelected S. P. Carter, president, and H. Z. Silver, secretary-treasurer, at a dinner meeting at the Hotel Rossman, Eaton, December 15. C. A. Coleman, Dayton, was the guest and essayist of the occasion.—News Clipping.

#### THIRD DISTRICT

*Allen County* Medical Society reports the election, November 15, of A. F. Basinger as president, and A. N. Wisely, Jr., secretary, to serve during 1922.

*Hancock County* Medical Society held a most successful annual session at the Elks' Home, Findlay, December 7. Dinner at six o'clock found 23 members of the society present. The paper of the evening by Don B. Biggs, Findlay, on "A Few Notes on Obstetrics" was very practical and evoked an enthusiastic discussion. Dr. O. P. Klotz was received on transfer membership from the Illinois State Society. Election of officers resulted in the reinstatement of W. J. Zopfi as president; E. J. Thomas, treasurer; Nelia B. Kennedy, secretary; J. C. Tritch, delegate; J. P. Baker, alternate; N. L. MacLachlan, legislative committeeman, and J. P. Baker, medical defense committeeman. Dr. Wells Teachnor, Columbus, president of the State Association, was the speaker-guest of the society at its January 4 meeting, which was also attended by physicians from nearby counties.—Nelia B. Kennedy, Secretary.

*Logan County* Medical Society met for its first regular meeting of 1922 in Bellefontaine, January 7, with an attendance of 31 members. A communication from the "Medical Advisory Committee" was read and tabled until further information concerning same was obtained. Dr. P. M. Wright of the State Department of Health presented moving pictures on "The Modern Diagnosis and Treatment of Gonorrhoea in the Male," and "The Modern Treatment of Syphilis" (including the Wassermann reaction). These and his instructive talks afterwards were thoroughly enjoyed.—M. L. Pratt, Secretary.

*Marion County* Medical Society held its December meeting in Marion, December 6. A large attendance was out apparently stimulated by the interest in the election of officers for the new year. Those chosen were: R. C. M. Lewis, president; A. M. Crane, vice-president; D. O. Weeks, secretary-treasurer; W. J. Weiser, censor; C. W. Sawyer, legislative committeeman. The committee to secure sanitary inspection for Marion and Marion County made a report. President-elect Lewis expressed his appreciation of the honor conferred on him, this being the third time he has



been called upon to serve the society as president.—J. A. Dodd, Secretary.

The society started the year auspiciously on January 3, when the regular monthly meeting was held in the city library. Officers for the new year were installed, after which President Lewis delivered a splendid inaugural address, reviewing the history of medicine and surgery and the prominence attained by the medical profession in the war. Announcement of the following committee appointments was made: Advisory Committee on Hospital Affairs—H. K. Mouser, chairman; D. W. Brickley, Fillmore Young, A. J. Willey, D. O. Weeks, J. W. McMurray; Social Committee—A. Rhu, E. L. Brady, J. W. Jolly; Program Committee—A. M. Crane, F. V. Murphy, Maud Bull.—D. O. Weeks, Secretary.

*Mercer County* Medical Society had a busy day, December 13, when it held its regular monthly meeting in the morning and devoted the afternoon to the crippled children's clinic conducted by the local and state health departments. At the morning session, which was attended by physicians from Auglaize and Van Wert Counties also, C. A. Coleman, Dayton, gave an interesting and instructive illustrated lecture on some of the newer things in diagnosis and treatment of some of the common urological diseases. Forty children were examined at the clinic in the afternoon at which B. G. Chollett, Toledo, and J. R. Tillotson, Lima, served as consulting orthopedists. J. E. Hattery, has succeeded J. P. Symons as president, and D. H. Richardson and L. D. Brumm have been retained in their respective positions as secretary and treasurer of the society.—D. H. Richardson, Secretary.

*Van Wert County* Medical Society met at the Van Wert County Hospital, December 22, and elected the following officers for 1922: president, L. A. Ellis; vice-president, C. G. Church; secretary-treasurer, C. R. Keyser. The society will meet on the second Tuesday of each month.—C. R. Keyser, Secretary.

#### FOURTH DISTRICT

*Defiance County* Medical Society received five new members at its December 14th meeting. The meeting date has been changed to the second Tuesday of the month, meetings to be held bi-monthly in even numbered months. W. S. Powell and F. W. Watkins were reelected president and secretary.—F. W. Watkins, Secretary.

*Fulton County* Medical Society has chosen C. F. Murbach, Archbold, president, and George McGuffin, Pettisville, secretary-treasurer, for 1922.

*Paulding County* Medical Society met at the office of R. J. Dillery, Paulding, January 4 for its annual election of officers. F. F. McMuth, Cecil, was elected president; D. M. Milholland, Junction, vice-president; R. J. Dillery, reelected secretary-treasurer and legislative committee-man; L. R. Fast and K. C. Evans, delegate and alternate, respectively; and C. E. Huston, chair-

## Personal Service;

the Plan and Method of Specialization by which a larger recognition of the individual is accomplished.

Every claim and suit against a contract holder is given Personal Service by our Home Office Staff of Legal Experts in Malpractice, the only organization of its kind in existence.

---

*Over twenty-three  
years of doing one  
thing right*

---

*For Medical Protective Service  
Have a Medical Protective Contract*

---

### The Medical Protective Co.

of  
Fort Wayne, Indiana

man of the program committee.—R. J. Dillery, Secretary.

*Sandusky County* Medical Society held its regular meeting at Fremont, December 22. Three new members were received. Under new business the following resolution was presented, and after discussion laid on the table:

Whereas, the Sandusky County Medical Society at a regularly called meeting held in Bellevue, Ohio, November 17, 1921, took action, placing this society on record as being unalterably opposed to a medical staff for Memorial Hospital;

Whereas, certain members of this society, with full knowledge of the action taken by this society, ignored and defied the officially expressed action of this society.

Resolved, that it is the sense of the members of the Sandusky County Medical Society here assembled, that those members, who showed an inclination to serve on said hospital staff, or were present at its first meeting, be hereby cited to appear singly, before the society at its next regular or specially called meeting and show cause why they should not be censured, suspended or expelled, in answer to whatever changes of unethical conduct and especially of misconduct by their recent action which may be brought against them.

C. J. Wehr reported a case of shoulder presentation following an automobile accident, and E. L. Vermilya reported a case of four months pregnancy being aborted following delivery. Election of officers resulted in the selection of M. O. Phillips as president, to succeed E. W. Baker, Clyde, and the reelection of C. I. Kuntz and W. H. Booth as secretary and treasurer.—C. I. Kuntz, Secretary.

*Wood County* Medical Society, in session at Bowling Green, voted to retain President J. W. Rae and Secretary-treasurer F. V. Boyle, the 1921 officers, in the same positions for the ensuing year. E. H. Mercer, H. J. Powell and A. A. Babione were elected censors.—F. V. Boyle, Secretary.

#### FIFTH DISTRICT

*Ashtabula County* Medical Society devoted its December meeting to the annual election of officers. R. B. Wynkoop, president; J. J. Hogan, secretary, and A. W. Hopkins, treasurer, were reelected to their former posts. C. E. Case and G. T. Wasson were chosen delegate and alternate to the state meeting. The society enjoyed an interesting exhibition of films and an instructive talk on venereal disease by Dr. P. M. Wright of the State Department of Health.

The largest and one of the most enthusiastic meetings of the society was held at Hotel Ashtabula, January 10. After a splendid feed the following program, a symposium on "Goiter", was introduced: "Etiology and Pathology", Z. O. Sherwood, Geneva; "Diagnosis", C. E. Case, Ashtabula; "Medical Treatment", R. B. Wynkoop, Ashtabula; "Surgical Treatment", S. H. Burroughs, Ashtabula. These papers were well prepared and brief; each was well and thoroughly discussed. It was our largest attended meeting since my affiliation with the society. Dr. W. H. Tuttle, president of Lake County Medical Society, was a guest and spoke well of our activity. We have now the largest membership in the history of the society with 44 paid members and we are going to keep going.—J. J. Hogan, Secretary.

*Geauga County* Medical Society closed its

year's work on October 26, with 1922 state dues for every member in the hands of the secretary, thus enabling the society to again head the one hundred per cent. list. Between May and November five meetings were held at which the following men from outside the county gave valuable papers: Drs. John Osmond, Byron Colvin, John Phillips and O. T. Manley. R. K. Updegraff, councilor of the Fifth District, visited the society in May and discussed many matters of interest to the profession.

The meeting of October 26 was a banquet at the Dean Hotel, Burton, in honor of Dr. A. D. Warner's seventy-fifth birthday. Dr. Warner has practiced in Geauga County for 47 years. He took part in the reorganization of the society in 1881 and is the oldest member. The original organization dates back to 1866. Dr. Frank Pomeroy, a life-long friend of the honored guest, acting as toastmaster, spoke of the great service rendered the community by Dr. Warner and of the strong friendship that had existed between them as members of the profession. Dr. Gilmore, who as a boy remembered the doctor as a resident and practitioner in Chester, where Dr. Gilmore now practices, gave pleasant reminiscences of how he saw Dr. Warner through a boy's eyes. Others called upon to pay tribute were Drs. Hertzog and Myler, while the others present gave silent assent and wished the doctor many more years in our midst. Dr. Warner responded in words that will long be remembered by those who heard him, words of good cheer and appreciation of the honor the society had conferred upon him in thus remembering him on this occasion.—Isa Teed-Cramton, Secretary.

*Lorain County* Medical Society enjoyed an excellent meeting at North Ridgeville, January 10. Forty sat down to a splendid dinner after which the program of the evening was started. Dr. I. N. Oakes, who has practiced in North Ridgeville for 45 years, was unable to be present and make the address scheduled but the society paid tribute to him. Drs. Gill and Jameson spoke in glowing terms of Dr. Oakes, the physician, the man, the country doctor who has perfected himself in many specialties. H. C. King, Lakewood, in an address on "Some Practical Lessons from the Recent Advances in the Treatment of Diabetes Mellitus" gave a thorough digest of his subject. Dr. King was elected to honorary membership. Establishment of a venereal disease clinic was considered at a meeting of the Elyria Memorial Hospital staff, January 12, at which members of the society were guests. R. K. Updegraff, Fifth District councilor, was among those present.—W. E. Hart, Secretary.

#### SIXTH DISTRICT

*Portage County* Medical Society met at the office of J. H. Krape, Kent, January 5. No set program had been provided, but a profitable evening was spent reviewing and discussing recent papers in *The Ohio State Medical Journal*. W.

# RADIUM

Cancer of the Cervix responds particularly well to Radium, especially when supplemented by X-Ray, applied externally.

Some of our most prominent surgeons are not operating upon Cancer of the Cervix at the present time.

Your inquiries are invited.



DR. CHAS. F. BOWEN  
344 EAST STATE STREET  
COLUMBUS, OHIO

B. Andrews demonstrated a few recently introduced surgical appliances. Communications from "The Medical Advisory Committee" were read and discussed, and on motion, it was decided to postpone action on same until more information was obtained.—E. J. Widdecombe, Secretary.

*Stark County* Medical Society's program on January 17 included addresses on "Progress in Surgery, 1921," by J. P. DeWitt; "Prevailing Diseases and Therapeutics," L. A. Buchman; "Diseases of Women and Children," B. C. Barnard; "Progress in Obstetrics," S. S. P. Barnes; "Progress in Hygiene and Sanitation," Chester Peters, and "Ethics and Legislation," Perry F. King.—Program.

*Summit County* Medical Society met in Akron, January 3, with an attendance of 85 from Cuyahoga Falls, Copley, Akron and Columbus. Officers for the new year were installed, after which there was an address by the president and the secretary's report for 1921 was given. Average attendance at 11 meetings during the past year has been 85. A committee of five was appointed to revise the constitution. Andre Crotti, Columbus, gave an illustrated lecture on "Goitre."—A. S. McCormick, Secretary.

#### SEVENTH DISTRICT

*Belmont County* Medical Society, in annual session at Bellaire, December 20, elected F. S. Wright, president; F. R. Dew, vice-president; J. S. McClellan, secretary-treasurer; C. W. Kirkland, delegate; R. H. Wilson, legislative committeeman. Dr. McClellan has served the society as secretary-treasurer for many years and is widely and favorably known for his successful work in the organization field.—News Clipping.

*Tuscarawas County* Medical Society's program on January 12 at Dover, consisted of a "Review of the Patient for Operative Procedure as Seen by Diagnostician, Anesthetist and Surgeon", by A. C. Dempster, E. D. Moore and K. E. Shawker. On December 8 the society elected E. C. Davis, president; S. M. Mahaffey, vice-president, and reelected P. J. Alspaugh, secretary-treasurer. At this meeting D. W. Shumaker gave an interesting report of the clinics of the American College of Surgeons.—P. J. Alspaugh, Secretary.

#### EIGHTH DISTRICT

*Athens County* Medical Society elected J. F. Weber, Amesville, president, and reelected T. A. Copeland, Athens, secretary-treasurer, at its annual meeting, December 6.

WHEREAS the Public and Profession are being sold out to:—

- (1) Foundation control of "full time" medical education.
- (2) Lay board domination and the "closed shop" hospital.
- (3) Socialized state medicine, subsidized community health centers and hospitals under political or university control.
- (4) Legislative dictation of therapy and fees.
- (5) Demoralization of medical standards by the expansion of cults.
- (6) Exploitation of the specialties by lay technicians.

THEREFORE BE IT RESOLVED that all the Delegates of the State Medical Society to the A. M. A. meeting

in St. Louis, Mo., May 22-26, 1922, are hereby instructed to vote for—

- (A) A change of policy and leadership in the A. M. A. pledged to the immediate abolition of the evils mentioned, and constructive protection of medical interests.
- (B) The repeal of multiple representation and plural voting privilege by Section Delegates.
- (C) The election of Trustees for a period of two years; five Trustees to be elected one year, and four the next, to prevent the Trustees from perpetuating oligarchical rule.

BE IT FURTHER RESOLVED that copies of these Resolutions be sent at once to the Official Organ of the Ohio State Medical Society, the Journal of the A. M. A. and the Medical Advisory Committee.

(Signed)

T. A. COPELAND, M.D., Sec'y.

Passed—Jan. 10th, 1922.

*Fairfield County* Medical Society had as its guest on December 20 Dr. F. G. Boudreau of the State Department of Health, who gave an interesting and instructive talk on the Schick test and the use of toxin-antitoxin. Officers for the new year are: president, C. H. Hamilton, Lancaster; vice-president, H. F. Bigony, Millersport; secretary-treasurer, James M. Lantz, Lancaster; censor, J. J. Silbaugh, Lancaster; delegate, W. R. Coleman, Lancaster; legislative committeeman, H. M. Hazelton, Lancaster.—J. M. Lantz, Secretary.

*Washington County* Medical Society has reorganized for the new year with J. W. Donaldson as president; A. G. Sturgiss, secretary; F. S. McGee, vice-president, and F. E. McKim, censor.—News Clipping.

#### NINTH DISTRICT

*Scioto County*—Hempstead Academy of Medicine's meeting on December 13 was featured by the annual banquet, election of officers and an interesting address on "Nephritis" by John Phillips of Cleveland. Officers elected were Ira Martin, president; J. G. Murfin, vice-president, and William Quinn, secretary-treasurer. Tunis Nune-maker is the retiring president and Harry Rapp secretary-treasurer.—News Clipping.

#### TENTH DISTRICT

*Crawford County* Medical Society held its annual banquet and election of officers in the Elks' Grill, Bucyrus, December 28. Eighteen members were present and enjoyed the fine roast chicken banquet. In the balloting which followed C. E. Kimmerline, New Washington, was chosen president; K. H. Barth, New Washington, vice-president and secretary-treasurer; H. H. Hartman, Galion, delegate; W. G. Carlisle, Bucyrus, alternate. R. J. Caton, the retiring president, was given a vote of thanks for the cigarettes which he furnished for the banquet. Dr. Barth succeeds H. S. McClure as secretary-treasurer.

*Pickaway County* Medical Society met in Circleville, January 6, for election of officers for the new year, which resulted as follows: President, A. F. Kaler, New Holland; vice-president, G. R. Gardner, Ashville; treasurer, G. H. Colvill, Circleville; secretary, D. V. Courtright, Circleville; delegate, J. B. May, New Holland; alternate, H. C. Allen, Circleville.—D. V. Courtright, Secretary.

# R A D I U M

## Six Years Experience with Radium Over One Thousand Cases Treated

*Adequate amounts of Radium in both tubes and needles to meet any and all requirements at any time. Patients requiring hospital accommodations are treated at Mt. Carmel, Grant, Protestant, St. Francis or McKinley Hospitals at the option of the physician or surgeon referring the patient.*

*Ethical co-operation assured.*



**BEN. R. KIRKENDALL, M. D.**  
137 E. State St. Columbus, Ohio

## Many Seek Admittance to Correspondence-Study Course Given by State Department of Health for Health Commissioners

One of the very promising features of the Correspondence-Study Course being given by the State Department of Health for health commissioners of Ohio is that a number of such health commissioners not on the first list of prospects have written to the department wishing to know why they have been overlooked and expressing a desire to enroll.

In planning for the course it was decided to start with a group of 25 full time health commissioners, and when once the first group was well started to begin with a second group of similar size and so on until the list of health commissioners was exhausted. Some 40 commissioners were selected arbitrarily from the list of full time men for the first group. It was thought that at least this number would need to be solicited in order to secure 25 registrants. However, nearly every one of the 40 has signed up for the course so that the first group will be considerably larger than was expected. In a short time the call for the second group to enroll will be sent out, and third and fourth groups will follow as rapidly as possible.

Several inquiries relative to the course have been received from outside of the state, but it is not the purpose of those in charge to extend it any more than is absolutely necessary. The amount of work necessary to prepare material and questions and to read and correct answers will be quite heavy enough in addition to the routine work of the staff of the department, so that only individuals actually engaged in health work in Ohio will be considered.

### PLAN OF THE COURSE

The four main subjects to be covered before those who enroll will be called to Columbus for a short institute are (a) public health administration, (b) communicable diseases and epidemiology, (c) sanitary engineering, and (d) public health laboratory work. Public health administration occupied the month of January, communicable diseases and epidemiology will occupy the months of February and March, sanitary engineering, the month of April, and laboratory work, the month of May. The time limits as above are for the first group only.

### PUBLIC HEALTH ADMINISTRATION

Mr. James E. Bauman, assistant director of health, and chief of the Division of Administration, is in charge of this course. It is Mr. Bauman's plan to acquaint the health commissioners with the fundamentals of civics and government before proceeding with public health itself. For this purpose he has sent out an assignment of reading material covering these subjects in abstract form and has given a number of ref-

erences to texts for collateral reading. This is followed by a list of questions to which the registrants are required to submit answers. By adopting this plan Mr. Bauman hopes to show the sources of power of government and the place of health departments in government. Where the health department gets its powers, just what are these powers and how they may be used are some of the fundamental questions Mr. Bauman hopes to answer in the first part of his course.

### ELABORATE QUESTIONNAIRE USED IN CONNECTION WITH THE COURSE

There is a section of the General Code of Ohio which requires boards of health to submit annual and special reports to the State Department of Health. This section is being used for the first time in many years by requiring a very complete report from every health department in the state. For this purpose a questionnaire has been sent out to each health department, comprising some 16 pages of questions with spaces for the answers. These questions cover almost every phase of public health work.

The first part deals with public health administration and includes an account of the education and experience of the health commissioner, the personnel of the board of health, and the training and work of each employe of the health department. Communicable diseases are covered under the general headings of quarantine, isolation, disinfection and fumigation, while a number of the important diseases are listed separately. Sanitation is covered by the general headings surveys, inspections, nuisances, water supplies, sewage disposal, and milk supplies. A portion of the questionnaire is devoted to child hygiene, including prenatal, preschool and medical inspection of school children.

In general, the questionnaire is drawn up in such a way as to elicit definite answers.

The object of this questionnaire are:

1. To secure reports from health departments which will be definite and comparable, and which will give a bird's-eye view of the health work being carried on in Ohio.
2. To secure information about health commissioners and health departments upon which to base the Correspondence-Study Course. Without an intimate knowledge of the strength and weakness of each commissioner it will be impossible for those in charge of the course to prepare material to meet the needs of those who enroll. In a residence course this knowledge may be secured from actual contact with the registrant.
3. To secure definite information concerning the improvement in all branches of health work

# Radium Laboratory

350 East State St., Cor. Grant Ave.  
Columbus, Ohio



Edward Reinert, Ph. G., M. D.  
R. R. Kahle, Ph. B., M. D.

Citz. 9215

Bell, M. 7417

---

Adequate dosage for all conditions.  
Radium Needles for suitable cases.  
We desire to communicate and co-operate with physicians and surgeons interested.



## The Holzer Hospital Gallipolis, Ohio

*Announces the purchase of a sufficient quantity of radium for all therapeutic uses.*

# Radium Service

By the Physicians Radium Association of Chicago (Inc.)

Established to make Radium more available for approved therapeutic purposes in the **Middle States** Has *the* large and complete equipment needed to meet the special requirements of any case in which Radium Therapy is indicated. Radium furnished to physicians, or treatments referred to us, given here, if preferred. Moderate rental fees charged.

Careful consideration will be given inquiries concerning cases in which the use of Radium is indicated.

### BOARD OF DIRECTORS

- William L. Baum, M. D.
- N. Sproat Heaney, M. D.
- Frederick Menge, M. D.
- Thomas J. Watkins, M. D.

## The Physicians Radium Association

1104 Tower Bldg., 6 N. Michigan Ave.  
CHICAGO

Telephones: | Manager:  
Randolph 6897-6898 | William L. Brown, M. D.

in Ohio resulting from the operation of the Hughes-Griswold Law. In a general way it is known that such improvement has taken place but it is necessary to have definite information concerning each district in order to meet the attacks which may be made upon the present health law in the next General Assembly.

It is hoped by those in the State Department that the questionnaire may be a stimulus to health commissioners in the state by directing their attention to various important lines of work which some may not have taken up and by emphasizing the need for careful and accurate record of all health department activities. An unusual feature of the questionnaire is a section on publicity, including material for newspapers, publication and distribution of bulletins and lectures and addresses before various groups.

#### WEAKNESS OF NEWLY ORGANIZED HEALTH DEPARTMENTS

One of the weaknesses of newly organized health departments to which the State Department of Health has directed attention recently is the lack of a well planned publicity campaign. Many commissioners who are carrying on excellent work have absolutely failed to sell their work to the residents of their districts because of this lack. The real cause of this weakness lies in the fact that these health commissioners have for many years been practicing physicians and as such have shunned the newspapers as much as possible.

The State Department of Health is anxious that every local department should have a well planned campaign of publicity, with the two-fold object of acquainting the people with the value of the local organization and the new health law, and of securing from the residents of the district intelligent cooperation in all public health measures. Officials of the State Department point out that such publicity should be systematic in that each newspaper in the district should be given the opportunity of printing health news at regular intervals, that the news stories given out should have a local interest and a human touch, and that educational material should be distributed as widely as possible by means of the newspapers, bulletins, pamphlets and public addresses. Suitable material for news stories is sent out from the State Department at intervals, but local health commissioners are urged to supplement this as frequently as possible from their own experiences.

#### Dr. W. H. Park of New York Lectures in Ohio

On the invitation of Dr. F. G. Boudreau of the State Department of Health and the officers of the Cleveland and Columbus Academies of Medicine, Dr. W. H. Park, director of the Bureau of Laboratories of New York City, made three addresses in Ohio on January 17 and 18. On Jan-

## The Kennedy Radium Laboratory

Established 1914

Dr. Thomas C. Kennedy  
Dr. Will H. Kennedy

For application of radium in malignant and other diseases where indicated.

Co-operation with physicians or surgeons desired.

All inquiries or request for information will receive prompt attention.

709 HUME-MANSUR BLDG.  
INDIANAPOLIS, INDIANA

## Cincinnati Radium Laboratory

22 West Seventh Street

Needle, Tube and Plaque Applicators



CHARLES GOOSMANN, M. D.

X-Ray Treatment with the New High Voltage Equipment Used When Indicated.



**T**HE OHIO MEDICAL PRODUCTS COMPANY has arranged and equipped a scientific laboratory with all modern and necessary machinery for the manufacture of pharmaceuticals and the compounding of individual formulas under the direction and supervision of trained and experienced chemists.

This company is prepared to serve the physician in his particular requirements and seeks the opportunity to assist in the solving of his daily problems by placing at his disposal a complete laboratory service.



1104-1108 N. High St.

Columbus, Ohio

The Management of an Infant's Diet

## Maltose and Dextrins

are the carbohydrates in

**Mellin's Food**

## Protein

in a most available form is a part of the composition of

**Mellin's Food**

## Potassium Bicarbonate

together with the salts in wheat and barley  
are the inorganic constituents of

**Mellin's Food**

Mellin's Food Company, Boston, Mass.

uary 17, he spoke before the Columbus Academy of Medicine on "The Use of Diagnostic Cultures, Toxin-Antitoxin, Antitoxin and the Schick Test in the Prevention of Diphtheria." A number of persons had been given the Schick test by Dr. Boudreau and these were demonstrated to the members of the Academy.

On January 18, Dr. Park addressed a group of health commissioners from the northeastern section of the state in the afternoon and in the evening he spoke before the Cleveland Academy of Medicine. In both addresses he spoke of the newer work in diphtheria control.

### Ohioans Take Public Health Course at Johns Hopkins

Doctors G. E. Robbins of Chillicothe and F. M. Houghtalling of Huron returned to Ohio just before the holidays from six weeks' public health course at Johns Hopkins University. Both found the course valuable and stated that the information acquired would be of great use to them in their work. Dr. A. W. Freeman, formerly commissioner of health of Ohio, was one of the instructors and his lectures were well received by the class which numbered ten, almost all from different parts of the world.

The Public Health School of Johns Hopkins University is supported in part by the International Health Board, a branch of the Rockefeller Foundation. Dr. Freeman is professor of Public Health Administration in the school, and Dr. W. H. Frost, who has spent a number of years in Ohio and is well known to Ohio health officials, is head of the Department of Public Health Administration and Epidemiology. Besides the special course mentioned above, the School of Public Health gives regular courses leading to degrees in public health.

### Schick Test and Use of Toxin-Antitoxin Explained to Medical Societies and Health Commissioners

Showing the interest taken in the newer phases of diphtheria prevention, two medical societies have on their invitation had the Schick test and the use of toxin-antitoxin explained to them by Dr. F. G. Boudreau of the State Department of Health. These were the medical societies of Belmont and Fairfield Counties. Dr. Boudreau has planned for demonstrations and lectures on these subjects before the various district organizations of health commissioners. The next demonstration and lecture will take place at Dayton.

### Cincinnati Ophthalmological Club

Before a meeting of the Cincinnati Ophthalmological Club, in session at Dr. Vail's Hospital, January 2, Dr. Victor Ray read a paper on "Gunshot Wound of Cranium With Ocular Manifestations," in which he stated: "December 12, 1919, a boy of 17 years was shot with a 22-calibre rifle.

X-ray showed the bullet penetrated the skull midline 1 c.m. above the occipital protuberance, splitting into four parts, three within the brain—(1) lodging in the scalp above occipital protuberance; (2) 1½ in. above the sella turcica; (3) 2½ in. above the level of ext. auditory meatus in the median line; (4) 3½ in. above the level of ext. auditory meatus, 2½ in. to the left of the median line.

"Patient was unconscious for several days. The next day after the injury examination showed bilateral ptosis and mydriasis, with sluggish response of pupils to strong light. Fundi normal. From X-ray surmise that fragments passed through the cortical visual area along the calcarine fissure. The marked improvement in vision indicates that the initial blindness was due to hemorrhage which was gradually absorbed. The marked retraction in the various parts of the field grounds indicate actual damage to ocular nerve tissue.

"The ptosis disappeared in one week; in two weeks was able to discern light. August 10, 1920, vision O. D. V 7/200 O. S. V 1/200, with gradual improvement to January 5, 1922, vision O. D. V 20/40 O. S. V 20/40. He is now able to read headlines of newspapers (which would indicate involvement of macula fibers.) On account of restriction of lower fields has difficulty in walking."

W. E. Schenck, M.D., Secretary.

## SAVE MONEY ON YOUR X-RAY SUPPLIES

Get Our Price List and Discounts on Quantities Before You Purchase  
HUNDREDS OF DOCTORS FIND WE SAVE THEM FROM 10% TO 25% ON X-RAY LABORATORY COSTS

### Among the Many Articles Sold Are

- X-RAY PLATES. These brands in stock for quick shipment. PARAGON Brand, for finest work; UNIVERSAL Brand, where price is important.
- X-RAY FILMS. Duplitzed or Dental—all standard sizes. Eastman, Ilford or X-ograph metal backed. Fast or slow emulsion.
- BARIUM SULPHATE. For stomach work. Finest grade. Low price.
- COOLIDGE X-RAY TUBES. 5 Styles. 10 or 30 milliamp.—Radiator (small bulb), or broad, medium or fine focus, large bulb. Lead Glass Shields for Radiator type.
- DEVELOPING TANKS. 4 or 6 compartment stone, will end your dark room troubles. 5 sizes of Enameled Steel Tanks.
- DENTAL FILM MOUNTS. Black or gray cardboard with celluloid window or all celluloid type, one to eleven film openings. Special list and samples on request. Price includes your name and address.
- DEVELOPER CHEMICALS. Metol, Hydroquinone, Hypt, etc.
- INTENSIFYING SCREENS. Patterson TE, or celloid-backed screens. Reduce exposure to one-fourth or less. Double screens for film. All-metal Cassettes.
- LEADED GLOVES AND APRONS. (New type glove, lower priced).
- FILING ENVELOPES with printed X-Ray form. (For used plates). Order direct or through your dealer.

If You Have a Machine Get Your Name on Our Mailing List



**GEO. W. BRADY & CO**  
771 So. Western Ave.,  
Chicago



TRADE MARK

Has decidedly more prompt pain, inflammation and congestion relieving properties than the Salicylates, simple or complex.

Information, Literature and Ample Trial Quantity from



Besides showing a remarkable degree of freedom from heart-depressant, kidney irritant, constipating and cumulative by-effects.

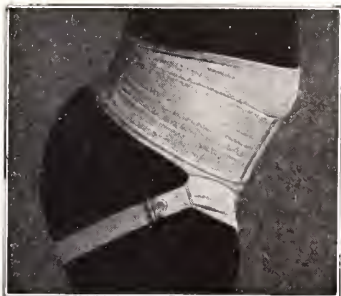
Schering & Glatz, Inc.,  
150 Maiden Lane, New York.

# RHEUMATISM

## THE STORM BINDER AND ABDOMINAL SUPPORTER

PATENTED

### For Men, Women, Children and Babies



Modifications for Hernia, Relaxed Sacroiliac Articulations, Floating Kidney, High and Low Operations, Ptosis, Pregnancy, :: Pertussis, Obesity, Etc. ::

Send for new folder and testimonials of physicians. General mail orders filled at Philadelphia only—within twenty-four hours

KATHERINE L. STORM, M. D., 1701 Diamond Street - - - Philadelphia

Do you believe that the fitting of trusses is a part of the Practice of Medicine? If so, send your patients needing trusses to

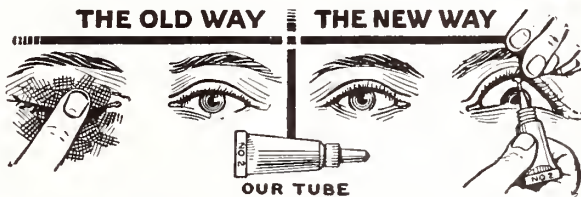
### The Columbus Truss & Optical Co.

PARKER W. PHENEGER, M. D., Mgr.

We Specialize in Elastic Stockings Made to Measure Office and Fitting Rooms

42 W. Broad Street Columbus, Ohio

### THE OLD WAY | THE NEW WAY



### Better Ocular Therapeutics

Can be obtained by the use of "M-E-S-Co" brand of Ophthalmic Ointments. Reasons: Selected Chemicals, Thorough Trituration, Perfect Incorporation, Sterilized Tubes, Billed and Strained Petroleum, Excellent Service, No Waste, No Dirty Salve Jar, Right Prices. Write for complete information  
MANHATTAN EYE SALVE CO., Inc.  
Louisville, Ky.

## Encouraging Returns From Tuberculosis Seal Sale

The 1921 tuberculosis seal sale conducted just before Christmas under the auspices of the Ohio Public Health Association again demonstrated the interest which the public has in the state and nation-wide effort being made to combat tuberculosis through education.

The Christmas seals made their appearance in every corner of the state and back of them was a force of voluntary workers explaining their mission and spreading the gospel of good health. This is one solicitation that meets with almost universal support. Preliminary reports indicate that the financial return from the sale will be almost equal to the sale of the previous year, notwithstanding the financial conditions of the country.

With the support given, those charged with the year around work of promoting good health will feel an added stimulus in making the work for the coming year more effective than ever.

The schools of the state showed an unusual interest in the seal sale and it is the plan of the voluntary health organizations to devote greater efforts during the coming year to the educational side of this work. The Ohio Public Health Association has prepared a course of study in hygiene which has been published by the State Department of Education and is being introduced in the schools of Ohio. Many of the rural schools are purchasing scales for weighing children with their Christmas seal money and not a few are planning nursing service in connection with the educational work.

Port Clinton, with only about 4,000 population, sold more than \$1,000 of the little health stamps just before Christmas and within less than a month had employed a school nurse with the funds, with the idea of having the Board of Education finance the work after July 1.

## Ohio-Michigan Fellows A. C. S. to Hold Joint Meetings

The Ohio section of the American College of Surgeons will join with the Michigan fellows of the college in a joint clinical and scientific meeting to be held in Cincinnati, probably December 8 and 9, 1922. These joint meetings of the Ohio and Michigan fellows will be annual events in the future, superseding separate meetings of the Ohio and Michigan sections which have previously been held in the spring. As in the past, there will be two days of clinics, scientific, hospital and public meetings. About one month prior to the December meeting invitations will be sent to all fellows of the College resident of the two states. The Ohio executive committee consists of Dr. Charles S. Hamilton, Columbus; Dr. Walter H. Snyder, Toledo, and Dr. J. Edward Perring, Cincinnati.

## Dares Haemoglobinometer

Candle lighted, or Electric lighted.  
We are accepting orders for prompt delivery.  
Write for booklet and prices.

## Tycos Office Sphygmomanometer

With 6 inch silvered dial.  
A distinct advance over the pocket type.  
Immediate delivery. Price \$37.50.

Surgical Instruments—Dressings,  
Pharmaceuticals, Biologicals

Your orders will receive prompt attention—  
"You will do better in Toledo."

## The Rupp and Bowman Co.

319 Superior St.  
TOLEDO, OHIO

## Prescribe

# "Horlick's"

the Original and Genuine

Endorsed by the medical profession, who for over a third of a century have proven its reliability in the feeding of infants, nursing mothers, convalescents, and the aged.

*Samples prepaid upon request.*

## Horlick's Malted Milk Co.

Racine, Wisconsin

# Artificial Pneumothorax

in  
Pulmonary Tuberculosis

Progressive cases of pulmonary tuberculosis, especially when only one lung is actively involved, respond very well to compression of the active lung with nitrogen gas.

Treatments given at the patients home or in the office, under local anesthesia.

*Inquiries invited.*

**LOUIS MARK, M. D.**  
327 East State Street  
Columbus, Ohio



**Rent This TYCOS  
Nine Months  
Then It's Yours**

**\$2.50 Monthly Brings It**

The new 1922 model celebrated Blood Pressure Apparatus, Dr. Rogers' Sphygmomanometer is very accurately made and registers both systolic and diastolic pressures. The cash price of the Tycos everywhere is \$25.00. We will send it to you on receipt of only \$2.50 and, if after ten days' trial, you wish to keep it, simply pay the balance—\$22.50—the same as rent—in nine monthly payments of \$2.50 each. You pay only the cash price (no interest—no extras) and have nine full months in which to make it pay for itself.

**Leather Case and Booklet Free**

With every Tycos is included **Free** a genuine morocco leather case. You can put your Tycos into this case and carry the entire instrument in your pocket. Besides the case, we give you **Free**, a 44-page booklet which explains accurately, thoroughly and plainly just how and why the Sphygmomanometer is essential to the intelligent practice of medicine.

**Ten Days' Trial—Money Back**

Send today. Just sign and mail the coupon below—enclose \$2.50 for first month's rent and we will immediately send you the instrument and you will only have to pay \$2.50 each month until the cash price, \$25.00, is paid in full. Send that \$2.50 today. Remember, we give ten days' trial and return your money if you are not satisfied. The price for all cash with order is just the same, \$25.00.

-----  
**SIGN AND MAIL COUPON**  
-----  
A. S. ALOE CO, Factory Distributors, 570 Olive St., St. Louis, Mo.  
I enclose first payment, \$2.50, for which send me Dr. Rogers' TYCOS and Outfit on ten days' trial as per your offer. I agree that the title is to remain in you until paid in full.

Name .....

Address .....

*Infant Feeding*



*Diet Materials*

**IF THE FORMULA IS WRONG SO WILL THE BABY BE**

**Consider These Four Types of Bottle Babies**

- |                                 |                              |
|---------------------------------|------------------------------|
| <b>Baby A</b> is a WELL baby.   | <b>Baby B</b> does not GAIN. |
| <b>Baby C</b> has CONSTIPATION. | <b>Baby D</b> has DIARRHOEA  |

Should All Four Babies Be Fed Alike? YOUR Answer is NO.

They are DIFFERENT, and therefore need a different formula. That is why MEAD'S DEXTRIN-MALTOSE is not supplied to the laity with directions printed on the label. When mothers continue to make the mistake of feeding according to stock formulas which are not tolerated by their babies, digestive disturbances continue—even become worse. The DOCTOR'S HEAD WORK, plus "D-M," COW'S MILK and WATER means gratifying results. Samples, analyses and interesting literature on request.

**The Mead Johnson Policy**

Mead's Infant Diet Materials are advertised only to physicians. No feeding directions accompany trade packages. Information regarding their use reaches the mother only by written instructions from her doctor on his own private prescription blank.

**MEAD JOHNSON & COMPANY**  
EVANSVILLE INDIANA, U.S.A.

## Small Advertisements

Graduate nurse desires position as companion, nurse, for elderly or middle aged lady. Have had traveling experience. Address S. L. B., 322 South State Street, Girard, Ohio.

*Location Wanted*—Prefer unopposed, with first-class high school, good roads and on railroad; will consider any location, with or without real estate; must stand the very closest investigation. A proposition. Address M. D., care *The Journal*.

*Location*—Office for rent in a town of 1,200 with only two doctors. No better location in state. Good roads, good schools and three churches. Anther doctor needed badly. Address A. F., care *The Journal*.

*Wanted*—Position as superintendent, assistant superintendent or resident physician of tuberculosis sanatorium or general hospital in Ohio. Experienced. Reply J. B., *The Journal*.

*For Sale*—In Dayton, Ohio, one of best locations in city with offices and residence combined. Will sell for value of property alone. If interested investigate promptly as I am going to quit. Address B. G., care *The Journal*.

*Wanted*—Salaried appointment: industrial or mine contract. Class A school graduate; hospital training; Protestant; married; references. Address 100, care *The Journal*.

*Wanted*—Assistantship with a general surgeon by Ohio State University graduate of personality and resourcefulness. Gentle; aged 29; married; internship; Mason; best of references. Address 222, care *The Journal*.

*Physician Wanted*—To locate in the town of Seaman, Adams County. Large territory for practice because of deaths of physicians at Cherry Fort and Winchester. Write Dr. A. N. Vandeman, Spring Valley, Ohio, former resident of Seaman.

*For Sale*—Splendid practice, southern Ohio. Lovely modern home, equipped office, waiting room; town of 5,000 people; thickly settled farming community. Low price. Cause of selling taking up surgery. Address W. S. J., care *The Journal*.

*For Sale or Lease*—The Gardner Mineral Bath and Sanitarium, Stryker, Ohio. Unlimited possibilities, mineral waters and natural gas. Curative powers of these waters well known. A good opening for good diagnosis and surgery. Will deal on income basis. J. A. Gardner, Manager.

Have you paid your 1922 membership dues? They were due January 1st.

# To Prevent Hydrophobia

Use

## Pasteur Treatment

With a

Potent Product and Prompt Service  
PRICE \$25.00

Order from

James McIlvaine Phillips, M. D.

2057 N. High St.

Columbus,

Ohio

LUETIN TEST  
URINE  
BLOOD  
SPUTUM  
EFFUSIONS  
STOMACH  
CONTENTS  
WASSERMANN &  
NOGUCHI  
REACTIONS  
GONORRHEAL  
COMPLEMENT  
FIXATION TEST  
BLOOD CHEMISTRY

AUTOGENOUS  
VACCINES  
FAECES  
GENITO-URINARY  
SURGICAL and  
GYNECOLOGICAL  
PATHOLOGY  
DARK FIELD  
ILLUMINATING  
FOR  
SPIROCHETA  
PALLIDA  
MEDICO-LEGAL  
POST MORTEM

# LABORATORY

Clinical and Pathological

COLUMBUS, OHIO 370 East Town Street

J. J. Coons, B. S., M. D.

H. M. Brundage, M. D.

Dorris Coss, B. S., M. S.

Coral Walters, B. A.

PROMPT SERVICE.

Immediate Report on Frozen Sections of all Tumors.

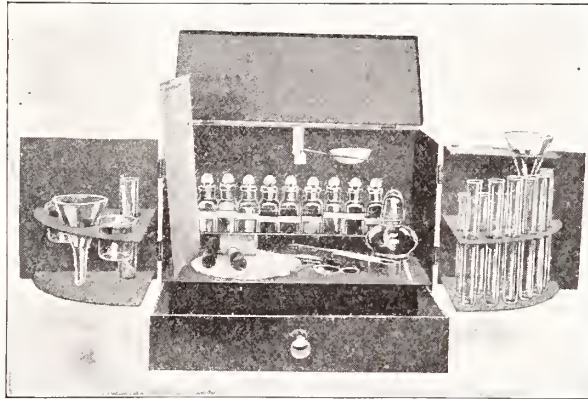
# MODERN AIDS IN URINALYSIS

Very often the Physician in general practice is handicapped by lack of suitable equipment for making the simpler tests in laboratory diagnosis. We offer at reasonable prices three modern aids in office laboratory diagnosis at reasonable prices.

## THE NEW URINARY TEST CABINET NO MORE WOOD—IT'S ALL STEEL NOW

### AN EXCLUSIVE BETZCO PRODUCT

The new Betzco Urinary Test Cabinet is quite complete for office urinalysis. Although wood urinalysis outfits are to be found on the market, this outfit with its steel cabinet is an exclusive Betzco product and decidedly superior to outfits with wood cabinets. It is cleaner, sturdier, and more compact. It is finished in smooth olive green enamel that is washable. All equipment folds into it readily. The top of the cabinet lifts up; the front is divided into two swinging doors and there is a large drawer below.



STEEL URINARY TEST CABINET

### COMPLETE WITH FULL DIRECTIONS

Each test cabinet comes complete with full directions and equipment as follows: Nine reagents in glass stoppered bottles; alcohol lamp; porcelain evaporating dish; two funnels; two beakers; assorted test tubes; urinometer; urinometer jar; wood test tube holder; watch glasses; glass stirring rod; litmus paper and graduated pipette. With this outfit the Physician is able to make the simpler examinations of urine in his own office, observing the exact reactions which take place.

2CJ219. Steel Urinary Test Cabinet .....\$11.00

## Speedy Electrical Centrifuges

WITH PERFECT SPEED CONTROLS

Much time and trouble have been involved in perfecting our two and four arm electric centrifuges. In offering the finished product to the profession, it is with the firm conviction that both types will prove highly efficient and thoroughly satisfactory for office and general laboratory work.

### FOUR ARM ELECTRIC CENTRIFUGE

This equipment is supplied with a universal motor, operating on either direct or alternating current. The motor is mounted in a dust proof casing with heavy cast base provided with lugs for fastening to laboratory table or sink. The rheostat is scientifically constructed and worked out to give the operator perfect control of the speed. When in service on direct current, this centrifuge has a speed of from 900 to 2,400 RPM; when in service on alternating current, it has a speed of from 800 to 1,900 RPM.

The equipment for the four arm centrifuge includes four aluminum shields, two plain glass 15 CC. (Mil.) tapered sediment tubes and two 15 CC. (Mil.) graduated percentage tubes and special removable four arm head.

9CJ4216. Four Arm Electric Centrifuge, for 110 volt direct or alternating current ..... **\$30.00**  
Motor wired for service on 32, 40 or 220 volt current, extra..... 5.00

### TWO ARM ELECTRIC CENTRIFUGE

This equipment is constructed similarly to the four arm machine, being fully as efficient and embodying the same devices for control. It is built with a slightly smaller motor of sufficient capacity to carry the two arm head at the same speed as the larger motor used in the four arm equipment. It is equipped with two aluminum tube shields, one 15 CC. (Mil.) plain glass sediment tube and one 15 CC. (Mil.) graduated percentage tube.

9CJ4215. Two Arm Electric Centrifuge, for 110-120 volt direct or alternating current, complete..... **\$25.00**  
Motor wired for service on 32, 40 or 220 volt current, extra... 5.00



# FRANK S. BETZ CO.

CHICAGO  
30 E. RANDOLPH ST.

HAMMOND, IND.

NEW YORK  
6-8 W. 48TH ST.

## Pioneer Health Commissioner Retires; Other Changes in Personnel of Health Departments

Mr. Amos Beardsley of Findlay, the oldest health commissioner in the state in point of service, has resigned and will retire from active duty as soon as his successor is appointed. Mr. Beardsley has acted as health officer and health commissioner of Findlay for nearly 33 years. The main characteristic of his tenure of office is not, however, its length but its uniform high character and excellence. His acquaintance with health officials all over the state is very wide and many will regret the passing of this pioneer figure from active health work.

Mr. Beardsley represents the best of the lay health officials now rapidly disappearing. His long experience enabled him to overcome the lack of medical training which proves such a handicap to the few remaining laymen now acting as health commissioners of cities. His energy, industry, integrity and good fellowship would have gained him success in almost any line of endeavor, but he chose to remain in health work although he knew that his only reward would be his own satisfaction in the knowledge of work well done. The cooperation he secured from the members of the medical profession in his district showed the high regard in which he was held by all physicians.

So well was Mr. Beardsley's work done that representatives of the State Department of Health have made practically no visits to Findlay for a number of years except on work that could not be done by a local health commissioner. As soon as word of his resignation reached Columbus a letter of appreciation for his services was sent him carrying the best wishes and gratitude of the State Department. His retirement leaves only 14 lay health commissioners in the state. \* \* \*

Besides the retirement of Mr. Beardsley as health commissioner of Findlay, a number of changes have taken place in other health districts. Dr. F. D. Postle of London is now full time health commissioner of Madison County general health district, a district which had no health commissioner for nearly two years. Dr. D. M. Criswell of Coshocton, formerly part time health commissioner of Coshocton County, accepted a full time contract beginning with the first of the year. Dr. W. H. Knauss, formerly health officer of Newark, is again at the head of that department on a part time basis, succeeding Dr. W. H. Morgan, resigned. Dr. O. F. Lowry of Cambridge has resigned, and his successor is William Lewis, a layman. Dr. S. A. McCullough, full time health commissioner of Meigs County, has retired and has been succeeded by Dr. J. A. Miller of Pomeroy on a part time basis. Dr. F. W. Murrey of Caldwell, health commissioner of Noble County, retired from service on December 31, 1921. His successor has

## Every Physician

Is Interested In

## Physician's Supplies

In dispensing, he requires a great variety in his office—in prescribing he uses the **PRESCRIPTION DEPARTMENT** that is **UP-TO-DATE**.

If you are unacquainted with our plan of handling the physician's requirements, you may profit by giving us an opportunity to show you what we can do.

## The Wendt Bristol Co.

47 South High St., Columbus, Ohio

**FINE PHARMACEUTICAL SPECIALTIES**

## Our Business

is confined exclusively to the manufacture of Strictly High Grade Medicines and Pharmaceuticals for *Physicians, Dispensing and Prescribing.*



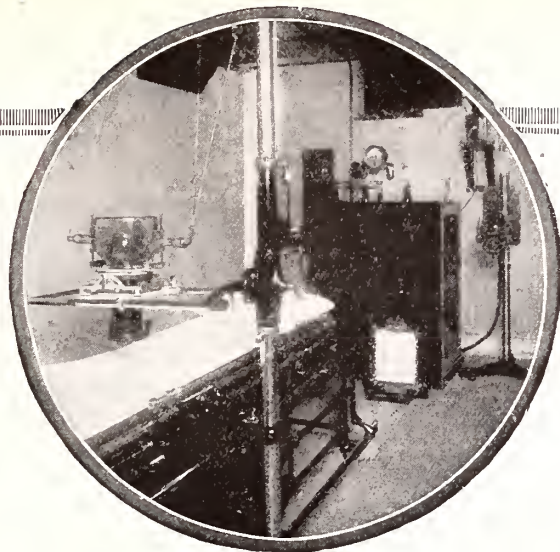
Our Offices and Laboratories are now located in our New Building, 330-336 Oak Street, one square north of Grant Hospital.

NO GOODS SOLD AT RETAIL

**The COLUMBUS PHARMACAL Co.**

COLUMBUS, OHIO





## WILL THE MANUFACTURER OF YOUR X-RAY APPARATUS STAY IN BUSINESS?

**T**HE physician who buys an X-Ray equipment buys not only to meet present but future needs. Will the manufacturer who delivers his equipment be in business five, ten years hence? If not, who is to supply parts? Who is to make repairs?

The Victor X-Ray Corporation is as old as the X-Ray. Its past is a sufficient guarantee of its future. It is the oldest manufacturer of X-Ray equipment in the United States. It has maintained from the very beginning a Service organization whose duty it is to respond to the call of Victor users when their equipment needs attention—a Service organization which has been systemati-

cally expanded until now it includes the principal cities of the United States. It occupies a dominant position, because it devoted its energies not only to manufacturing the best possible X-Ray equipment, but also to improving that equipment through research.

The Victor X-Ray Corporation is a permanent institution. In dealing with it the physician has the assurance that not only is he purchasing the best apparatus that scientific research has been able to produce at the time, but that it will be kept in operative condition by a manufacturing company that will continue to exist and to meet his demand for repair and maintenance service.

**VICTOR X-RAY CORPORATION, Jackson Blvd. at Robey St., Chicago**

*Territorial Sales and Service Stations:*

Columbus: J. L. Taylor, 145 E. State St.



not been appointed. The board of health of that county is desirous of getting in touch with a young medical man looking for a location to practice, as the present budget will not permit the employment of a full time health commissioner.

Dr. R. M. Schwartz, health commissioner of Columbiana County and of Salem has presented his resignation to the two boards of health but his successor has not been appointed as yet.

Dr. Thomas W. Rhodes of Chicago has been appointed health commissioner of East Liverpool succeeding Dr. Charles A. Bailey of that city. Dr. Rhodes will devote part of his time to the venereal clinic recently established there and the remainder of his time to the duties of the health department. This arrangement will provide East Liverpool with the services of a practically full time health commissioner without adding unduly to the burden of the present health budget.

Dr. H. T. Thornburgh of Columbus succeeds Dr. Bernard LeRoy of Warren as health commissioner of Trumbull County general health district. Dr. Thornburgh was at one time connected with Toledo State Hospital in a medical capacity. Following that he was appointed to the position of medical supervisor with the State Department of Health and was there promoted to the position of chief of the Bureau of Local Health Organization. Prior to accepting the position in Trumbull County he had been with the State Department of Health for a little more than two years.

On Monday, January 9, following a discussion of methods of health organization with Dr. F. G. Boudreau, the city manager and city commission of Sandusky met with the board of health of Erie County and agreed to appoint Dr. F. M. Houghtalling as health commissioner of Sandusky for that part of his time not already occupied by his duties as health commissioner of Erie County. For years Sandusky has had a part time health commissioner, and while the caliber of men serving her in this capacity has been very high, the health problems have been too difficult to handle by any physician not devoting his whole time, thought and energy to health work.

Under the present arrangement and with a budget only slightly larger than before, Sandusky will be served by a commissioner who devotes his whole time to health work and who will have the whole situation in hand, county as well as city. Voluntary health organizations in Erie County are gratified with the change and the promise of progress it forecasts.

Besides these changes, the 1920 census provides for fourteen new city health districts. In some cases these new districts may unite with the counties in which they are located by employing the same commissioners. No information is at hand at this writing concerning definite appointments, however.

**M**ORE people die from pneumonia than any other disease.

Approximately 25 out of every 100 cases end fatally. Dr. Gustav Goldman has demonstrated that at least twenty of these twenty-five deaths may be prevented by employing Bacterial Vaccines.

Why delay and chance a fatal termination?

*Dr. Gustav Goldman's article appeared in American Medicine, March, 1921*

Bacteriological Laboratories of  
**G. H. SHERMAN, M. D.**  
DETROIT, U. S. A.

## Fort Wayne Medical Laboratory Inc.

ESTABLISHED 1905

CLINICAL AND X-RAY

DR. BONNELLE W. RHAMY, Director

Bacteriological, Serological, Pathological, Toxicological and Chemical examinations of all kinds given prompt, personal attention.

Full instructions, fee table, sterile containers, Keidel and culture tubes sent on request.

As early diagnosis is the important factor in successful treatment, it will pay to utilize dependable laboratory diagnosis early and often.

Wassermann Tests (Daily except Sunday).....\$5.00  
(Send 3-5 cc. of blood)

On every blood I use two antigens and run two tests; the regular method and the latest and best, the ice box method which is especially valuable when testing for cure, and in cases giving doubtful reactions. This insures an accurate report.

Gonorrhoea Complement Fixation Test.....\$5.00  
(Send 3-5 cc. of blood)

This serologic test is the very best means of determining the presence or absence (cure) of systemic Gonorrhoeal infection.

Tuberculosis Complement Fixation Test.....\$ 5.00

Blood Chemistry—Sugar—Urea—Nitrogen, etc.,

Each..... 5.00

Spinal Fluid Gold Curve..... 5.00

Blood Typing for Transfusion..... 5.00

Blood Cultures..... 5.00

Tissue Diagnosis..... 5.00

Basal Metabolism Estimation..... 10.00

### AUTOGENOUS VACCINES

Bacteriologic Diagnosis and cultures.....\$ 2.00

Twenty Doses Vaccine in 2 cc. vials..... 5.00

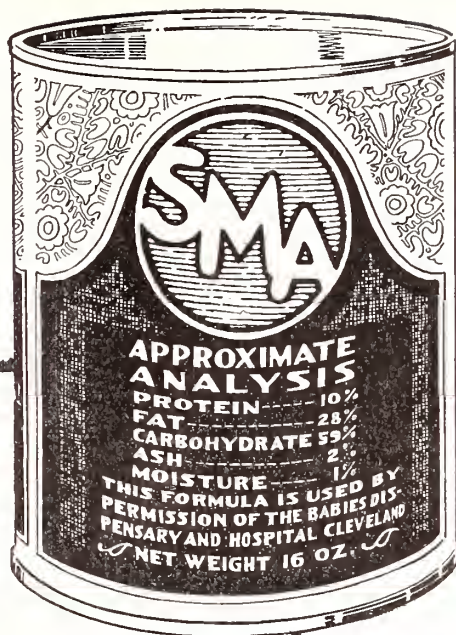
### COMPLETE X-RAY DEPARTMENT

Diagnostic and Therapeutic

*Special Delivery Postage Insures Prompt Delivery*

327 W. Berry St. Ft. Wayne, Indiana  
1 Block South from Interurban Station.

*To be used only  
under direction  
of a physician*



## A Food to Keep Babies Well

*Adapted to Mother's Milk*

S. M. A. is a finished product which may be used by the physician with every assurance of success. In prescribing S. M. A. he is not conducting an experiment in baby feeding, but is using a food which has been fed constantly in the dispensary for six years, and by scores of physicians in general practice for two years.

S. M. A. is a food to keep babies well. It is recommended to family physicians because it is a simple and satisfactory food for babies who are deprived of Mother's milk or who require food in addition to what the mother can supply; because it contains the required food elements; because it needs only

the addition of warm boiled water to prepare it whether for the month-old baby or for the baby a year old; because clinical records of S. M. A. feeding indicate absence of spasmophilia and because it makes happy, solid, breast-fed-looking infants.

It is easy to understand how S. M. A. rouses the parents' enthusiasm, and adds to the prestige of the physician.

Please write for the S. M. A. bulletin for physicians. It gives the history of S. M. A., and contains complete directions for its use.

\*H. J. Gerstenberger et al. I. Studies in the Adaptation of an Artificial Food to Human Milk. Am. J. Dis. Child. Vol. X, Pg. 249-265.

H. J. Gerstenberger et al. II. Studies in the Adaptation of an Artificial Food to Human Milk. (A Report of Three Years' Clinical Experience with the Feeding of S. M. A.) Am. J. Dis. Child. Vol. XVII, Pg. 1.

**THE LABORATORY PRODUCTS COMPANY**  
3829 CEDAR AVENUE CLEVELAND, OHIO  
DISTRIBUTING AGENTS

CLEVELAND . . . The Telling-Belle Vernon Company

AKRON . . . The Akron Pure Milk Co.

## CORRECTED ROLL OF DISTRICT AND COUNTY SOCIETIES

Societies	President	Secretary	
<b>First District</b>	G. D. Lummis, Middletown.....	Eric Twachtman, Cincinnati.....	
Adams.....	G. E. Neal, Manchester.....	O. T. Sproull, West Union.....	3d Wednesday in April, June, Aug., Oct.
Brown.....	R. B. Hannah, Georgetown.....	Geo. P. Tyler, Jr., Ripley.....	4th Wednesday in Feb., May, and Nov.
Butler.....	James G. Grafft, Trenton.....	F. M. Fitton, Hamilton.....	2d Wednesday, monthly
Clermont.....	T. A. Mitchell, Owensville.....	O. C. Davison, Bethel.....	3d Wednesday, monthly
Clinton.....	F. A. Peele, Wilmington.....	Elizabeth Shrieves, Wilmington.....	2d Thursday, monthly
Fayette.....	H. L. Stitt, Wash'gton C. H.....	Lucy Pine, Washington, C. H.....	1st Thurs., March, June, Sept. Dec.
Hamilton.....	Gordon McKim, Cincinnati.....	Ralph Carothers, Cincinnati.....	Monday evening of each week
Highland.....	J. C. Bohl, Hillsboro.....	H. H. Lowe, Leesburg.....	1st Wednesday in Jan., April, July, and Oct.
Warren.....	T. E. Keelor, Lebanon.....	Herschel Fisher, Lebanon.....	1st Tuesday in May, June, July, Sept., Oct. and Nov.
<b>Second District</b>	C. I. Stephen, Ansonia.....	D. B. Conklin, Dayton.....	Dayton
Champaign.....	David H. Moore, Urbana.....	J. F. Shultz, Urbana.....	2d Thursday, monthly
Clark.....	William Ultes, Springfield.....	R. R. Richison, Springfield.....	2d and 4th Monday each month
Darke.....	G. W. Burnett, Greenville.....	A. F. Sarver, Greenville.....	2d Thursday each month
Greene.....	W. A. Galloway, Xenia.....	H. C. Messenger, Xenia.....	1st Thursday each month except July and August
Miami.....	H. E. Shilling, Troy.....	G. J. Hance, Troy.....	1st Thursday each month
Montgomery.....	C. N. Chrisman, Dayton.....	A. W. Carley, Dayton.....	1st and 3d Friday each month
Preble.....	S. P. Carter, W. Manchester.....	H. Z. Silver, Eaton.....	3d Thursday, monthly
Shelby.....	V. W. LeMaster, Sidney.....	C. C. Hussey, Sidney.....	1st Thursday, monthly
<b>Third District</b>	C. H. Clark, Lima.....	Norris Gillette, Toledo.....	Lima
Allen.....	A. F. Basinger, Lima.....	A. N. Wiseley, Lima.....	1st and 3d Tuesdays
Auglaize.....	W. S. Stuckey, Wapakoneta.....	C. L. Mueller, Wapakoneta.....	3d Thursday, monthly
Hancock.....	W. J. Zopfi, Findlay.....	Nelia B. Kennedy, Findlay.....	1st Wednesday, monthly
Hardin.....	D. H. Bowman, Kenton.....	W. A. Belt, Kenton.....	1st Thursday, monthly
Logan.....	C. K. Startzman, Bellefontaine.....	M. L. Pratt, Bellefontaine.....	1st Friday, monthly
Marion.....	R. C. M. Lewis, Marion.....	D. O. Weeks, Marion.....	1st Tuesday, monthly
Mercer.....	J. E. Hattery, Celina.....	D. H. Richardson, Celina.....	2d Tuesday, monthly
Seneca.....	V. L. Magers, Tiffin.....	E. H. Porter, Tiffin.....	3d Thursday, monthly
Van Wert.....	L. A. Ellis, Van Wert.....	C. R. Keyser, Van Wert.....	2d and 4th Monday, monthly
Wyandot.....	Frederick Kenan, U. Sandusky.....	B. A. Moloney, U. Sandusky.....	1st Thursday, monthly
<b>Fourth District (With Third District in Northwestern Ohio District)</b>			
Defiance.....	W. S. Powell, Defiance.....	F. W. Watkins, Defiance.....	2d Tuesday, Feb., April, June, Aug., Oct., Dec.
Fulton.....	C. F. Murbach, Archbold.....	Geo. McGuffin, Pettisville.....	Semi-monthly
Henry.....	I. H. Boesel, McClure.....	C. H. Skeen, Napoleon.....	3d Wednesday, monthly
Lucas.....	L. A. Levison, Toledo.....	J. F. Wright, Toledo.....	Friday, each week
Ottawa.....	A. A. Brindley, Pt. Clinton.....	S. T. Dromgold, Elmore.....	2d Thursday, monthly
Paulding.....	F. F. DeMuth, Cecil.....	R. J. Dillery, Paulding.....	3d Wednesday, monthly
Putnam.....	Frank Light, Ottawa.....	J. A. Harold, Ottawa.....	1st Thursday, monthly
Sandusky.....	M. O. Phillips, Fremont.....	C. I. Kuntz, Fremont.....	last Thursday, monthly
Williams.....	D. S. Burns, Bryan.....	F. E. Solier, Bryan.....	2d Thursday, each month
Wood.....	J. W. Rae, Bowling Green.....	F. V. Boyle, Bowling Green.....	2d Thursday, monthly
<b>Fifth District (No District Society)</b>			
Ashtabula.....	R. B. Wynkoop, Ashtabula.....	J. J. Hogan, Ashtabula.....	2nd Tuesday, monthly
Cuyahoga.....	John Phillips, Cleveland.....	Lester Taylor, Cleveland.....	Every Friday evening
Erie.....	F. F. Lehman, Sandusky.....	H. N. Sarchett, Sandusky.....	Last Thursday, monthly
Geauga.....	J. A. Heeley, Parkman.....	Isa Teed-Cramton, Burton.....	2d Thursday, Jan., March, July and Sept.
Huron.....	R. L. Morse, Norwalk.....	J. D. Coupland, Norwalk.....	2d Thursday, monthly
Lake.....	V. H. Tuttle, Madison.....	West Montgomery, Mentor.....	1st Monday, monthly

Societies	President	Secretary	
Lorain.....	R. D. A. Gunn, Oberlin.....	W. E. Hart, Elyria.....	2d Tuesday, monthly
Medina.....	M. F. Miller, Wadsworth.....	H. P. H. Robinson, Medina.....	3d Wednesday
Trumbull.....	R. R. Rogers, Warren.....	John D. Knox, Warren.....	3d Thursday monthly except June, July and August
<b>Sixth District..</b>			
Ashland.....	G. B. Fuller, Loudonville.....	L. G. Sheets, Ashland.....	1st Tuesday, Jan., March, May, July, Sept., Nov.
Holmes.....	M. B. Pomerene, Millersburg.....	A. T. Cole, Millersburg.....	1st Tuesday, monthly
Mahoning.....	W. E. Ranz, Youngstown.....	H. E. Patrick, Youngstown.....	3d Tuesday, monthly
Portage.....	G. J. Waggoner, Ravenna.....	E. J. Widdecombe, Kent.....	1st Wednesday, monthly
Richland.....	Chas. R. Keller, Mansfield.....	J. S. Hattery, Mansfield.....	3d Thursday, monthly
Stark.....	D. F. Banker, Canton.....	George S. Hackett, Canton.....	3rd Tuesday, Jan., March, May, July, Sept., Nov.
Summit.....	R. H. McKay, Akron.....	A. S. McCormick, Akron.....	1st Tuesday, monthly
Wayne.....	O. P. Ulrich, Orrville.....	O. G. Grady, Orrville.....	2d Tuesday, Jan., April, July, Oct.
<b>Seventh District</b>			
Belmont.....	F. S. Wright, Bellaire.....	J. S. McClellan, Bellaire.....	2d Wednesday, monthly, at 1:45 p. m.
Carroll.....			
Columbiana.....	P. C. Hartford, E. Palestine.....	C. R. Larkin, East Liverpool.....	2d Tuesday, monthly, alter- nately, in Lisbon, Salem and E. Liverpool
Coshocton.....	D. Edmund Cone, Coshocton.....	J. D. Lower, Coshocton.....	4th Thursday, April, June, Sept., Dec.
Harison.....	H. I. Heavilin, Cadiz.....	R. P. Rusk, Cadiz.....	1st Wednesday, monthly
Jefferson.....	B. F. Collins, Steubenville.....	G. F. Gourley, Steubenville.....	2d Tuesday, monthly
Monroe.....	G. W. Steward, Woodsfield.....	J. H. Pugh, Woodsfield.....	2d Wednesday, monthly
Tuscarawas.....	E. C. Davis, Dover.....	P. J. Alspaugh, N. Philadelphia.....	2nd Thursday, monthly
<b>Eighth District</b>			
D. J. Matthews, Zanesville.....	E. M. Brown, Zanesville.....		
Athens.....	J. F. Weber, Amesville.....	T. A. Copeland, Athens.....	1st Tuesday, monthly
Fairfield.....	C. H. Hamilton, Lancaster.....	J. M. Lantz, Lancaster.....	2d and 4th Tuesday, monthly
Guernsey.....	C. A. Moore, Cambridge.....	F. M. Mitchell, Cambridge.....	1st and 3d Tuesday each month
Licking.....	Carl Evans, Newark.....	W. E. Shrontz, Newark.....	Last Thursday, monthly
Morgan.....	C. V. Davis, Pennsville.....	D. G. Ralston, McConnelsville.....	1st Wednesday, monthly
Muskingum.....	C. P. Sellers, Zanesville.....	Beatrice Hagen, Zanesville.....	1st Wednesday, monthly
Noble.....	G. H. Zimmerman, Belle Valley.....	J. L. Gray, Caldwell.....	1st Thursday, monthly
Perry.....	H. W. Shaw, Junction City.....	C. B. McDougal, N. Lexington.....	3d Thursday, monthly
Washington.....	E. W. Hill, Jr., Marietta.....	A. G. Sturgiss, Marietta.....	2d Wednesday, monthly
<b>Ninth District..</b>			
S. B. McKerrihan, Portsmouth.....	J. G. Murfin, Portsmouth.....		Portsmouth
Gallia.....	C. G. Parker, Gallipolis.....	Milo Wilson, Gallipolis.....	1st Wednesday, monthly
Hocking.....	O. V. Donaldson, Gore.....	M. H. Cherrington, Logan.....	
Jackson.....	A. G. Ray, Jackson.....	R. W. Caldwell, Jackson.....	1st Tuesday, monthly
Lawrence.....	O. H. Henninger, Ironton.....	E. E. Ellsworth, Ironton.....	1st Thursday, monthly
Meigs.....	P. A. Jividen, Rutland.....	L. A. Thomas, Middleport.....	1st Wednesday, April, July and Oct.
Pike.....	F. C. Metzger, Waverly.....	L. E. Wills, Waverly.....	1st Monday, monthly
Scioto.....	Ira Martin, Portsmouth.....	W. A. Quinn, Portsmouth.....	2d Monday, monthly
Vinton.....	O. S. Cox, McArthur.....	H. S. James, McArthur.....	4th Wednesday, monthly
<b>Tenth District..</b>			
J. T. McCarty, Delaware.....	Rees Philpott, Delaware.....		Delaware
Crawford.....	C. E. Kimerline, New Wash.....	K. H. Barth, New Wash'g'n.....	2d Thursday, monthly
Delaware.....	I. T. McCarty, Delaware.....	Rees Philpott, Delaware.....	1st Friday, each month
Franklin.....	E. A. Hamilton, Columbus.....	James A. Beer, Columbus.....	1st four Mondays
Knox.....	C. K. Conard, Mt. Vernon.....	I. S. Workman, Mt. Vernon.....	2d and 4th Wednesday, from March to middle of Dec.
Madison.....	R. H. Trimble, Mt. Sterling.....	F. D. Postle, London.....	4th Thursday
Morrow.....	W. L. Case, Mt. Gilead.....	Todd Caris, Mt. Gilead.....	1st Wednesday, monthly
Pickaway.....	A. F. Kaler, New Holland.....	D. V. Courtright, Circleville.....	1st Friday, monthly
Ross.....	L. E. Hoyt, Chillicothe.....	G. S. Mytinger, Chillicothe.....	1st Tuesday, monthly
Union.....	H. C. Duke, Richwood.....	C. W. Hoopes, Marysville.....	2d Tuesday



## HOSPITAL NOTES

Following an inspection of Longview Hospital, Cincinnati, by local representatives of the United States Veterans' Bureau press reports indicate that the government will build a new hospital for insane soldiers in Cincinnati when Congress shall have made its proposed appropriation of \$16,000,000 for hospitalization purposes. The investigation at Longview was precipitated by charges made by Judge Robert S. Marx, national commander of the Disabled American Veterans of the World War, that the hospital was greatly overcrowded and ex-service men were therefore deprived of proper treatment and of desired comforts. The investigation substantiated previous reports made by Dr. E. A. North, superintendent of the hospital, to the effect that the institution is housing 1,580 patients, with a bed capacity of 1,340, meaning that nearly 250 patients are compelled to sleep on mattresses placed on the floor at night. The 42 ex-service men were not found to be among those thus accommodated, however, and they expressed themselves as satisfied with the treatment accorded them.

—Preliminary plans have been made for the erection in Oberlin of a modern hospital, to cost when completed and equipped approximately \$100,000. The hospital, to be known as the Allen Memorial Hospital, will be built jointly by Oberlin College and the citizens of the town, with a bequest of \$50,000 left to the Oberlin Hospital Association by the late Dr. Dudley P. Allen and funds from the Community Chest. Dr. Allen also bequeathed \$50,000 for the endowment of the hospital.

—Due to agitation on the part of county health officials and the Ashtabula County Public Health League, a movement is under way looking toward the establishment of a tuberculosis hospital in Ashtabula County.

—The will of the late Dr. C. N. Huston, Hamilton, bequeathed Mercy Hospital, Hamilton, the sum of \$1,000.

—A tract of land comprising 207 acres in Hudson has been purchased by the Cuyahoga Falls Sanitarium Company, of which Dr. W. A. Searl is president, and Dr. H. I. Cozad, secretary. The company operates the sanitarium known as Fair Oaks Villa, Cuyahoga Falls.

—The will of Mrs. Grace Tod Arrel, last of the family of David Tod, Ohio's Civil War governor, leaves several bequests to Youngstown institutions including \$60,000 to the Youngstown Hospital Association; \$25,000 to St. Elizabeth's Hospital; \$10,000 to the Visiting Nurses' Association, and \$10,000 to the Home for Aged Women.

## Vacuum Devices for Collecting Blood Specimens

Supplied with special needles, hand-ground and hand-finished, which penetrate the skin with a minimum of pain and the vein without tearing.

### Keidel Bleeding Tube

A glass tube evacuated to an unusual degree, providing a convenient and aseptic method for the collection and transportation of blood samples. Plain, 10 c. c. With potassium oxalate, 20 c. c.

### Blood Culture Tube

An enlarged tube containing either glucose bouillon medium, or ox-bile, glycerin and peptone medium, 50 c. c.

CIRCULAR ON REQUEST

## Hynson, Westcott & Dunning

BALTIMORE

## SPECIAL PRICES ON

### SALVARSAN

1.0 gram	\$1.35	per ampule
0.6 "	1.10	" "
0.5 "	.95	" "
0.4 "	.80	" "
0.3 "	.65	" "
0.2 "	.55	" "

### NEOSALVARSAN

Dosage VI	0.9 gram	\$1.35	per ampule
" V	0.75 "	1.20	" "
" IV	0.6 "	1.00	" "
" III	0.45 "	.90	" "
" II	0.3 "	.70	" "

### SILVER-SALVARSAN

(Sealed Glass Ampule in Aluminum Container)

0.05 gram	\$ .60	per ampule
0.1 "	.80	" "
0.15 "	1.00	" "
0.2 "	1.10	" "
0.25 "	1.35	" "
0.3 "	1.60	" "

## Charles E. Findlay Co.

Physicians Products

710 North Park Street Columbus, Ohio  
Bell Main 5707

# MEDICAL ECONOMICS

PUBLIC HEALTH - SOCIAL WELFARE *and* ORGANIZATION PROBLEMS  
WITH EDITORIAL COMMENT *by* D. K. M.

## A First Call—A Last Tip

The two short months between now and the seventy-sixth annual meeting of the Ohio State Medical Association to be held in Cincinnati, Tuesday, Wednesday and Thursday, May 2, 3 and 4, will pass rapidly.

Members will be wise to plan their affairs for this meeting as general plans, program and arrangements now under way in the hands of active and able committees insure for the physicians of Ohio an occasion of unusual pleasure and profit.

The scientific program for the various section sessions and general meetings is now practically completed, after months of preliminary work. The various features of the meeting under the direction of local committees have progressed to a point which assures approval and commendation.

As the section on Dermatology, Proctology and Genito-Urinary Surgery has asked the House of Delegates to abolish that section and consolidate it with others, the sessions at the coming annual meeting will probably be the last held by that section. In view of this the section officers have worked unusually hard to secure an excellent program that will merit much interest and good attendance.

The entire meeting, including all sections, general sessions, headquarters, exhibits and entertainments will be in the Hotel Gibson, and in order that early hotel reservations may be made a list of the leading hotels in the down-town section within short walking distance of the headquarters hotel, together with guaranteed rates for various classes of accommodations, is reproduced on page 219 of this issue. Assurance is given through the convention bureau of the Cincinnati Chamber of Commerce that the rates set forth will be adhered to and that requests for reservations made direct to the hotels will be honored, provided acknowledgement and assurance are returned.

The entire detailed program with an announcement of all other features for the meeting will be published in the April issue of *The Journal*. The current number will be the last one received by members whose membership dues are in arrears for 1922. The Council of the Association in emphasizing the necessity for organization cohesion urges that all delinquents heed this

warning immediately by remitting their dues to the secretary-treasurers of their respective county societies.

Local committees in charge of plans for the Cincinnati meeting are:

GENERAL CHAIRMAN, J. Louis Ransohoff.

Reception Committee—B. K. Rachford, chairman; A. Ravogli, Byron Stanton, A. B. Thrasher, C. L. Bonifield, J. E. Griewe, Henry Page, J. C. Oliver, F. Langdon, Robert Sattler, B. M. Ricketts, A. Friedlander, C. C. Agin, A. H. Freiberg.

Meeting Places—Gordon McKim, chairman, Mark Brown, Charles Kiely, Samuel Iglauer, Dudley W. Palmer, Magnus Tate, Carey P. McCord.

Badges—Moses Salzer, chairman, P. G. Smith, P. G. Smith, Samuel Rothenberg.

Exhibits—O. P. Geier, chairman; Julien E. Benjamin, Dudley Webb, Ralph Carothers.

Entertainment—W. D. Haines, chairman, H. K. Dunham, C. Crisler, F. B. Cross, Louis Schwab, C. T. Souther.

Registration—E. O. Smith.

Stereopticon—Ralph Carothers.

## Public Vagaries

Judging from the high proportion of chaff being ground from the legislative mills by the general assemblies now in session in some states, many legislators are wandering far afield in search of subjects concerning which they feel it is their duty to promulgate new and strange statutes.

So ardent are many legislators in their desire to "forbid by law" those few things still retained as personal rights that we find not only new laws more strange and wierd but with new penalties and new hazards for the private citizen, and especially for the professional man who is already under burdensome restrictions.

Each legislative session brings forth new restrictions tending to make even a conscientious citizen a criminal in a new way, and if as is generally agreed, one great menace of the present civilization is a general disregard for laws already in force, the need is not more law but better observance and more enforcement of the old statutes founded on sound principles rather than on temporary whim or prejudice.

Even laws impossible of enforcement are being constantly enacted, and as an indication of the general character of proposals which may be ex-

pected in the next Ohio legislature we find in those state legislatures now in session in addition to the usual proposals on anti-vaccination, anti-vivisection, cult boards and special privileges, state medicine and destructive amendments to health laws, such propositions as would compel the presence of another woman every time a male physician examines a female patient; the elimination of text books in the public schools that teach the Darwinian theory, biology and physiology; the provision for "treatment" of all school children from public funds as an extension of present school "inspection."

If group thought of the medical profession is to have a restraining influence in coordinating legislative trend in health and welfare matters, and if the professional and economic wellbeing of the physician is to be safeguarded and if genuine service is to be rendered to the public, there must be stronger unity, greater harmony, more concerted thought and combined team work through medical organization. If medical organization is to be effective the mechanics of organization must be maintained and strengthened.

Every eligible physician should be secured as a member of his local and State Association.

#### Medical Economics

The final test of genuine service and justification of either professional practice or business enterprise is determined on whether or not the genuine needs and demands of the community and the public are adequately supplied. In an original manner the general subject of medical economics including a thorough discussion of the various phases of finance and business in the practice of medicine, the essentials of "capital," "labor" and "management" in practice are set forth in a paper by Dr. C. D. Selby of Toledo published on page 213 of this issue.

In this illuminating paper the author approaches the problems of modern medicine from a somewhat different viewpoint than that of most authors on the same subject. In addition to analyzing the "purpose" of medical service, the elements of medical practice, the relationship of the physician to the public and the final return from such service, Dr. Selby indicates that he has given thoughtful consideration to the unfortunate trend toward socialization. His analysis of business methods, office and over-head expense in practice and his attitude toward investments are especially interesting.

#### Ohio—Medical Center

Impetus to medical education in Ohio has progressed recently with the announcement of a gift by Samuel Mather, Cleveland philanthropist, of \$2,500,000 to the Medical School of Western Reserve University. This sum is in addition to previous gifts to the building fund totaling \$800,000 and is expected to provide when completed, one of the finest medical structures in the United States.

In Cincinnati a campaign is well under way to secure subscriptions to the endowment fund of the University of Cincinnati College of Medicine in the sum of \$216,000, which will make a total of \$2,000,000 for the year 1920-1921. When this amount is secured the college will take over the offer of the General Education Board of the Rockefeller Foundation of a fund of \$700,000, and that of \$200,000 from the Carnegie Corporation. The money to be raised locally must be pledged by the end of March, although three years are allowed in which to make payments of the subscription.

It is the goal of each of these medical schools in Ohio to establish in Cleveland and Cincinnati, respectively, centers for medical instruction which shall gain recognition throughout the world and be a credit to Ohio and the nation.

#### Encouraging Court Action

The highest tribunal in the nation, the United States Supreme Court, through indirection at least has finally upheld the provisions of the Medical Practice Act of Ohio and affirmed the procedure of the Ohio State Medical Board, in dismissing the case of Luther M. Nesmith, a notorious unlicensed chiropractor from Wood County, who had carried his case over months of litigation through all the courts, after being indicted, tried and convicted for practicing without a license.

After gaining entrance to the Court of Appeals and the Supreme Court of Ohio on a writ of error, which courts in turn confirmed the verdict and judgment, of conviction, Nesmith carried the case to the United States Supreme Court under Section 237 of the United States Judicial Code, claiming that the law involved was unconstitutional.

The attorney general of Ohio filed a motion to dismiss the case in the Supreme Court because the federal questions had not been properly raised and that the writ of error was secured for delay only and that the entire contention of Nesmith was so "frivolous" as to justify no further litigation.

On being heard on this motion and briefs submitted by Mr. Ray Martin, assistant attorney general, the Supreme Court in a *per curiam* opinion, sustained the state's motion, citing authorities relating to the general question of "frivolity."

The disposition of the case by the Supreme Court and the authorities cited in the opinion quite clearly indicate that the court was impressed with the absurdity of Nesmith's claim.

The action of the Supreme Court in this case is an encouraging forerunner of probable termination of the civil injunction suit secured against the State Medical Board by the unlicensed chiropractors of Ohio some time ago in an effort to tear down the Medical Practice Act and the enforcement laws of Ohio, which through their ad-



ministration are intended to protect the public against unlicensed and unqualified practitioners. The injunction suit, known as the Williams vs. Scudder case, was likewise carried through all the courts of Ohio, and in a forceful opinion unanimously concurred in by the Supreme Court of this state, the Medical Practice Act was upheld in its entirety and the State Medical Board vindicated in its acts, rules and regulations. This opinion was published in the June, 1921, issue of this *Journal*. Shortly after that time the case was carried to the Supreme Court of the United States, where it is now pending. With the outcome of the Nesmith case and with an early hearing promised for the Williams case the end of legal obstructions to the rigid enforcement of law against those who have organized to obstruct enforcement, is now in sight.

#### Medical Education, Hospitals and Health

The coming midwinter annual congress on medical education, licensure, public health and hospitals, to be held in Chicago, March 6-10, holds particular interest this year. These conferences in the past have provided a forum in which medical instructors, officers and members of licensing boards and all hospital committees and others interested could discuss common problems in the various states, and the conditions in medical schools, standards of preliminary education and proposed revision in medical curriculum and law enforcement.

It is pointed out that as the extension and reorganization of medical schools has progressed, new problems have arisen such as the increased cost of medical education, necessary limitation of enrollments, difficulties of medical practice in rural communities, undue haste of some recent graduates to specialize and the need of more general public health education.

With the connection of the problems of education, licensure and hospital standardization the importance of the function of the hospital committee in Ohio and other states has increased. This committee in Ohio of which Dr. C. D. Selby is chairman, has been especially active during the recent months in an effort to coordinate these various problems and to approach them with a view to their inter-relationship.

One of the most pertinent subjects before the conference, that of the organization activity of state associations in relation to public health, will be discussed by Dr. J. H. J. Upham of Columbus, chairman of the Committee on Public Policy and Legislation of the Ohio State Medical Association. Others on the program include deans of large medical schools, chairmen and executive officers of state licensing boards and prominent officials in the American Medical Association.

#### Narcotic Regulation and Enforcement

Based on a statement of the appalling number of drug addicts in the country, the complicated and aggravated condition with conflicting decisions and rulings under the Harrison narcotic law, frequently in conflict with medical thought, with resultant uncertainty and embarrassment to practicing physicians, a resolution is now pending in Congress, introduced by Representative Lester D. Volk of New York state, to provide for the appointment of a select committee of fifteen members of the House including its six physicians, for the purpose of investigating the entire subject of drug addiction in this country, the method of handling such unfortunates, the treatments practiced by private physicians, institutions and sanitariums, and the result of present laws and regulations, with the purpose of drafting new legislation.

The preamble of this resolution (House Resolution No. 258) alleges:

1st. Competent medical and administrative authorities estimate that between one million and two million persons are victims of narcotic drug addiction.

2nd. This condition has been complicated and aggravated by enforcement of the Harrison narcotic law by the federal government and by many of the rulings and regulations, and also by variation in state laws.

3rd. Many of the rulings by the federal government, states and municipal laws are contrary to existing medical bibliography, clinical and pathological research in handling addict patients, and dangerous results have befallen victims.

4th. These rules and regulations and state laws have made it impossible for the medical profession to treat narcotic drug addicts without fear of arrest, indictment or prosecution by the criminal authorities.

5th. These facts have caused an increase in smuggling, peddling and illegal distribution of drugs and also have brought about a virtual monopoly in the treatment of narcotic addict patients by privately owned sanitarium promoting certain routine formulas and cures without regard to the individual physical phenomena.

Another resolution by the same author (House Resolution No. 259) would authorize the secretary of the treasury to transmit to the House of Representatives the facts in his possession with reference to the rules and regulations for the treatment of narcotic drug addiction permissible under the Harrison law. The resolution questions the ability of the prohibition commissioner to direct medication, and requests information regarding the allegation that narcotic drug addicts have been denied the advice of their family physicians.

The whole question of narcotic addiction, federal regulation with its angles—medical, social and criminal, having been the source of so much discussion in the medical and lay press, the summarized statement of the present situation in the United States by Dr. Roger G. Perkins of Cleveland, published on page 224 of this issue, is of interest.

**IF YOUR 1922 MEMBERSHIP  
DUES ARE UNPAID, THIS IS  
THE LAST ISSUE OF THE  
JOURNAL YOU WILL RECEIVE.**

### Court Decides Hospital Liability

In a recent decision of the Ohio Supreme Court in the case of Taylor vs. the Flower Deaconess Home and Hospital of Toledo it was held that "where a public, charitable hospital has failed to exercise due and reasonable care in the selection of physicians, nurses or attendants and injury results from the incompetence or negligence of such persons, the hospital is liable."

This case, decided on January 24, which came up on error through the Court of Appeals of Lucas County, has an interesting bearing on the whole subject of professional responsibility and lay assistants.

In this case the plaintiff predicated his right of recovery on the alleged negligence of the defendant hospital in its failure to use ordinary care in its selection and retention in its employ of a certain student nurse, who was alleged to have administered to the plaintiff an enema or injection of scalding hot water immediately following an operation on him for appendicitis and while he was under the influence of ether.

In its answer the defendant averred that it is a public and charitable corporation; that it is incorporated for the purpose of providing hospital accommodations for the sick and injured and to aid the sick and needy; that it never has had or can have capital stock; that it cannot declare dividends; that it cannot make profits either for the corporation or its members; that a large part of its income is from benevolent persons, and that the hospital is open to all persons who apply for its benefits as long as it has accommodations.

Damages to the extent of \$12,000, were allowed in the Common Pleas Court, which decision was reversed in the Court of Appeals, and on hearing in the Supreme Court the original court decision was sustained.

The real question in this case was whether a public, charitable, hospital corporation is liable for the negligence and careless acts of an incompetent nurse in its employ when the hospital failed to exercise ordinary care in her selection and retention. In its decision the court referred to a list of cases in which public, charitable institutions of this sort were not held to be liable for the acts of their employes or attendants, but quoted and reaffirmed a number of cases in which hospitals were held to be responsible for such acts in case it was found that proper care was not exercised in the selection of such attendants.

In this connection a decision from a previous case was cited to the effect that "while the public has an interest in the maintenance of a great public charity, it also has an interest in obliging every person and corporation which undertakes the performance of a duty, to perform it carefully, and to that extent, therefore, it has an interest against exempting any person and any such corporation from liability for its negligence, and that moreover, it is solely for the legislature

and not for the courts to say that the former interest is so supreme that the latter must be classified to it."

The court held that such safeguard should be observed as will prevent the neglect of a duty which the hospital can or should perform. "It cannot watch or control the countless acts and movements of its servants, but it can and should exercise care to see that only careful and competent servants minister to stricken patients who are within its walls. Moreover, while it may well be said that donors of funds for the praiseworthy objects of charitable hospitals do not contemplate the diversion of the fund for the payment of damages for the numerous acts of servants referred to, yet they necessarily realize and appreciate that they give their donations to those who have the management and control of the institution, and that every principle of justice requires that they use care in the development and maintenance of the property and in the selection of servants who have the oversight of patients.

"In our day there is a general tendency in all persons to resort to hospitals in cases which require surgical operations, or in cases of severe sickness, and for obvious reasons it is desirable that such an institution should neither be held out as devoted solely to the poor nor to the rich, and the degree of care required should in all cases be the same. The same rule should apply to a pay patient as to one who does not pay, and there is general agreement in this proposition."

### Medical Schools and Medical Practice

Involving as it does all phases of the question of foundation subsidies for full-time medical instructors, hospital service in connection with medical colleges, the training of students for the profession, the policy of group practice and the relationship of the profession to public service, the situation in the Medical School of the University of Michigan with its resultant controversy throughout the past year has attracted wide-spread attention.

Because of similar problems at other universities in practically all states the outcome of a recent conference between officers of the Michigan State Medical Society and a committee of the University of Michigan is of unusual interest. The conclusions of the joint committees to the effect that a solution of the differences between the medical profession of that state and the University is now possible, that a common ground has been established and that a movement of mutual concern has been undertaken, lends hope to a heretofore embarrassing and embittered controversy.

A former report signed by the Michigan State Medical Society through Dr. W. J. Kay, president, and Dr. W. J. DuBois, chairman of the council, and by the University of Michigan through President Marion L. Burton and Dr.

(Continued on page 217)

# Acute Appendicitis\*

CARL DaCOSTA HOY, A. M., M.D., F. A. C. S., Columbus

*Editor's Note.*—Dr. Hoy is quite right in maintaining that the continued high mortality of acute appendicitis is due to too much or too little surgery or else to procrastination in diagnosis and action. The problem of high mortality can no longer be shouldered onto the general practitioner, because the vast majority of doctors recognize their cases early and refer them for operation. Improvement in the death rate depends more than ever on better surgery. In his review of the entire subject, Dr. Hoy attempts not only to give his personal viewpoint, based on an experience of 422 cases, but also draws upon the wonderful sources of information from such authorities as the late John B. Murphy as well as Deaver, Dyas and Kanavel. In a final analysis Dr. Hoy suggests that his general review of published results would appear to show that the early operation, if performed as a routine procedure would lead to the disappearance of practically the whole series of complications, which, at the present time, account for the fatalities that occur; and further that the early operation may be fairly placed in almost the same category as regards mortality with that performed during a quiescent interval.

**A**CUTE APPENDICITIS has always and will continue to be a very interesting disease from a diagnostic and differentially diagnostic standpoint, as well as from the standpoint of morbidity and mortality. The mortality of acute appendicitis continues to be of too high a per cent. in some localities, ranging from 5 to 15 per cent. following operation. This percentage is colossal and in my opinion there are three distinct reasons for it.

1. Too much surgery.
2. Procrastination in diagnosis and action.
3. Too little surgery.

### HISTORY

I will refrain from going into the history of the struggles of the pioneers in the operative treatment of appendicitis. There is no procedure in surgery in which the battle was so fierce and so continuous, or the statements of the uninformed were so personal, so galling and so unjust, as in the contest for and against early operation in acute infective appendicitis.

Krafft, of Lausanne, was also an early advocate of operation for appendicitis. Fitz, of Boston, in 1886 gave the name of appendicitis to the disease and advocated the early removal of the appendix as the seat and cause of paratyphlitis. Fitz, at that time, operated for a phlegmon or abscess.

John B. Murphy of Chicago, operated on the first case of appendicitis in America, on March 2, 1889, in the absence of phlegmon and pronounced induration. Twenty days later Burney performed his operation for appendicitis. The late John B. Murphy said, "Looking backward one can scarcely comprehend how a so-called intelligent profession was so slow in accepting the overwhelming force of numbers and facts, which could not be altered by theory or speculation; it is however, but a repetition of the past and an index of the future. The medical profession, as a body, always has preferred to theorize and dream, rather than analyze, investigate and accept facts.

Every one recalls how reluctantly the advocate of the soothing, death lullaby of the opium treatment vacated his position, and how equally persistent and belligerent, was the advocating of the death groaning calomel and castor oil procrastinator, who has not yet capitulated; each and every one of these standing out against the most convincing presentation of pathologic phenomena."

The general practitioner can no longer be blamed for the mortality in appendicitis. The vast majority of doctors recognize their cases early and refer them for operation.

The Pathologic division of cases from the service of Drs. W. S. and C. D. Hoy, are as follows:

	No.	Mort.	Duration
Total Number.....	422		
(a) Acute Catarrhal...	71	0	2-42 Hrs.
(b) Acute Suppurative..	208	1	12-72 Hrs.
(c) Acute Gangrenous..	39	2	36-94 Hrs.
(d) Acute Ulcerative....	32	0	4-8 Days
(one) Pus in Appendix and			
(two) Perforative			

(a) Localized Peritonitis .....	60	1	4-21 Days
(b) Generalized Peritonitis .....	12	5	38-179 Hrs.

This means nine deaths in 422 cases. Omitting the cases of general peritonitis there are 4 deaths in 410 cases.

Causes	No.
Pneumonia .....	1
General Peritonitis .....	5
Shock .....	1
Sub-diaphragmatic Abscess.....	1
Septic Embolus .....	1

### ETIOLOGY

1. Trauma:
  - (a) Lawrence has been talking of trauma for fifteen years as one of the causes of infection.
  - (b) MacCallum brings this out in his text book on pathology.
2. Infection:
  - (a) Typhoid bacilli .....
  - (b) Pneumococcus .....
  - (c) Staphylococci .....
  - (d) Streptococci .....
  - (e) Colon bacilli and mixed.....
  - (f) First 98 cases no bacteriology.

\*Read before the Surgical Section of the Ohio State Medical Association, during the Diamond Jubilee Meeting, at Columbus, May 3-5, 1921.

3. Foreign Bodies in Acute Appendicitis:

(a) Needle .....	1
(b) Pin .....	1
(c) Cherry Seed.....	1
(d) Portion of bean.....	1
(e) Phlebolith, hard .....	3
(d) Fecal concretion (soft).....	24
(e) Shot, (lead) .....	2

In an analysis of 422 cases of acute appendicitis, we have followed these cases up for a period of two years, the shortest time being three months.

(A) Age	Number Cases
From 0—10 Years .....	9
From 11—20 Years .....	201
From 21—30 Years .....	103
From 31—40 Years .....	68
From 41—50 Years .....	29
From 51—60 Years .....	5
From 61—70 Years .....	2
(B) Sex Males .....	301
Females .....	121
(C) Cases Drained.....	115 (rubber tube)

POST-OPERATIVE CONDITIONS

Three cases had post-operative hernia which was repaired, and the reason for hernia was, that I believe patients were allowed up too soon. This does not include pregnancies.

I firmly believe that all abdominal cases, except prostates and conditions of that character, should be kept in bed for at least three weeks. I do not think it is possible to have firm organic union under a period of three weeks. Since I have made it a rule to keep my patients in bed I find that I am not troubled in drainage cases with post-operative hernia. We never use gauze for drainage, for the reason that gauze does not drain.

There were twelve patients out of this number that complained of severe constipation, stating positively that it was not necessary to take cathartics before operation, but since the appendix has been removed they had become very constipated. Out of this number there were three cases that complained of pains in right lower quadrant of the abdomen, which persisted after operation; in one case for nine weeks, in another eleven weeks and in the third twelve weeks and two days. This pain in my opinion was due to adhesions which gradually became better or entirely disappeared causing no pain.

There were five cases which complained of a burning and a frequency of urination for a period varying from six to fifteen days after operation. Two of these patients had urinary symptoms before operation. Two of them had red blood cells in the urine before operation. In these two cases we found adhesions and infiltration of the right ureter.

Phlebitis occurred in four instances in the left lower extremity, but subsided favorably in each patient.

CONDITIONS AT OPERATION

I was greatly surprised, in looking over my records, to find such a large number of appendicitis cases in which the appendix was lo-

cated post-caecally. This occurred ninety-eight times in my experience. I have, on three occasions, found a very long appendix extending clear up to the liver. I have also found the appendix fourteen times, adherent to the right tube and ovary. We did not have a fecal fistula in any case of appendicitis, in which pus was contained within the lumen of the appendix. There were sixty cases of localized peritonitis due to a perforation of the appendix into a localized abscess, with one death, and I do not believe this patient would have died, had he returned in the interval for removal of his appendix. In this series of sixty cases we were able to remove the appendix in nineteen cases; in the other forty-one cases a simple incision with drainage was done; in two of these the appendix sloughed out of the drainage opening. One of these patients died from a sub-diaphragmatic abscess three months later. Thirty-eight cases were operated upon a second time by me for the removal of the appendix; the period of time being, after the acute attack and primary drainage being from six weeks to four months. All these patients recovered.

In my series of twelve cases of general peritonitis, and by this, I mean general free suppurative peritonitis due to a perforation of the appendix, all of which patients were exceedingly toxic, there were five deaths. There was a distinct colon odor to the pus in all of these cases, and the operation consisted of an incision and drainage, and in only two cases were we able to remove the appendix. Two of these cases had ether and ten of them had nitrous oxide-oxygen anesthesia.

These patients, from a surgical standpoint, were practically moribund when they come in for operation, and I feel certain that all of them would have died without an operation.

ACUTE APPENDICITIS IN PREGNANCY

In this series of cases I operated upon eleven women for acute infective appendicitis that were pregnant:—

No.	Duration
1	8 Months Pregnant
2	7 Months Pregnant
1	5½ Months Pregnant
2	4 Months Pregnant
3	3½ Months Pregnant
1	3 Months Pregnant
1	7 Weeks Pregnant.

All of these patients went to term, giving birth to normal children. In all of these patients the infection was confined within the lumen of the appendix; only one patient in this series was drained. Four of these patients developed a post-operative hernia which was repaired by me at a later period. The mortality in pregnant women is colossal if the products of infection are outside of the appendix. The reason for this high mortality I believe to be that during pregnancy as the uterus enlarges it push-

es the intestines upward and the omentum, (that great barrier against infection), out of the way, thus nature has very little chance to throw out protective adhesions and to wall off the infective process, so that as the infection progresses, if a perforation takes place it causes a general free suppurative peritonitis. This, I think, is the cause of such a high mortality in acute infective appendicitis, especially marked during the latter months of pregnancy.

#### PERFORATION AND FECAL FISTULA

Perforations of the appendix were present in seventy-two cases, with localized peritonitis or a circumscribed abscess due to perforation. Twelve cases presented generalized peritonitis. In this series of seventy-two cases there were thirteen instances of fecal fistula, in which seeds were demonstrated in the dressing, all of these cases healed spontaneously with the exception of one case, which I re-operated and closed. I believe that most fecal fistulas, so-called, will entirely heal if there is no foreign body present, such as a fecal concretion or a non-absorbable ligature, or a portion of the appendix left in, which keeps up fistulas drainage. The occurrence of fecal fistulas depends a great deal upon the pathologic condition of the appendix. Some operators, in cases of this character, give the incidence as 6 per cent. I think that nature will heal 99 per cent. of our fecal fistulas if some such pathological condition as has just been mentioned is not present.

#### SECONDARY ABSCESES

I am happy to say that this complication occurred only twice in our acute cases; once post-cecal and once in the left lower quadrant of the abdomen. It occurred only once in all of our chronic cases of appendicitis, and then it was post-cecal and was not recognized until the eighth day after operation; lumbar drainage was instituted and the patient made an uneventful recovery. One of our cases of localized peritonitis, with a post-cecal appendix, developed a sub-diaphragmatic abscess, which ended fatally.

#### INTESTINAL OBSTRUCTIONS

We have not had a single case of mechanical intestinal obstruction following operation, but have had three patients develop paralytic ileus, all of whom recovered. I believe that Escrin-sulphate and Pituitrin are the drugs of choice in this condition. No morphine should be given to these cases.

#### ACUTE DILATION OF THE STOMACH

This complication occurred twice and both patients speedily reacted to treatment by gastric lavage, and stopping everything by mouth. A distention of the bladder and an inability to urinate occurred in twenty-one cases. This inability to urinate lasted from 24 to 36 hours; *in not a single patient did we have to catheterize.* Our results along this line have been a great deal better since we have eliminated opiates. It is a

matter of personal opinion, but I believe there is very little indication, if any, for the use of morphine after operations for appendicitis; certainly it should never be given before the diagnosis is made. Appendicitis is a surgical condition from the beginning and there is no drug treatment necessary. I think that morphine not only locks up the bowels but tends to cause a paralytic ileus; it locks up the urine and obscures all of the signs and symptoms, which are so necessary, both before and after operation, to enable us to properly interpret nature's warnings. It lowers the local and general leucocytosis and tends to create a habit for this drug. I have often heard the late John B. Murphy say that "the medical and surgical profession would be better off if morphine and catheters were locked up in the safe and the combination forgotten in these *acute abdominal conditions.*" I also believe firmly that there are two things of the utmost importance and these things are *Fowler's position* and *continuous salines.* The saline we use consists of 2 quarts of warm water about 98.6° or 99° with sodium chloride 5i, lactose 5i, and sodium bicarbonate 5i.

#### SYMPTOMATOLOGY AND CLINICAL COURSE

The symptomatology and clinical course, from Murphy's classic description made fifteen years ago, are as follows:

The symptoms in the order of their occurrence may be mentioned as: *First:* Pain in the abdomen, sudden and severe. *Second:* Nausea or vomiting, even within a few hours, most commonly between three and four hours after the onset of pain. *Third:* General abdominal sensitiveness, most marked in right side, or more particularly over the appendix. *Fourth:* Elevation of temperature, beginning from two to twenty-four hours after the onset of pain. In severe cases, the temperature reaches 102° to 103°, between eight and twelve hours after the initial pain.

The symptoms occur almost without exception in the above order, and when that order varies I always question the diagnosis. If the nausea and vomiting or temperature precede the pain, I feel certain that the case is not one of appendicitis. Where the temperature alone precedes the pain for a day or even two or three days, then I am always fearful that it is a typhoid fever, with a typhoid ulcer in the appendix. Where sensitiveness has been present for a number of days, and particularly where it is low in the pelvis, I have found the focus other than appendiceal, *that is*, due to infection of the tube, tuberculosis or some other condition.

#### PAIN

"Pain was a constant and uniform symptom and usually colicky in character, although patients varied in their expressions of its severity. In not a single case was it absent as an initial symptom. It usually reached its acme of in-

tensity about four hours after its onset. It subsided gradually in the majority of cases. *When it subsided suddenly, as it sometimes did, within the first thirty-six hours, the subsidence was due either to (1) liberation of the infective material through the neck of the appendix into the caput coli, (2) rupture of the appendiceal wall, or (3) complete gangrene of the appendix.* Under these conditions, the pus pressure was relieved and the pus absorption diminished or stopped. With the cessation of pain in these cases, whether it was due to gangrene, intestinal escape or perforation, came the diminution or cessation of absorption, but not necessarily a diminution or cessation of danger, as is so commonly thought and erroneously interpreted, and often with fatal result.

"The secondary pain after the first thirty-six hours, is usually not colicky in character, but of the typical inflammatory type, and due to peri-appendiceal involvements. Severe pain, after the primary subsidence, is always a signal of great danger, as it announces a beginning peritonitis from perforation.

"The primary nausea and vomiting is reflex, due to over-distention of the appendix from the accumulating products of the infection, and is the same type of nausea and vomiting that we have with stones suddenly impacted in the neck of the bladder or suddenly passed into the ureter. There is usually only one or two efforts at emesis and the nausea then passes away. The secondary nausea and often persistent vomiting is due to the peri-appendiceal involvement; that is, infection of the peritoneum, and is of the same character and often the same persistence as vomiting from perforation of the tube, intestine, or stomach into the peritoneum. In extensive peritoneal infections the vomiting continues to the fatal termination, increasing in frequency as time advances and as absorption increases.

"The abdominal sensitiveness is first diffuse, although the abdominal wall is not particularly rigid. When the appendix becomes fully distended and tense it will not tolerate pressure and is protected by a marked rigidity of the abdominal muscles, the same as the gall bladder and the urinary bladder are protected under similar conditions when over-distended. As soon as the acute tension subsides, the general sensitiveness disappears. It becomes circumscribed to the area of the appendix, whether it be at McBurney's point, in the sub-hepatic space, or in the pelvis. When absent above, the pelvic examination should never be overlooked. If the sensitiveness has been once circumscribed to a small area and increases suddenly, preceded by pain and by secondary nausea and vomiting, it strongly indicates a perforation of the circumscribed adhesions and an infection of the general peritoneum. In endeavoring to palpate the appendix, after the first twenty-four hours, the greatest care and caution should be exercised.

Severe pressure is likely to produce separation of friable adhesions that are of life saving importance."

#### TEMPERATURE

Temperature was not absent in a single acute infective case in its early stage, *that is*, in the first thirty-six hours after the onset of the symptoms. In the acute severe infections it is present in a few hours. In acute obstructions of the neck of the appendix, with mild infection, it appears later. In the calcular obstructions it does not appear until about the twentieth to the twenty-fourth hour after the beginning of pain. It is always present in the early stage of acute appendicitis. I would not operate on a case where I was confident that no temperature had been present in the first thirty-six hours of the disease. The temperature may all subside within twenty-four hours after the onset, and if it subsides suddenly, I am fearful that the cause of its subsidence is a *gangrene of the mucosa*, with failure of further absorption, and therefore an intermission of temperature. Where it subsides gradually from thirty-six to fifty-two hours after the onset, then I believe it is due to a cessation of pressure from rupture of the appendix, either into the meso-appendix or to circumscribed adhesions around the appendix. The temperature here, as in other places, must be recognized not as a manifestation of pus, but as a manifestation of absorption of the products of infection; without the absorption, there is no elevation. A remission of temperature of one, two or three degrees with subsequent gradual elevation means an infection of a new area of tissue. The temperature may go below 99° and remain there after the initial elevation, and still a large quantity of pus be present either circumscribed or diffuse, in the peritoneum.

Secondary elevation of temperature should always be noted with apprehension, as it indicates a fresh invasion of tissue, a thrombophlebitis, a peritonitis, or cellular infiltration. These elevations are indications for immediate operation, and that usually means immediate drainage. Under these circumstances no extensive laceration of tissue or separation of adhesions should be attempted for the purpose of making a complete operation. The focus of pus should be drained and, as a rule, nothing more done. "*Get in and get out quicker.*"

#### LEUKOCYTOSIS

For a time it was believed that much valuable information could be obtained by ascertaining the excess of leukocytes. The more extended our experience, the less valuable it became. Leukocytosis may be considered a blood reaction to the absorption of septic products. Infection may be present without producing the blood reaction. A sudden and great increase in the number of leukocytes, supported by the other symptoms, is usually indicative of an extensive peritonitis.

We do not depend on leukocytes for a diagnosis. Nor on the differential count.

#### PULSE

The character of the pulse has little value in the differential diagnosis of appendicitis. In children, where there is rapid absorption the pulse rate is very high. In the later stages of peritonitis, when it becomes compressible, rapid and feeble, it is a fair index of the degree of intoxication and a guide to the prognosis rather than to the extent of the inflamed area.

#### TUMOR

In the very early hours of appendicitis, while the inflammatory process is still confined within the appendix, an examination of the abdomen reveals an apparent tumor. The center appears to be hard and fixed. It is oblong and about the size of the thumb. One feels convinced that the appendix rests close to the abdominal wall. The impression of tumor under these conditions is due to the spasmodic contraction of the muscle fibres directly over the situation of the appendix. When the patient is placed under the anesthetic the tumor entirely disappears and, indeed, the appendix may be in the retro-caecal position and many inches from the abdominal wall. So frequent is this deception that I feel it should constantly be borne in mind. In the sub-acute cases, the enlarged, swollen and distended appendix can be frequently outlined by careful examination. As the peri-appendiceal tissues become involved and the quantity of infective material increases, the tumor becomes more pronounced and often attains considerable size. This is usually located in the right iliac fossa, but its absence from that position, with a clinical history indicating an appendicitis, must not be construed as meaning that the tumor is not present, because it will be found to be in the loin or low in the pelvis. Fluctuation is only present when there is a large circumscribed abscess in the later stages of the disease. In the early stages of the disease the absence of peristalsis in the appendiceal region is of value in indicating the nature of the process. A careful examination of the stethoscope reveals a "still" area for many inches around the appendix. The size of the tumor bears little relation to the quantity of pus. The area of infiltration around a streptococcus or staphylococcus infection is small while the area of infiltration around the colon bacillus group of infections is always very large in proportion to the quantity of pus.

#### CLINICAL COURSE

The clinical course of acute infective appendicitis is fairly uniform. In the acute infectious cases without calculus the mucosa becomes infiltrated and oedematous within an hour or two after inoculation. The oedema and infiltration increase rapidly and the compression of the inelastic coats of the appendix, with the assistance of the biotic and toxic effects of the pathogenic

flora, produce a rapid gangrene of the mucosa, sub-mucosa and occasionally the entire thickness of the wall, with now and then complete gangrene of the appendix, so that a perforation of the appendiceal wall, on the average, takes place in from thirty-two to forty hours in virulent infections. Infection with the presence of a foreign body (fecal concretion) is usually associated with only a small area of gangrene, and that at the point of pressure of the calculus; here there is a local necrosis or gangrene with perforation and leakage; perforation in these cases takes place a little earlier than in the infections without a foreign body. Occasionally pressure ulceration and perforation of the appendix takes place at the seat of a coprolith without an acute infection. In this last class of cases the first announcement of the trouble is made by the initial symptoms of the perforation. These cases represent about 1 per cent. of all of the acute cases. It is a dangerous type for the patient, as the initial symptoms are attributed to a beginning appendicitis, when in reality they are due to a beginning perforative peritonitis.

In the streptococcus infections the meso-appendix and neighboring tissues are more seriously involved and the area of gangrene is less than with the colon bacillus or the staphylococcus type. The pain is more severe in the first six to fourteen hours; it becomes less as the necrosis advances; the temperature is highest from the sixteenth to the thirtieth hour, preceding the completion of the gangrenous process. If the gangrene continues to advance, the temperature remains up; if it becomes stationary, the temperature declines. *A sudden drop in temperature means a cessation of absorption, due, most commonly, to perforation to the wall of the appendix, with diminished pus pressure, second in frequency, to the escape of the contents of the appendix into the intestine; third, to gangrene of the wall; fourth, to circumscribing tissue infiltration with diminished absorption (local immunity); and fifth, diminution of the virulence of the flora in accordance with the law of putrefaction and fermentation.*

After fifty hours the clinical picture changes from that due to lesions of the appendix to that of infections of the peri-appendiceal regions. If the perforation takes place into the meso-appendix, or under circumscribing adhesions, the clinical presentations are those of a limited infection, while if the perforation takes place into the free peritoneal cavity the symptoms of a more or less severe peritonitis manifest themselves, depending upon the types of infection and the degree of involvement. After a circumscribed abscess has formed, the temperature, pulse rate, and pain subside to a considerable degree; indeed, the temperature may approximate normal as the infiltration in the abscess wall becomes more and more pronounced and absorption proportionately diminished. If the

rupture be into the post-peritoneal cellular tissue, then there is rapid rise of temperature from the absorption. If the rupture be into the free peritoneal cavity, the rule is a primary drop of temperature, as the pus is relieved of pressure and the peritoneum has not yet been abraded of its endothelium, and, therefore, does not allow rapid absorption.

In a staphylococcus infection of the milder type, the peritoneum is first covered with an exudate, which may go on increasing in thickness to the formation of a membrane resembling the diphtheritic exudate. This exudate lessens the immediate absorption and protects the patient against an overdose of the septic products. It paralyzes peristalsis and produces coprostasis, but in a short time this plaque loosens, is thrown off, and carries with it the endothelial covering of the peritoneum, leaving a distinctly abraded or blistered surface from which there is rapid absorption and a sudden collapse of the patient, frequent bowel discharges, anxious expression and shortly death. This sudden change in the staphylococcus infection of the peritoneum takes place between the evening of the fourth and the morning of the sixth day.

If the primary infection of the appendix be of streptococcus type and it ruptures into the peritoneum there is rapid blistering of the peritoneum and, within a few hours, symptoms of intense intoxication, high pulse, anxious expression, talkative delirium, quick perceptions, tympany, and all the manifestations of severe and acute streptococcus intoxication.

The action of the colon bacillus when it gains entrance into the peritoneum, may be said to be midway between these two pictures. At times it produces but slight irritation, mild elevation of temperature, considerable sero-purulent exudate, and a gradually increasing disturbance of the surface of the endothelial covering of the peritoneum. The advancement is so slow that the tendency with this milder type is to circumscription of the process by peritoneal adhesions. On the other hand, under certain conditions, which we little understand, the colon bacillus may have a powerfully irritating effect on the peritoneum, produce rapid destruction on its lining cells, and expose its lymphatic stomata for rapid absorption. Indeed its virulence may be so great as to produce gangrene of the peritoneum and even of the entire intestinal wall. This is fortunately rare, but is an extremely fatal type of the action of this bacillus. Sometimes the gas bacillus is associated with it and the tissue becomes emphysematous. There is not usually a high temperature in this class of cases, but great physical depression, lowered arterial tension, sunken eyes, somnolence, and finally low muttering delirium, differing entirely from the clinical picture of the streptococcus intoxication.

The quantity of pus found in the peritoneal cavity in the dry streptococcus type is usually

small. It may be large in quantity and then it is of a sero-purulent character. With the streptococcus type there is little if any, free pus, but the peritoneum has that peculiar dry, granulating, blistered appearance which was so frequently seen in the post-partum sepsis. The colon bacillus produces pus with an offensive odor usually considerable in quantity and thick and creamy in character. The intestines are agglutinated together and many times separate pockets are formed. The elevation of temperature, the tympany, and the collapse are commonly slower in appearing with the colon bacillus, than with either of the other types of infection.

Collapse is not a sign of perforation, but a manifestation of the absorption of products of infection by an abraded or blistered peritoneum. It will appear rapidly or slowly after perforation, depending on the virulence of the infection and the rapidity with which the endothelium of the peritoneum is destroyed. This has been one of the most difficult lessons for the general profession to learn. For years we believed that collapse was an immediate manifestation of perforation. We must now recognize that it is a symptom of septic intoxication and always a late symptom, as far as the clinical course is concerned.

It can be seen from the various pathological conditions mentioned in the clinical course that a case of appendicitis may subside within a few hours by escape of the infective material along the tract of the appendix into the caecum; that it may subside as a circumscribed inflammation of the appendix; that it may form a circumscribed infection without the production of pus in the free peritoneal cavity, with an inflammation only of the lymphatics of the meso-appendix and local peritoneum; that it may subside as a circumscribed abscess outside the appendix, rupture through the wall of an adjacent coil of intestine, and empty itself in that way; that it may subside as a circumscribed peritoneal abscess and remain quiescent to be opened later; that it may terminate in a circumscribed or diffuse general suppurative peritonitis; that while it is a circumscribed abscess there may be a thrombophlebitis of the iliac veins, and the general venous circulation become infected with the manifestations of embolism, infarcts, and secondary abscess; that a portal venous branch may thrombose and hepatic abscess or phlebitis result; that there may be continuations of the infective process by contiguity of tissue or continuity of surface extending down into the pelvis and up the opposite side of the abdomen, upward behind the peritoneum and around the kidney, upward beneath the surface of the liver and around the gall bladder, or into the sub-phrenic space, through the diaphragm into the lung, and the pus be expelled through the mouth; or it may rupture into some portion of the urinary or genital tracts.

All of these later and graver conditions are the



sequence or the direct result of omission on the part of the surgical or medical attendants who had charge of the case during the first forty-eight hours of the appendicitis. The closest attention has been paid in all these cases to the relation between the symptoms and clinical course and the pathological findings, so that we may better anticipate the intra-abdominal changes by the symptoms and physical signs, or at least that we may know when and under what conditions pathological changes are not announced by appreciable symptoms, and thus avoid fatalities and surprises by a proper interpretation of the presence, order or absence of symptoms.

I will not mention here the clinical course produced by the great variety of displacements, flexions, retentions, adhesions, torsions and abnormal fixations of the appendix, as that would carry me beyond the scope of the paper. I must state however, that we are just beginning to appreciate the great disturbance that can be produced in the intestinal tract and in the general metabolism, and the distressing and complex train of symptoms which result from these minor appendiceal lesions. We must operate much more frequently in the future for their relief than we have in the past, as we are learning from clinical experience that the disturbances produced by them are out of proportion to the logical deductions that could be made from the pathological conditions. The completeness of cures by operations on this class of cases is one of the most gratifying in the entire field of appendical surgery.

#### TIME FOR OPERATIVE INTERVENTION

The time for operative intervention may be divided into four stages; *First*, early, within the first forty-eight hours; *second*, in the active increasing inflammatory process, from the second to the fifth day; *third*, in the subsiding inflammatory process, from the fifth or seventh day on; and *fourth*, in the intermediate stage between attacks. From the previous statements concerning the clinical course and pathological changes, it can be seen that the most favorable time for operation, is within the first forty-eight hours of the attack; or from a pathological basis, before the perforation of the appendix or the infection of the peri-appendiceal tissue.

The diagnosis can and should be made with accuracy in the great majority of cases before the end of the first twenty-four hours, and almost universally within the first forty-eight hours. From the symptoms and clinical course of the disease in the first forty-eight hours, it is impossible to predict, with any degree of certainty, what the subsequent course of the case will be; *that is*, whether the tendency will be to subsidence and be cured by natural processes or to become virulent and go on to fatal termination. This is the consensus of opinion of the large majority of those surgeons of greatest ex-

perience. The danger of operative intervention in the early stage is scarcely more than that of an exploratory laparotomy. The time required for the convalescence is not more than two and a half to three weeks. Drainage, is as a rule, not indicated and hernia improbable. Unnecessary operations, as a result of error in diagnosis would be very limited. The patient would, therefore, be relieved of his appendicitis without hazard, without prolonged illness, without the danger of unpleasant sequelae, without the possibility of recurrence, by the only timely operation.

*"To me there appears to be no excuse, no explanation, no logical process, no justifying hope that relieved the patient of the dangers of this disease. Procrastination under these circumstances, I do not interpret as a manifestation of knowledge, experience, judgment, or true conservatism, but a stigma of their opposites."*

This should, therefore, be considered the period of election. Should we operate in the second stage, during the increasing or spreading inflammatory process, which may mean anywhere from the second to the fifth day? In this stage we may have the circumscribed abscess around the appendix, the active inflammatory process of the neighboring tissues or organs, or the early pathological changes of a circumscribed or general peritonitis. We often find the temperature and pulse high, meteorismus, intestinal paralysis and acute infected tissues, with manifestations of severe intoxications. These patients will not stand extensive manipulations. They are already fully burdened with the toxins and this intoxication must not be increased or the patient will be sacrificed. Shall we operate? Yes and in this stage. But the operation must be a limited one; *that is*, simple opening and relief of pus tension in the infected area; (with the removal of the appendix, if it be accessible and easily amputated). *There should be at least possible separation of agglutinations or other trauma to the infected tissues. Agglutinations and adhesions are life-saving, both in circumscribing the process and in rendering the local tissues unfit for absorption. Many of the fatalities in operations for appendicitis have been due to the failure of recognition of these facts.*

When the patient is apparently overwhelmed with the intoxication from a circumscribed or diffuse peritonitis or inflammatory process, I content myself with making a simple incision in the abdomen and relieving the pus tension by the insertion of a large drainage tube without irrigation, without sponging and without manipulation of the tissues. On the other hand, in the ascending stage of the disease, when the depression is not noticeable, when the intoxication is not severe, even when the quantity of pus is large, circumscribed or not circumscribed, the appendix is removed. In other words the extent

of operation is governed rather by constitutional symptoms of the sepsis than by the extent or pathological changes. One fact must never be lost sight of in operating on this class of cases, and that is, that the pus is usually virulent, and when organized adhesions are present they must not be separated, as they expose the surface to acute absorption. Organic adhesions are rarely formed before the fifth day. Exudates must not be rubbed or torn off, as they carry with them the endothelia and leave an abraded, absorbing surface. The peritoneum should be considered similar to the skin; in the latter while the epithelia are intact, there is practically no absorption. The rule, therefore, which I follow is not to treat any of the active inflammatory conditions on the expectant plan, but to relieve the suppurating infected centers, by simply opening and inserting an efficient drain; and in the cases, in which the constitutional reaction is mild and the appendix accessible, it is removed.

In my work the appendix has been removed in nine cases out of ten operated in the second stage, while if attempted in the 10 per cent. of selected cases, with severe symptoms of constitutional sepsis, the majority of cases would be fatal.

The treatment after operation in these cases consisted in placing the patients in a semi-sitting position, 35 to 45 degrees, retaining them in this position for three or four days, administering large quantities of saline solution (per rectum), from four to twelve quarts in twenty-four hours; the saline must be allowed to seep in, the tube remaining constantly in position. No water was given by the mouth. The stomach never absorbs, and under these conditions it does not readily transmit it to the intestines for absorption. I am convinced that the great mortality which has been reported in operations in the second stage and under the clinical conditions mentioned above, has in a measure, *been due to excessive manipulation, sponging, flushing, adhesion separating, and prolonged operation.* The deaths in these instances are due to the depression resulting from a sudden absorption of an overwhelming dose of toxin. This absorption is favored by the manipulations mentioned. The posture after the operation allows the pus to settle in the most dependent portion of the peritoneum; there it is pumped out through the tube by the alternating respiratory pressure. During transportation of cases of general suppurative peritonitis to the hospital the patients are kept in a sitting position.

I do not consider any of these steps in the sense of life-saving stitches, but their combination and the results obtained have revolutionized my ideas and prognosis in general suppurative peritonitis in the stage of projectile, black vomitus; cold, clammy skin, pinched expression, ballooned abdomen, and dusky cyanotic hue. Here, the fatal dose is already in the circulation,

and inhibition, antitoxic eliminants and haematodiluents would have no effect.

Operations in the third stage or the stage of subsidence of the inflammatory process or retardation of the process of absorption, are not at all as urgent as in the first and second stage. To begin with, the destructive process has been overpowered by the local resistance of the tissue (the local immunity of tissue infiltration) and an effectual encapsulation has taken place; or they have been emptied through ulceration into a neighboring coil of intestine; or they are slowly destroying their boundaries in the line of least resistance and little absorption is taking place.

This process may continue for a considerable length of time, unless some accident should rupture the wall, or pus should come in contact with some vein and thrombophlebitis with embolism ensue. The retained products of infection under these circumstances are always an element of danger, and in the hands of judicious and careful operators in this stage they can be conducted to the surface without hazard to the patient, and the appendix can, very frequently, be removed without extensive separation of adhesions or scattering the pus over non-infiltrated areas by carefully coffer-damming the operative field. If a mass is felt in the iliac fossa, pelvis or loin, and is readily accessible in any of the positions, it should be opened directly over the most prominent point and drained. This, however, must always be the exceptional route. When a patient has progressed to this stage, the patient is in a position to be placed in the best operative environment and to have the best skill. Personally, I open through the anterior abdominal wall in practically all of these cases and coffer-dam the field before opening the pus cavity.

In the fourth or intermediate stage the question arises, should we operate on every patient who has been through an acute attack of appendicitis? If so, why? The reasons for operating that may be given are these: *First*, after an attack of appendicitis the patient is prone to recurrence. *Second*, upward of 60 per cent. of the patients operated by me in the intermediate stage have had more than one attack. *Third*, in the large proportion of the cases in which there was only an incision and drainage of the abscess (which was a procedure frequently recorded by me in my first 60 cases) the attacks recurred. *Fourth*, the pathological changes, such as adhesions, flexions, stenoses, etc., following a primary attack, very much favor a recurrence. *Fifth*, even if there was no danger of recurrence of the inflammatory conditions, the adhesions fixations, stenoses, flexions and retentions in the appendix produce sufficient disturbance of the digestive tract to demand an operation for their prevention. *Sixth*, recurrent infections are, practically, as dangerous as primary attacks.

(To be Concluded.)



Kelly with an additional eight by Moskovitz; the remaining cases were studied individually, reviews of all but two being obtained.

Of the forty-eight cases reviewed, two should not be included as true appendiceal intussusception, and yet are so interesting in their symptoms as to demand attention. One (Case 27) had an appendix inverted at operation without removal according to the Edehhol operation; this gave rise to symptoms simulating appendiceal intussusception. The second (Case 41) developed an ileo-colic intussusception of the intestine, starting at the inverted stump of the appendix removed twelve days previous.

Of these forty-eight cases reported, forty-one were diagnosed at operation; in one case a possible pre-operative diagnosis was made; five cases were discovered at autopsy and in one case the specimen was passed spontaneously per rectum.

Of the forty-two cases operated, thirty cases recovered, six died, and in six cases there is no record of the outcome. Five of the deaths were in those with an associated ileo-colic intussusception.

Forty-four cases of Class 3 are recorded. Of these twenty-one were total or partial intussusception of the colon or ileum. Twenty-three cases were total or partial intussusception with an associated ileo-colic involvement.

In forty-four cases the average age was fourteen years, but thirty occurred before the age of ten. Both cases of Class 1 occurred previous to ten years; of Class 3, fourteen of an associated ileo-colic type occurred before ten. Age incidence was from thirteen months to sixty-three years. There were twenty-eight males and fourteen females. Most numerous were the cases of the fourth year.

#### MECHANISM

Intussusception of the appendix starts with a gradual inversion of all coats at the base; in one case there was a prolapse of the mucosal wall into the caecum, this case being accidentally discovered at autopsy.

An ileo-colic intussusception may be associated with either a partial or total intussusception, the inverted appendix acting as a foreign body in the caecum, the efforts to expel it dragging the caecal walls along with the base. The most probable reason for an ileo-colic intussusception with a partial inversion of the appendix is that the appendix, either markedly thickened in its free portion, or very adherent to the surrounding caecum in its intussuscepted portion, cannot further invert.

#### CAUSE

Intussusception of the appendix most probably is due to the same causes as intussusception of the bowel—violent peristalsis and irritating ingesta. The rôle that acute appendicitis plays is very doubtful though the conditions may be as-

sociated. There is a possibility that inversion may occur as the result of attempts to expel a foreign body, though no definite instance of this is reported.

#### CLINICAL PICTURE

A clinical picture of this condition can only include cases in Class 3, and more exactly before an associated intestinal intussusception complicates the picture.

The disease is more frequent in childhood and is characterized by a paroxysmal, cramp-like, indefinite abdominal pain, so severe as to double-up the patient, localized, if at all, in the right iliac region. There are definite remissions of hours to weeks; during the remission the patient is apparently in good health but with evident emaciation and loss of energy.

The disease is essentially chronic, extending in some cases over a period of years. The duration of the disease is in all probability due to an inability of the clinician to make an accurate diagnosis.

There is usually no marked elevation of temperature during an attack; if very severe the temperature may be subnormal and the pulse very rapid. The leukocyte count is usually normal.

Tenderness and rigidity are evident during an attack, often throughout the entire abdomen. There is not a board-like feeling of a general peritonitis.

Tumor formation can at times be determined on examination; most usually the palpable tumor means an intestinal intussusception and so is valueless in differential diagnosis. It is curious to note that many authors report tumor formation during an attack which disappears during remissions.

Constipation and diarrhea may be present; as a rule during the remissions the stool is normal, while in an attack diarrhea is most prevalent. Obstruction usually indicates an intestinal intussusception. Blood and mucous may be present in small amounts at the time of an attack, but are usually not found unless an intestinal intussusception is present.

#### PATHOLOGY

*Partial Intussusception.*—Microscopically a varying portion of appendix protrudes from the caecum. In the caecum may be palpated a tumor mass extending into the lumen, which is the intussuscepted portion of the appendix. The protruding portion shows signs of a chronic appendicitis; thickening of all coats with an engorgement of the blood vessels. It may show a cystic bulbous tip filled with mucous indicating a closed lumen at the base.

At the point of intussusception is a markedly thickened collar of caecum fitting over the appendix as a glove. The appendix in this area is also markedly thickened protruding downward with an inversion of all coats. In the appendico-

	Author	Reference	Age	Sex	Type	Duration	Diagnosed at	Result
1	McKidd.....	Edinburg Med. Jour., 1859, Vol. II, 763.	7	M	Class 3—total ileocaecal	several weeks	autopsy	Died
2	Chaffey.....	Lancet, 1888, Vol. II, 17.	3	M	Class 3—partial ileocaecal	3 weeks	Autopsy	Died
3	Knight.....	New Zealand Med. Jour., 1890-91, Vol. IV, 106.	1	no sex	Class 1—ileocaecal	½ days	Operation	Died
4	Hogarth.....	British Med. Jour., 1893, Vol. I, 850.	6	F	Class 3—total ileocaecal	6 weeks	Operation	Recovered
5	Wright and Renshaw....	British Med. Jour., 1897, Vol. I, 1470.	2½	M	Class 3—partial ileocaecal	1 year	Operation	No record
6	Pitts.....	Lancet, 1897, Vol. I, 1602.	2½	F	Class 3—partial ileocaecal	3 mos.	Operation	Recovered
7	McGraw.....	British Med. Jour., 1897, Vol. II, 956.	2	M	Class 3—total	consid. period	Operation	Recovered
8	Waterhouse.....	Trans. Path. Soc. London, 1897, Vol. II, 956.	4	F	Class 3—partial ileocaecal	5 days	Operation	Died
9	Colman.....	Trans. Clin. Soc. London, 1898, XLIX, London, 1898, Vol. XLIX, 108.	8	M	Class 3—total ileocaecal	5 mos.	Operation	Died
10	Lees.....	Lancet, 1898, Vol. I, 1400.	4½	M	Class 3—total ileocaecal	4 mos.	Operation	Recovered
11	Rolleston.....	Edinburg Med. & Chir. Jour. 1898, Vol. II, 21.	32	M	Class 3—partial	.....	Autopsy incidental	Died
12	Enderlein.....	Munchener Med. Wehnsr, 1900, 1021.	4½	M	Class 3—partial ileocaecal	4 mos.	Operation	Recovered
13	Montserrat.....	Liverpool Med. & Chir. Jour., 1901, Vol. XXI, 68.	4	M	Class 3—partial ileocaecal	1 mos.	Operation	Recovered
14	McFarland.....	Proc. Path.-Soc. Phila., 1902, Vol. IV, 163.	8	F	Class 1—ileocaecal	cons. period	Specimen passed	Recovered
15	Haesler.....	Archiv. F. Klin. Chir., 1902, Bd. 36, 817.	9	M	Class 3—total ileocaecal	4½ mos.	Operation	Recovered
16	Haesler.....	Same	42	F	Class 3—total ileocaecal	2 mos.	Operation	Recovered
17	Ackerman.....	Beitr. B. Klin. Chir., 1902, Bd. XXXVII, F. 580.	4	F	Class 3—total ileocaecal	6 mos.	Operation	Recovered
18	Westerman.....	Beitr. B. Klin. Chir., 1903, Bd. XXXVII, 585.	6	F	Class 3—total ileocaecal	Cons. period	Operation	No record
19	Bishop.....	Chironian, 1903, Vol. XX, 81.	5	M	Class 3—total ileocaecal	1 day	Operation	Recovered
20	Connot.....	Lancet, 1903, Vol. II, 600.	9	M	Class 3—total ileocaecal	2 mos.	Operation	No record
21	Haldane.....	Scottish Med. & Chir. Jour., 1903, Vol. XII, 333.	3	F	Class 3—partial	Cons. period	Operation	No record
22	Smith.....	Abdinal Surgery, Vol. II, 678.	.....	.....	Class 3—total ileocaecal	.....	Autopsy	Died
23	Power.....	Medical Record, 1910, Vol. LXVIII, (Mosko) 1087.	.....	.....	Class 3—partial	.....	Operation	No record
24	Brewer.....	American Med., Vol. IX, 63.	22	F	Class 3—total ileocaecal	5 mos.	Operation	Recovered.
25	Kuss and Guimbellot....	Bullet Mem. dela. Soc. Anat. Path., 1907, Vol. LXXXII, 487.	17	M	Class 3—total ileocaecal	1½ mos.	Operation	Recovered
26	Binney.....	Australian Med. Jour., 1908, Vol. XXVII, 358.	2	.....	Class 3—total ileocaecal	2 wks.	Operation	Recovered
27	Forniss.....	Am. Jour. Obst., 1908, Vol. LVIII, 307.	45	.....	Total inversion by Edebohls operation	.....	Operation	Recovered
28	Rogers.....	St. Paul Med. Jour., 1909, Vol. XI, 458.	8	M	Class 3—partial	1 day	Operation	Recovered
29	Rogers.....	Same	18	M	Class 3—partial	1 yr.	Operation	Recovered

	Author	Reference	Age	Sex	Type	Duration	Diagnosed at	Result
30	Moskovitz.....	Medical Record, 1910, Vol. LXXVIII, 1087.	4½	M	Class 3—partial	3 mos.	Operation	Recovered
31	Watson.....	Lancet, 1911, Vol. II, 942.	18	.....	Class 3—partial ileocaecal	6 wks.	Operation	Recovered
32	Young.....	Glasgow Med. Jour., 1911, Vol. LXXVI, 380.	4½	M	Class 3—partial	3 wks.	Operation	Recovered
33	Young.....	Same	24	F	Class 3—partial	cons. period	Operation	Recovered
34	Cooper.....	Lancet, 1911, Vol. I, 229.	10	M	Class 3—total	1 yr.	Operation	Recovered
35	Kirmisson.....	Bullet Mem. Soc. Chir. de Par., 1911, Vol. XIII, 936.	4	M	Class 3—partial	1 mo.	Operation	Recovered
36	Langemak.....	Munch. Med. Wehnschr., 1911, Vol. LVIII, 1564.	4	M	Class 3—total	.....	Operation	.....
37	McConnel & Wilson.....	Brit. Jour. Surg., 1913-14, Vol. I, 673.	50	F	Class 3—partial	2 mos.	Operation	.....
38	Burghard.....	Brit. Jour. Surg., 1913-14, Vol. I, 721.	60	M	Class 3—total ileocaecal	3 wks.	Operation	Died
39	Madero.....	Rev. Soc. Med. Argen Buen. Aer., 1914, Vol. XXII, 1101.	no	review	obtained			
40	Moskovitz.....	Ann. of Surg., 1914-, Vol. LX, 641.	10	M	Class 3—partial	cons. period	Operation	Recovered
41	Roquette.....	Brit. Jour. Surg., 1914, Vol. I, 722.	5	M	Ileo-caecal intuss. apex append. stump	12 days	Operation	Recovered
42	Corbett.....	British Med., 1914, Vol. I, 915.	4	M	Class 3—total ileocaecal	2 mos.	Operation	Recovered
43	Curry & Shaw.....	Lancet, 1916, Vol. I, 866.	8	F	Class 3—total	1 yr.	Operation	Recovered
44	Pollag.....	Deutsch Zshr. J. Chir. Leipz., 1916, 1916, CXXXV, Vol. III, 85.	9	M	Class 3—partial	4 mos.	Operation	Recovered
45	Johnson.....	Brit. Jour. Surg., 1915-1916, Vol. III, 564.	63	M	Class 3—partial	3 yrs.	Operation	Recovered
46	Fort.....	Medical Record, 1917, Vol. XCII, 741.	5	F	Class 3—partial	4 days	Operation	Recovered
47	Finsterer.....	Med. Klin. Bid. Wien. Klin. Wehnschr., 1917, Vol. XXX, 60.	no	review	obtained			
	McLennon.....	Clin. Jour., July, 1919, 78.	adult	F	Class 3—total ileocaecal	11 yrs.	Suspected previous to operation	Died
	McLennon.....	Same	adult	M	Class 3—partial	1 yr.	Operation	Recovered
	Blaxland.....	Brit. Jour. Surg., 1920, Vol. VIII, 229.	63	M	Class 3—total ileocaecal	6 wks.	Operation	Recovered
	Spurney.....		26	F	Class 3—partial	2 yrs.	Operation	Recovered

caecal junction necrosis and oedema of the mucosa is found microscopically.

Microscopically there is found in the intussuscepted portion a marked thickening of all coats with a deposit of fibrous tissue; at the appendico-caecal junction there is evident oedema with necrosis of the mucosa. Usually a marked infiltration of mononuclear cells is found.

*Total Intussusception.*—In total inversion the appendix is palpated as a tumor mass in the caecum; externally the only sign may be a dimple on the caecal wall. There is a complete inversion of all coats with different grades of oedema and necrosis throughout. Microscopical-

ly the picture is practically the same as that of the intussuscepted portion of a partial intussusception.

#### TREATMENT

At the present time this may be disposed of with very few words: Operation as soon as a positive diagnosis is made. Operative measures in these cases consists of, *first*, reduction of any intestinal intussusception that may be present; and *second*, removal of the appendix, which often means a resection of the head of the caecum. We do not deal here with the further operative procedures necessary in intestinal intussusception.

## ILLUSTRATIVE CASE REPORT

*Hospital Case No. 31041.*—Mrs. L. D., aged 26. Patient entered St. Luke's Hospital October 29, 1920, on the service of Dr. A. F. Spurney complaining of a slight dragging pain in her right side.

*Family history* was negative.

*Past history:* Pneumonia at the age of four years; measles and whooping cough in childhood. Menses commenced at thirteen years, and have been irregular but with very little pain. Patient says that she has been exceptionally healthy all her life.

*Present illness* began about 2 months ago with nausea and vomiting, with considerable paroxysmal pain in her right side. This condition persisted for two or three days, after which the patient felt perfectly well. It was repeated about one month before admission. At present the pain is a little more severe but without nausea. Neither constipation or diarrhea were marked even during an attack; there was no blood in the stool. On closer questioning she gives a history of some pain previous to her first severe attack. There has been no elevation of temperature as far as was known.

*Physical examination:* Well nourished white adult female, lying apparently comfortably in bed. Examination of head and throat negative; neck shows slight enlargement of thyroid with a feeling of nausea upon manipulation. Lungs negative. Heart slow, regular, no enlargement, no murmurs. Extremities negative. Abdomen no distention, no epigastric or umbilical tenderness. Liver and spleen not palpable; no tenderness over gall bladder; very moderate tenderness and rigidity on deep pressure in the right iliac fossa.

On admission temperature was 98°, pulse rate 88 and respirations 20.

## OPERATION

Operation October 30, 1920, Dr. A. F. Spurney operating. Low right rectus incision, peritoneum opened, preliminary examination of gall bladder negative; pelvis negative. Examination of the appendix showed a non-adherent appendix with base very much enlarged, thickened, firm on palpation, about which the caecum seemed to fit as a glove. It became evident that the appendiceal contents were protruding into the caecum for about one inch. Because of evident inability to remove the appendix by usual means, it was excised by a circular incision around the base of the caecum, resection of the head of the caecum being performed. Closure of the abdomen in layers with silk worm and clips to skin completed the operation. Patient ran a very normal post-operative course, temperature being normal after the fourth day. The wound healed by first intention. Patient was out of bed on the tenth day, and was discharged on the fourteenth day. At the present time she is in perfect health.

*Pathological report,* (Dr. Nyquist).—Pathological specimen No. B 34: The specimen is an appendix four inches long, with free tip. The tip is moderately thickened with engorged blood vessels, as would be seen in a chronic appendicitis. There is an enlargement beginning about two inches from the tip. At the point of enlargement it appears as if the caecum was pushed down over the appendix in a glove fashion. Diameter through the enlargement is 3/4 inches. A constricting ring is formed at the distal portion of the invagination. The caecal opening of the appendix is patulous and opens into the caecum with ragged edges. Microscopical examination shows the ordinary picture of a chronic appendicitis, with the addition, in the invaginated portion, of an oedema and thickening of all coats and a sloughing in the appendiceo-caecal junction. Diagnosis of partial intussusception of the appendix.

## NEW AND NON-OFFICIAL REMEDIES

During January the following articles were accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies: Abbott Laboratories—Butyn; G. W. Carnrick Co.—Solution Post-Pituitary; Parke, Davis and Co.—Pituitrin "O".

Pollen Protein Allergens-Squibb.—Powders consisting of the sodium chloride-soluble protein of the isolated pollen from various species of plants. The Pollen Protein Allergens-Squibb are intended only for diagnosis. For action, uses and dosage, see general article, "Pollen Extract Preparations", New and Nonofficial Remedies 1921, page 239. The following allergens have been accepted: Corn Pollen Allergen-Squibb, Goldenrod Pollen Allergen-Squibb, Orchard Grass Pollen Allergen-Squibb, Ragweed Pollen Allergen-Squibb, Rye Pollen Allergen-Squibb, Timothy Pollen Allergen-Squibb, E. R. Squibb and Sons, New York (Jour. A. M. A., Jan. 21, 1922, p. 193).

Chaulmoogra Derivatives.—Chaulmoogra oil is a fixed (fatty) oil. In addition to small quantities of the glycerides commonly found in fats, chaulmoogra oil contains the glycerides of a series of highly unsaturated fatty acids, chiefly chaulmoogric acid and hydnocarpic acid. The therapeutic properties of chaulmoogra oil appear to be due to these unsaturated fatty acids. Chaulmoogra oil is used in the treatment of leprosy, the bulk of the evidence indicating that it is of value though it does not have specific curative properties. Chaulmoogra oil is given by mouth or hypodermic injection. The sodium salts of the fatty acids of chaulmoogra oil and the ethyl esters prepared from these fatty acids have been used in the treatment of leprosy with claims that they are better tolerated than the oil.

## Cardiac Arrhythmia\*

J. J. REYNOLDS, M.D., Defiance

*Editor's Note.*—The profession is coming to a far more intimate knowledge of the heart, its functions, control and abnormalities. Even in otherwise seemingly healthy persons premature contractions may indicate systemic infections, myocarditis or digestive disturbances. Rapid heart action may be associated with ordinary or paroxysmal tachycardia, hyperthyroidism, auricular flutter or fibrillation. In addition the physician now has to contend with heart block and pulses alternans. In consequence the general practitioner will be interested in Dr. Reynolds' brief review of these conditions and their therapeutic indications. The cardiac aphorism, which he quotes, expresses an important truth well worth remembering—"The muscle is of more importance than the murmur and the rhythm is of more importance than the rate.

**I**RRREGULARITIES of heart action are due to various causes. When we think of these irregularities we consider the rate, the rhythm and the volume. Any or all of these may show arrhythmia.

The heart contains an elaborate conduction system to which I wish to call attention. This system carries the stimulus for contraction to the heart muscles. This conduction system begins with the sino-auricular node, or *pacemaker*, located at the junction of the superior vena cava with the right auricle. Here the stimuli originate. Next comes the atrio-ventricular node, or node of Tawara, at the junction of the right auricle with the right ventricle. Beyond this, the bundle of His, made up of nervous and muscular fibers and running from the node of Tawara down the wall of the right ventricle. Near the sulcus this bundle divides into two branches, one of which pierces the inter-ventricular septum and goes to the left ventricle, while the other branch supplies the right ventricle. These two branches divide into the fibers of Purkinje, which spread out over and into the ventricular walls.

### THE CARDIAC CYCLE

Allow me to pass in review what happens during one cardiac cycle. The cardiac cycle is the time intervening from the beginning of one cardiac systole to the beginning of another.

The cardiac cycle begins with the stimulus for contraction, which arises in the pacemaker, and which is conducted along the wall of the right auricle to the atrio-ventricular node and over the branches of the bundle of His. The mitral and the tri-cuspid valves stand open and the auricles contract. Next, the ventricles receive the stimulus from the fibers of Purkinje and contract; the contraction starting at the apex. Then the mitral and the tri-cuspid valves close. When the tension in the ventricles exceeds the tension in the aorta and the pulmonary artery, the aortic and pulmonary valves open, and the *pulse period* begins. Ventricular systole is then completed. Comparative relaxation of the ventricles occurs and when the pressure within them is lower than that in the aorta and pulmonary artery the aortic and pulmonary valves close,

and the *pulse period* ends. The ventricles further relax, the mitral and the tri-cuspid valves open and a new cycle begins.

### PREMATURE CONTRACTIONS

In the condition called *premature contractions*, we have an irregularity of rhythm. An occasional beat occurs too soon and the following pause is of correspondingly longer duration. A premature contraction is a weak beat, because the ventricle has not had time to fill entirely with blood: and besides, it has not had its usual rest and has not fully recovered its strength from the previous contraction.

They are thought to arise from an irritable focus either in the auricle or in the ventricle caused often by overwork inducing fatigue.

*In an otherwise healthy person premature contractions do not mean a diseased heart, and yet such a person should be watched. It is the type of irregularity which is found usually when a person says his heart stops, skips beats or turns over.*

The condition is best recognized when the person is at rest. Exercise, by increasing the force and frequency of the contractions, tends to obliterate the irregularity.

If the phenomenon follows some infectious disease; some weakness of the heart muscle is doubtless present.

Treatment should be directed toward the underlying cause: as systemic infection, fatigue, myocarditis, digestive disturbances, and nerve strain.

### RAPID HEART ACTION

A patient who has periods of *rapid heart action*, usually can be placed in one of the following five classes:—

1. Ordinary Tachycardia.
2. Hyperthyroidism.
3. Auricular Flutter.
4. Auricular Fibrillation.
5. True Paroxysmal Tachycardia.

*Ordinary Tachycardia* is the result of some lack of control by the pacemaker. Either diminished action of the pneumogastric or, as is thought to be more frequent, irritability caused by the sympathetic nerves.

It occurs in neurotics. Anxiety, worry and ex-

\*Read before the Defiance County Medical Society.





cessive emotions may be exciting factors. With the patient quiet or asleep the rate diminishes.

*Hyperthyroidism* is likewise a sympathetic irritation due to an excess of the thyroid secretion circulating in the blood.

The symptoms accompanying the rapid heart action in this class of cases will point to the diagnosis.

#### AURICULAR FLUTTER

*Auricular Flutter*, caused by some abnormal focus in the auricle, is a condition of partial heart block, not all the stimuli from the auricle reaching the ventricle. In the majority of cases it is a 2 to 1 heart block, *i. e.*, two contractions of the auricle to one of the ventricle. Occasionally it is 3 to 1 or 4 to 1. The auricular contractions are very incomplete but regular and in rate are from 200 to 300 per minute. The ventricular contractions also are regular. In an elderly person with a persistent heart rate of 120 or more, auricular flutter may be *suspected*. The suspicion is strengthened by the fact that the *rate does not alter* with change of position or with exercise.

The ventricular rate suddenly may become one-half of what it was at the onset of the period of rapidity, a point which *Lewis* considers significant. Symptoms are not prominent. Patients usually complain of fatigue.

It is probably impossible to make the diagnosis without the graphic record.

#### AURICULAR FIBRILLATION

*Auricular Fibrillation* is a condition in which the auricle, instead of receiving the stimulus from the pacemaker, has a number of foci sending out stimuli: and the result is haphazard, irregular contractions.

The auricle, instead of contracting normally, stands in trembling diastole, on account of these many foci antagonizing or neutralizing each other's efforts.

Some of these stimuli reach the node of Tawara and are carried on and produce contractions of the ventricles. The ventricular contractions are abnormal, now weak, now strong, but never regular.

Toxines in the system from infectious diseases may produce auricular fibrillation, but the condition is usually chronic. In the infinitely more frequent form the muscle of the auricle is found inflamed, degenerated or sclerosed. The valve lesion most frequently found in connection with auricular fibrillation is *mitral stenosis*.

Arterio-sclerosis is a common cause and fibrillation is said to be often a terminal *event* in arterio-sclerosis.

Then how may we recognize auricular fibrillation?

1. The pulse is persistently, continuously and absolutely irregular. It varies in rate, in rhythm and in volume.

2. The ventricle shows tumultuous disorder. The ear is confused by a babel of sounds. The systoles are very irregular in rate, rhythm and volume.

3. The *pulse deficit*. If one observer count the heart beats for one minute and another count the radial pulse for the same minute using the same watch the pulse count will be lower than the heart count: due to some of the ventricular contractions being too weak to open the aortic valve; and so fail to reach the wrist.

As minor symptoms we may mention cyanotic lips, shallow respiration, anxious countenance and guarded movements. As a usual thing auricular fibrillation is an evidence of serious damage to the musculature of the heart, and produces the signs and symptoms of circulatory failure. In contradistinction to auricular flutter the disturbance is increased by exercise but as a rule we would not be justified in resorting to this test in fibrillation.

This condition when due to myocardial degeneration is greatly benefitted by *digitalis*, which retards the conductivity from the atrio-ventricular node, thus slowing the heart, and it increases the *force* of the ventricular contractions. Morphine induces rest and stimulates the vagus and frequently is of benefit. It goes without saying that rest and quiet with a supporting diet and good elimination are important additions.

#### PAROXYSMAL TACHYCARDIA

*True Paroxysmal Tachycardia* is a continued

rapid succession of premature beats; the attack having a sudden beginning and an equally sudden ending. The irritable focus is usually in the auricle, rarely in the ventricle. People with arterio-sclerosis are the ones most frequently affected. The rate is rapid, from 160 to 180 and higher; rate is best counted at the heart. In my experience the attacks have been of short duration ( $\frac{1}{2}$  to 1 or 2 hours), but it is said that they may last for weeks.

Short, infrequent attacks need not alarm us much, but longer attacks, frequently repeated, may lead to myocardial exhaustion.

Treatment is unsettled. Attention to rest, quiet, light diet and proper elimination are to be advised. Digitalis is thought to do good sometimes. Morphine may be given for rest. We may keep very busy during such an attack and when it is over we cannot be sure which, if any, of our therapeutic efforts have done good. Medical writers tell us that pressure on the right pneumogastric nerve in the neck has aborted many attacks. Pressure should be increased gradually until the carotid pulse is obliterated, when no further increase should be made.

The point where pressure should be made is at the anterior edge of the sterno-mastoid just below the angle of the jaw.

In an article in the *Journal, A. M. A.*, April 30, 1921, this subject of vagus stimulation by pressure is discussed. Here are the conclusions:

1. It appears that the right vagus in man can be stimulated by pressure in the neck.
2. The effect of *mild* pressure may be slowing of the whole heart.
3. The effect of *strong* pressure may be cardiac standstill, and cessation of the heart's action for from 3 to 5 seconds is sufficient to produce *fainting*.
4. Both auricles and ventricles share in this effect.
5. Ventricular escapes may occur while the auricles are still inhibited.

#### HEART BLOCK

*Heart Block* is an interference with the normal working of the conduction system. This interference may occur at any point in the course of this system—from the pacemaker to the final distribution of the fibers of Purkinje. When but few of the stimuli are interrupted, and most of them pass on and cause ventricular contractions, we have a *low grade heart block*. When many are interrupted we have fewer ventricular systoles and we have a *high grade block*. When all the stimuli from the auricle are interrupted, none of them getting through, we have *complete heart block*.

The ventricle then initiates a rate of its own, usually about 30 beats to the minute, and entirely independent of the contractions of the auricle.

Greiwe, of Cincinnati, says that in heart block

the normal interval of  $\frac{1}{5}$  of a second between auricular and ventricular contraction may be increased to  $\frac{2}{5}$  or  $\frac{3}{5}$  of a second, or more. With the prolongation of the time to  $\frac{3}{5}$  of a second the ventricle fails to respond, and we have dropped beat. We have more contractions of the auricle than of the ventricle. If this dropping of a beat is only occasional it is referred to as partial heart block. When the contractions of auricle and ventricle are absolutely independent we have complete heart block. Greiwe says that heart block may come from focal infections *e. g.*, diseased tonsils and teeth. He also says that ventricular premature contractions are not uncommon in focal infections.

Rheumatic fever and diphtheria may cause heart block. Arterio-sclerosis is a frequent cause and syphilis also comes in for its share, by invading the fibers of the conduction system.

Heart block should be regarded as but a part of a more widely spread involvement of cardiac tissue.

A slow pulse of 50 or less is suspicious of heart-block.

The Stokes-Adam's syndrome occurs when the ventricular silence lasts over 3 or 4 seconds. It is caused by lack of blood supply to the brain; and is characterized by slow pulse-rate, syncope and epileptiform convulsions. In milder attacks, we find far away sensations, dizziness and momentary loss of consciousness with perhaps muscular twitchings. I may say that any heart affection which has progressed sufficiently to seriously affect the conduction system should be considered grave.

While digitalis diminishes the conductivity of the atrio-ventricular node, atropin increases this conduction and may thus establish a normal rhythm in partial heart-block.

#### PULSUS ALTERNANS

*Pulsus Alternans* is a condition of the heart in which every alternate radial pulsation is weak as compared with the others. This is due to some of the muscle fibers of the heart being too much fatigued to respond fully to all the ventricular stimuli. It indicates decided myocardial defect; and is of grave import.

Gordinier in the *American Journal of Medical Sciences* says that most of these patients are suffering from general arterio-sclerosis, hypertension, chronic myocarditis and chronic nephritis. In other words, with cardio vascular renal disease. He finds the condition to be of grave import; as it shows myocardial degeneration. He says that most of the patients will die from cardiac insufficiency in less than three years from the onset of the disturbance.

Every second pulse beat must be weak to be pulsus alternans. If it is every 3d or every 4th beat it does not belong to this class.

A nice scheme in diagnosis is to make gradually increasing pressure over the brachial artery

until the weak pulsations are eliminated, the pulse being reduced to  $\frac{1}{2}$  its former rate. The pressure may be made with the cuff of the sphygmomanometer.

The patient should be given the care that will best diminish heart effort, such as rest, elimination, regulation of diet and probably supportive cardiac medicines.

With a normal heart, beating 75 times a minute, the ventricular systole lasts .3 of a second and the diastole .5 of a second. This means that the working time of the heart bears a ratio to the resting time of 3 to 5 or 9 to 15, which means that the heart works 9 hours and rests 15 hours in each 24. Usually our patient's heart in the conditions under discussion needs rest, and this thought should be always in mind.

If digitalis increases the force of the systole

and delays conductivity from the atrio-ventricular node it gives the heart added rest.

In heart block, since conductivity is already delayed, digitalis would seem to be contraindicated and atropin, which increases conductivity, would be the proper remedy. A special reason why the heart in these conditions needs more rest is that in most cases there is a weakened myocardium.

Here is a cardiac aphorism which impresses me as expressing an important truth well worth remembering—

*"The muscle is of more importance than the murmur.*

*The rhythm is of more importance than the rate."*

506 WAYNE AVENUE.

## Immunity with Reference to Tuberculosis\*

C. C. KENNEDY, M.D., Bethel

*Editor's Note.*—Dr. Kennedy brings a newer viewpoint to bear on an old topic when he concludes that tuberculosis is a disease that develops under the laws of resistance of the immuned body, and in the treatment of which we are fighting a disease that is battling against a body with a certain degree of resistance. This is not a primary but a chronic pulmonary tuberculosis, a secondary infection; and in this battle the deficiencies of the immunity may be so slight that they may be overcome by alleviating the symptoms as they arise. Thus Dr. Kennedy believes we are too prone to say that we have cured a case of tuberculosis. These cases are not cured. The disease has become arrested by the individual's immunity.

**T**HE subject of immunity is one of such magnitude that to attempt to discuss it exhaustively in a short time, with reference to any disease, would be impossible. In the time allotted we will be able to discuss only briefly this very interesting and extremely important subject with reference to tuberculosis.

For some of the data of this paper I am indebted to Col. G. E. Bushnell, U. S. Army (retired) and to other instructors in a course given at General Hospital No. 16, New Haven, Conn.

### GENERAL CONSIDERATIONS

There is no such thing as *perfect immunity* to any disease, but there are varying degrees of *partial immunity* in many diseases, some of which approximate the absolute. We know that typhoid fever, scarlet fever, smallpox, cholera, cerebro-spinal meningitis, measles, whooping cough and a few other diseases usually confer a lasting immunity, while several others confer a varying degree.

Immunity is a *resistance*, either natural or acquired. There is a natural resistance which varies in every species of animals, and in the individual of each species, but in the case of tuberculosis, it is not sufficiently strong to afford any material protection against large doses of tubercle bacilli. If a guinea pig be given a large dose of tubercle bacilli, he will quickly die of acute

general miliary tuberculosis. We must admit then that should a perfectly healthy person be given a corresponding large dose, the results would be the same.

Practically every adult human being, brought up under civilized conditions, has come in contact with the tubercle bacilli and has undergone a certain degree of vaccination or immunization.

The one who has pulmonary tuberculosis is the one in whom the vaccination has been faulty and *visa versa*.

In the reading of X-ray plates of the chest, there is very little difference in appearance between the so-called normal plate and the plate of the *less* severe clinical case of pulmonary tuberculosis. The difference in the two being that the so-called normal plate will not show lines to the surface of the lung—usually at the apex.

### INFANTILE PRIMARY INFECTION

When does the primary infection take place? Alsteadt, in giving an account of his investigation in the binding of the complement by Much's partial tuberculosis antigens, found that of the population served by the hospitals of Hamburg, hardly any child reaches the second year without showing a positive reaction. This goes to show that with a sufficiently fine test nearly all infants, at all events nearly all infants in Hamburg, have come in contact with tuberculosis before they become two years old.

It is not only probable but undoubtedly true,

\*Read before the Clermont County Medical Society.

that children almost invariably get their vaccination or immunization during the so-called dirty age. They crawl upon the floor and place anything that they can get hold of into their mouth, the hands naturally and inevitably become contaminated with toys, etc., and the very fact that they get a small dose of tubercle bacilli with occasional remissions, is the thing that saves their life then or later from the disease.

The children of the ruler of one of the small European countries suddenly became ill of an acute general miliary tuberculosis and died. Subsequently it was discovered that the nurse of the children had a tubercular antrum of Hymore and had undoubtedly infected the children from the discharge. These children had been raised practically in seclusion and had not had the opportunity to develop an immunity.

#### LACK OF RACIAL IMMUNITY

This lack of immunity is further shown in the case of Eskimos, Indians, Negroes, South Sea Islanders and of late in the Turkish Empire. The Germans some years ago undertook to establish a series of hospitals and found medical schools in Turkey. The young men who came from all parts of the country to serve as orderlies in the hospitals and to study medicine died at first rapidly with tuberculosis. About 10 per cent. of the young men, who came in for these purposes, developed an acute extensive tuberculosis of a type usually different from that familiar to us, in that it more especially involved the bones and joints. Tuberculosis when it affected the lungs was of a more acute character than that usually met with. Though tuberculosis resembled that of childhood rather than that of adult years, showing that such immunity as may have been present was at least very imperfect. Similar experiences have been had in the Caucasus. It was found that when schools were first established in comparatively wild regions the pupils died of acute tuberculosis. The further one went from civilization the more rare and at the same time the more severe the cases of tuberculosis became. This is an illustration of the general law: the more tuberculosis there is in a country, the less severe, on an average, are the individual cases; which is another way of saying, where tuberculosis abounds there is an opportunity of acquiring an early immunity. It is quite evident that the best time to acquire immunity is in early childhood: the chances being much better that the individual will escape massive infections then, than it would be if he was large enough to roam about at will among the filth of the crowded quarters. A young child acquiring this immunity under the conditions of child life has a much better chance for life than a perfectly unprotected adult coming into the same unhygienic surroundings.

Too much importance should not be placed upon the family history in working out a diag-

nosis of tuberculosis. Insurance companies have recognized this fact for several years. Many physicians seem to think that the fact that relatives of a tuberculous patient, who have had tuberculosis is a strong point in the diagnosis. It, however, simply shows that there has more likely been an opportunity for the reception of a considerable dose of tuberculous poison, but if there is no evidence of a tuberculous environment that means little as respects opportunity for infection. Every child must have the opportunity for infection. The child in healthy surroundings has a better chance of getting a small infection.

#### SENSITIZATION

A German physician once investigated a remote village in which no case of pulmonary tuberculosis was known to have existed for ten years, and found that some twenty or thirty per cent. of the children reacted to the Von Pirquet test. It is, no doubt, an excellent thing for a child to become infected with tuberculosis if it is not done too soon, if it is done in the right way and not too often. It is shown by abundant experimentation in animals that when an animal is first infected with tuberculosis the immunity does not reach its highest point at once. It is a great mistake in testing immunization from tuberculosis to do it by early multiple infections. *Calmette found that if you gave an animal a single small injection of a tubercle bacilli it would develop a marked immunity, but if it were given a number of small injections at short intervals it died more quickly than the unprotected animal, showing that re-infection in the period of sensitization immediately after the primary infection is a peculiarly deadly thing.*

Sensitization is a phenomena which takes place in the body soon after the primary infection and becomes progressively less as immunity is established and practically becomes nothing as immunity reaches the maximum. Therefore sensitization diminishes in direct ratio to increase of immunity.

#### ESTABLISHING IMMUNITY

What is the size of the primary infection. Is it possible to infect an animal with one tubercle bacilli? It is said to be if the bacillus is very virulent or if, in other words, the animals resistance is very low. As a rule, however, a very small infection does not infect, so far as can be determined, under the conditions of experimentation. It is impossible for us to determine, in case an animal develops tuberculosis, six months or a year after a very small infection, whether the tuberculosis is a result of the primary infection or whether it arose from some later infection that was not noticed. We recognize, therefore, what is called the *threshold of infection*. Doses of tubercle bacilli have multiplied so as to rise above the threshold of infection. Now suppose the child in the *dirty age* picks up a tubercle bacillus today and one tomorrow, and so on. So

long as the bacilli are below the threshold of infection nothing happens. In time, either because more bacilli are added or because the bacilli already collected have multiplied, their number will become sufficiently great to infect, that is—there is an irritation from the tubercle bacilli which is sufficient to arouse a resistance of the organism of the child. The interesting thing about infection in this way is that it is acquired by the smallest possible dose. The change takes place at once in all the tissues of the child as can be detected by biological experiment (tuberculin), but a high immunity is not quickly developed. The child has started well in the vaccination, and if he can be shielded from the repetition of infections, especially large infections, and if his health is good and his surroundings hygienic he has every prospect of completing the vaccinating process successfully and remaining protected during life against tuberculosis.

This process of dissensitizing or establishing an immunity is a slow one, and takes months or even years to be completed. The work of Roemer in the laboratory of Von Behring proved this conclusively.

#### UNIVERSALITY OF TUBERCULAR INFECTION

How is it that we know that tuberculosis is so widespread in civilized man as to be practically universal? There are two chief sources of information; *first*, the tuberculin test, and *second*, the result of autopsy. Tuberculin tests are given subcutaneously, cutaneously (Von Pirquet) and intracutaneously.

Koch's conclusions, after investigation with his tuberculin, were that any tuberculous person would react to 10 mg. or less, and that a healthy person would react to approximately 25 mg.; yet possibly a person having a very high resistance might take that much without reacting, even though they may have the disease.

It is believed that practically every adult will react to tuberculin if it is given often enough and in large enough doses. Now the reaction to tuberculin is an absolute evidence that the organism has come in contact with tubercle bacilli before, because human beings who have not thus come in contact with tuberculous poison will take any quantity of tuberculin without results. Young infants have been given several grams, in one case I believe as high as seven grams, of tuberculin without producing any reaction.

At one time a positive tuberculin reaction was considered as evidence of an active tuberculosis. All it really means is, that there is present a tuberculous infection in a stage, that has not gotten past some degree of sensitization, though not in the sense, that reinfection with the tubercle bacilli would necessarily be injurious.

There is an analogy between sensitization to tuberculin and sensitization to reinfection, but such analogy should not be drawn too closely.

The facts concerning the children were ob-

tained by the Von Pirquet test, which is easily administered and relatively harmless. He showed that over 90 per cent. of all children examined in Vienna under 14 years of age reacted.

Besides the biological tests during life, we have various means of examination of tissues after death to determine whether tuberculosis has existed before death. Naegeli, of Zurich, and Burkhardt, of Dresden, made extensive investigations, especially in the aged, and found that practically 100 per cent. showed the existence of some degree of tuberculosis.

Albrecht, examining the glands of children who died of various diseases, not tuberculosis, in hospitals in Vienna, by means of microscopic sections and the inoculations of animals, found that about 80 per cent. of the cases gave evidence of tuberculosis, showing a marked correspondence with the results obtained by Von Pirquet in a very different way. As the experiments of Alsteadt show, it is quite possible that the child might have already passed the threshold of infection and still not react to a coarse test like tuberculin injected subcutaneously or applied to cutaneous scarification. Care must be taken if this method be employed, to differentiate between a reaction and a necrosis due to malnutrition.

The most delicate test is the injection of portions of tissues, usually from the large lymphatic glands, into guinea pigs, or other animals and noting whether or not tuberculosis develops.

We have then three methods of testing the dead body to determine whether or not tuberculosis has existed: *first*, macroscopic inspection; *second*, microscopic examination, and *third*, biological examination, consisting in infecting animals.

To review our results, we may say that the existence of the tuberculosis infection is shown in a very large percentage in civilized persons in early childhood or infancy; that by biological tests and the examination of the dead body about the same percentage is obtained; and that neither the tests with tuberculin, nor the experiments by infection are so infallible that a negative result necessarily proves the absence of tubercle bacilli from the body.

#### ADOLESCENT TUBERCULOSIS

The disease, however, is in my judgment not so absolutely latent as we might suppose. You have all seen children, say from 12 to 15 years of age, who are delicate, languid, with no appetite and yet in the same time have no disease that we can give a name to. Such children are often kept out of school for a year. Gradually the ill health improves as a rule and the condition, whatever it has been, passes off, possibly with a result that adult life is vigorous. I believe that such conditions are often a deep seated tuberculosis. If you will examine the radiographs of the adult you will often find lines

pretty well marked, extending downward and outward from the hilus. It is customary for many Roentgenologists to consider that these lines are due to non-specific irritation, which may possibly be so.

At the same time these lines are occasionally accompanied by dots which occur chiefly at the bifurcation of vessels and air tubes and are undoubtedly of tuberculous origin. No one will dispute that these appearances are due almost exclusively to tuberculosis. The point which I wish to make is that the system of lines without the dots resembles the system with these dots. In my judgment the difference is mainly that the lines of the system without dots, belong to cases of higher immunity. In other words, we consider that these symptoms are evidence largely of tuberculous lymphangitis, whereas, in the other condition to the lymphangitis there has been superadded tuberculous adenitis.

An interesting thing about these lines is that they are confined to the deep lung save in comparatively rare cases, where a line or two may run clear to the diaphragmatic pleura, where there is usually an opacity representing a healed tubercle.

The fact that these lines are confined to the deep lung explains, of course, the absence of clinical signs; the adolescent has been going through a period of tuberculosis which may be called the period of deep pulmonary extension.

The definite localization of these lines, in the least mobile parts of the lung, is another point in favor of them being tuberculous, as it is a disease of definite localization and such localizations occur in direct ratio to resistance. Often children go through this period, showing no signs of clinical tuberculosis. When the child reaches the age of adolescence he usually has to stop play and go to work, whether he feels like it or not. He begins to feel the real strain and at the same time usually does not exert care about his manner of living. The individual has then reached the stage when the deep tuberculosis is liable to extend and become a clinically manifested disease; whether this will occur, depends in my judgment upon the amount of immunity established in childhood.

#### LATENCY OF TUBERCULOSIS

Some pathologists object to this view of latency of tuberculosis and yet freely admit the latency of syphilis for years, whereas the spirchete would seem to be a much more delicate organism than the tubercle. Surgeons have reported cases in which pyogenic bacteria, the staphylococcus and streptococcus lived for years and then caused trouble.

This was proved during the World War. When a second operation was contemplated the tissues were massaged to see if an abnormal amount of irritation resulted; if so, the operation was deferred or given up, for experience has shown

that a clean operation over an old wound will often result in a bad reinfection from the organisms that lie dormant beneath.

Another fact which goes to show the possibility of the long latency of the tubercle bacillus is the fact pointed out by Staeholin, who noted that when people died of Cachexia, such as cancer, microscopic examination would often show the presence of small tuberculous lesions in the vicinity of old and hard hilus glands and evidently having proceeded from these glands, his idea being that the vital resistance was so lowered by the Cachexia that the tubercle bacilli could begin to grow, though of course, the process was of no clinical importance, and simply served to show that bacteria were present, although they gave no sign, until the failure of the vital powers which preceded death.

One of the most important proofs of immunity is the fact that the tuberculosis that we have in adults is different than in children. The adult tuberculosis is localized, the child tuberculosis is usually generalized miliary tuberculosis. Localization is always a sign of immunity. If we could not localize pus germs, we would die of septicaemia; if we do localize them we have an abscess. If persons having no immunity should have pneumonia they would have a pneumococcus septicaemia.

#### LOCALIZATION OF TUBERCULOSIS

In localized tuberculosis we have the disease localized not only in the lungs, but in definite portions of the lung. This localization is governed by the laws of resistance. The localization then, which is characteristic of tuberculosis, usually is not due to tubercle bacillus, but is due to the resistance of the organism, that is, the immunity of the organization against the tubercle bacillus which prevents its establishing a colony, except in places which, for one reason or another, are most favorable to it.

In the lungs the most favorable place for bacilli is in parts of least motion, and in parts of least vascularity; of least motion, in order that colonies developing under difficult conditions may be disturbed as little as possible; of least vascularity in order that too large quantities of anti-bodies may not interfere with their growth. The X-ray shows very beautifully that the tubercle bacilli collected in the glands of the hilus tend to spread out along the large tubes in the peri-vascular and peri-bronchial tissue. Here they encounter no large lymph streams to sweep them away. They can spread by contiguity and, if necessary, take years in journeying through the deep part of the lungs; here, usually, being confined to bronchi and vessels nearest the spine, and in the adult; of the para-vertebral portions of the upper lobe. The disease may be arrested in the deep lung or it may extend to the surface of the lung, usually at the apex. The ability of tubercle bacilli to colonize

in the more mobile portions of the lungs is a sign of a great diminution of immunity.

Now the reasons that the apex is most frequently involved of the more moveable parts of the lung are these:—The lower part of the lungs are very mobile for two reasons, (1) the vascularity of that portion of the lung itself and (2) the movement of the diaphragm in respiration. The apex of the lung, although very vascular, is not well aerated, except in extraordinary respiration, and also in people of sedentary occupation, sitting at desks, etc., with the shoulders stooped, makes it mechanically harder for the apex to be moved in respiration.

The great difficulty in the use of the term *immunity* in tuberculosis is the fact that a man with some immunity may still be unable to restrain the tuberculous process. You may ask what is the use of the word *immunity* if the immune individual is going to die of tuberculosis. But if the immunity has been sufficient to localize the disease to the lungs and compel it to take years or decades to finish its course it certainly has conferred a great benefit upon the individual, who otherwise would have died speedily of a generalized tuberculosis. Then, the immunity shows itself, *first* in the localization of the tuberculous process, that is, tubercle bacilli which escape from the lesions, enter the blood and circulate through the body cannot grow and form

colonies in parts of the body away from the original focus.

It was formerly believed that the presence of tubercle bacilli in the blood rendered the individual in great danger of developing general tuberculosis. This has been shown to be erroneous, and that there is very little danger of the disease spreading to other organs of the body, but is more likely to be confined to the lungs, spreading by continuity of tissues there. It is in this way cavities are formed; or in the case of some other diseases, of gummas.

#### CONCLUSIONS

In closing, then, we conclude that tuberculosis is a disease that develops under the laws of resistance of the immuned body to the disease, and in the treatment we are fighting a disease that is battling against a body with a certain degree of resistance. Not a primary pulmonary tuberculosis but a chronic pulmonary tuberculosis, a secondary infection; and in this battle the deficiencies of the immunity may be so slight that they may be overcome by alleviating the symptoms as they arise. At the same time, put the patient to rest, have an abundance of good food and fresh air. Thus we are too prone to say that we have cured a case of tuberculosis. These cases are not cured. The disease has become arrested by the individual's immunity.

## Some Suggestions on the Relation of Congenital Syphilis to Juvenile Delinquency\*

H. H. GODDARD, Ph. D., Columbus

*Editor's Note.*—If crime is to be prevented it is very important that those concerned with juvenile delinquency should be able to anticipate certain tendencies in the young. It is certainly an interesting observation that congenital syphilis should, for all practical purposes, determine the conduct and reactions of the young to their environment. It is an even more challenging idea to conceive that such conduct predicates congenital syphilis although all routine tests may be negative. And yet the broad experience of Dr. Goddard in juvenile research is bringing him more and more to this opinion and conclusion.

**T**HIS PAPER lays no claim to being the report of a finished piece of work, but the Bureau of Juvenile Research belongs to the people of Ohio and we look especially to the medical profession for help and suggestions and cooperation and it is but fair that we should report to you the lines along which we are thinking and the direction in which we seem to be trending. The matter here presented has proved of great interest to a number of individual physicians and it was thought it would be of interest to this group.

#### METHOD OF INVESTIGATION

All thoughtful people realize that with the increasing crime and increasing cost of crime, the

problem of the cause or causes of delinquency is one of the most fundamental. In a matter so complicated as the misdemeanors of children, the discovery of the causes of delinquency can only be made by the most careful and painstaking scientific procedure and by the collection of data on many cases, and the investigation to determine any correlations that may exist between physical, mental, environmental or hereditary conditions and the conduct whose causes we are trying to discover.

The children, who are committed to the Bureau, are studied, psychologically, physically, socially; their heredity is investigated, their conduct observed and everything pertaining to them is recorded. A blood test is a routine procedure. Along with positive Wassermann's there is found usually a group of physical

\*Read before the Section on Public Health and Hygiene of the Ohio State Medical Association during the Diamond Jubilee Meeting, at Columbus, May 3-5, 1921.

stigmata that are known to every worker with congenital syphilitics. It was not long until we discovered that in connection with these two lines of approach there were also typical reactions to the mental test. And fourthly it was soon discovered that the syphilitics have similar histories as to conduct.

The correlation between these four lines of observation in all cases of *known* congenital syphilitics was very marked. So high was this correlation that we came to speak of syphilitic conduct and syphilitic examinations, meaning it was the kind of conduct and the kind of test response that we found in known cases of congenital syphilis. But no sooner had we become appreciative of the type of conduct and type of reaction to the mental test than we discovered these typical responses in cases that did not give a positive Wassermann. In cases where we found the physical stigmata of syphilis this absence of a positive Wassermann did not disturb us since it is well known that the *negative* Wassermann is of very little significance, some claiming it to be fifty per cent. accurate and others, like Southard, claiming that it has no value. So that in time we came to regard the three as ample to establish the presence of congenital syphilis. This was confirmed of course in a great many cases by actual histories of syphilis in the family. It is the next step that is surprising, yet perhaps it is only because it is new that it is hard to accept.

#### BEHAVIOR AS AN INDICATION OF CONGENITAL SYPHILIS

We find that there are cases in which we get our typical mental reactions and the typical behavior but no positive blood test and no physical stigmata of syphilis. The question is "are these congenital syphilitics"? If this is to be answered in the affirmative it follows that whenever we get the typical mental reactions and the typical behavior then we shall conclude that it is a case of congenital syphilis. At first thought this seems too absurd for consideration. But many a natural law has lain undiscovered for long years because it seems too ridiculous to contemplate. Consequently the modern scientist does not refuse to consider a theory simply because the proposition seems absurd. And looking at the matter more closely, why should it be absurd to diagnose congenital syphilis from conduct any more than many other things which we do in everyday life. We diagnose insanity by the behavior; while another type of behavior indicates intoxication. If one wishes to look to the physiological side there seems to be no greater difficulty. We know that poisons are selective and it is entirely consistent with all that we know, both of brain anatomy and the action of poison, that the poison of syphilis might destroy certain recently developed brain cells which act as controls over natural impulses. So

that the child whose brain cells are thus injured would be incapable of controlling his natural impulses and would therefore lie and steal and commit sex offenses *ad libitum*.

Be that as it may, we have, as a matter of fact, discovered a number of cases that show both the mental peculiarities and the typical behavior, who did not give a positive Wassermann and who did not show any physical stigmata of syphilis. A large number of these suspects, as we may call them, have been confirmed by later discoveries of the family history.

#### ILLUSTRATIVE CASES

One or two cases will illustrate this. One boy, about fifteen years of age, gave no indication of congenital syphilis except in the conduct and tests. He was retained at the Bureau for several weeks for observation because his case was very difficult to explain. The more we watched his conduct the more convinced we became that he was exactly like the other cases that had proved to be congenital syphilitics. Finally the conviction became so strong that we thought it imperative to make an effort to discover the family history. We succeeded eventually in getting hold of the family physician, when the situation was explained to the physician he replied that the boy's father had been syphilitic and that the boy was covered with syphilitic sores when born and that he had treated him for three years for the disease. This case is interesting not only as confirming our suspicion but as giving us a hint, which must be confirmed by careful study of course, that perhaps this early treatment of the disease has the effect of rendering the blood normal and of preventing the usual physical stigmata, but does not save the brain cells (they having evidently been already damaged beyond help); with the result that the disturbed brain cells render the patient incapable of normal conduct, both in his natural environment and in response to mental tests.

In another similar case it was found, after considerable investigation, that a sister of our boy had been treated for congenital syphilis. Of course that alone would not prove that our boy had the same disease, but taken in connection with the symptoms already described it would seem to be fairly satisfactory evidence.

#### DISCUSSION

I quite agree with most of what has been said and written about syphilis causing feeble-mindedness. I have for a number of years maintained that there was no evidence that syphilis did cause feeble-mindedness. But we are not discussing feeble-mindedness, we are considering abnormality rather than subnormality. Many of these children are of normal level and some even precocious but their minds do not function right, therefore, they do the things that they should not do.



I am asked whether I could take a clinic of twenty-five children and pick out the congenital syphilitics by means of the mental tests and their behavior. I will answer: "for purposes of study and research, yes. For purposes of social disposition, no." For we have no right to dispose of a social problem on the basis of an unverified theory.

It has been objected that it is difficult to see how the syphilitic poison can possibly produce the conduct. I suppose no one would say, that was a valid reason for discarding the facts if they should show that the poison does actually produce the conduct.

I may say in passing that Fournier, who has written extensively on this subject, has many statements that corroborate the above view. Of

course it is true that the presence of the syphilis in some of these cases may be a coincidence and we have not proved that every congenital syphilitic behaves in this way or that no non-syphilitic ever behaves this way. As was stated we are in the very beginning of this study and have merely taken you into our confidence, telling you what we are working on and what the problem looks like at the present time.

#### CONCLUSION

In conclusion I would repeat that this is only a tentative suggestion, we have arrived at no scientific conclusions and are not handling cases on the basis of this view. But it seems an interesting lead and we are prepared to accept it or abandon it as further facts may require.

## The Use of Forceps in Obstetrics\*

A. H. BILL, M.D., Cleveland

*Editor's Note.*—In view of the fact that the first stage of labor may be made fairly comfortable for the mother by various means now at the disposal of obstetricians, it is not advisable, in the opinion of Dr. Bill, to use forceps until after the cervix has fully dilated. Even during the second stage forceps are not always indicated in preference to version. When used with proper discretion forceps are invaluable in changing bad presentations into good and in avoiding more difficult operative procedures. If however, Caesarean section would seem to be indicated at all, no attempts at delivery by other methods should be tried. The real field for forceps is coming more and more to be that which is now termed "prophylactic forceps deliveries." In dealing with the use of forceps under these circumstances Dr. Bill lays down ten fundamental and comprehensive rules, the following of which adds materially to the safety of the mother and child and the betterment of obstetrics.

THE VIEWS expressed in this paper are those of one who uses forceps very freely and yet realizes their limitations, but who believes not so much in a radical curtailment of their use as in the more accurate use of them and the better selection of cases which are suitable, as well as the elimination of those cases which may be better handled by other methods. Although an inestimable amount of damage, both to mother and child, has been done in the careless use of forceps, on the other hand wonderfully beneficial results have been obtained in their accurate and careful use. The object of this paper is to attempt to show the way to eliminate the former, and to enhance the latter.

#### FORCEPS CONTRA-INDICATED IN THE FIRST STAGE OF LABOR

Forceps should not be thought of so much as instruments of force as of instruments for manipulation and guidance of the fetal head as it follows the normal mechanism of labor. One, who would do the best work with forceps, will try to see how little traction force he can use in the delivery and will realize that if undue traction force is required, in all probability he is not making the most accurate use of the for-

ceps, or perhaps they are even contraindicated in the case in question.

To begin with, let me emphasize the fact that forceps essentially have no place in the *first stage* of labor. Much of the harm resulting from their use has been due to too early application in cases in which the cervix has not been fully dilated. The physician too frequently makes the mistake of pulling against an undilated cervix to overcome the resistance of which he is required to use unusual traction force, and this subjects the child's head to unnecessary pressure. Responsibility for this rests not alone upon the physician, but, in part, upon the relatives of the patient. In many cases, pressure brought to bear upon the physician to terminate labor, on account of the patient's suffering, induces him to yield, and in spite of what should be his better judgment, he attempts a forceps delivery, which is in reality contraindicated. This situation may be entirely eradicated by the more general use of analgesia and anesthesia in the first stage, for if the patient is not suffering, everyone is content to allow this part of labor to take its natural course.

This, then, is the first point which I wish to emphasize; *namely*, that as a general rule the first stage of labor should not be interrupted by the use of forceps. The writer has followed a policy of making labor easy and of terminating

\*Read before the Section of Obstetrics and Pediatrics, of the Ohio State Medical Association, during the Diamond Jubilee Meeting, at Columbus, May 3-5, 1921.

it as soon as seemed justifiable, and yet, in his experience, in 70 per cent. of cases, the head has passed spontaneously through the cervix. If, in special cases, a termination of labor by forceps should be indicated, before full dilatation of the cervix, the latter should be obliterated by thorough manual dilatation before any traction is made.

#### CASES HANDLED

As a basis upon which to discuss cases suitable and unsuitable for forceps delivery, I have taken the last 500 operative deliveries which I have personally performed. In this list there were:—

High Forceps .....	44
(including 37 posterior positions converted by forceps)	
Medium Forceps .....	82
(including 39 posterior positions converted by forceps)	
Low Forceps .....	244
(including 10 posterior positions converted by forceps)	
Podalic Versions .....	66
(including 45 posterior positions)	
Breech Extractions .....	26
Caesarean Sections .....	31
Vaginal Caesarean Sections.....	3
Craniotomies .....	2
Pubiotomies .....	2
	500

#### SELECTION OF FORCEPS CASES

The selection of cases suitable for forceps delivery offers a problem of first importance. No doubt in a considerable percentage of cases, in which forceps delivery is attempted, there are contraindications which have not been heeded or realized, and the birth could be accomplished more safely by other methods. This applies chiefly to a variety of cases in which the head is at the superior strait and high forceps delivery is attempted. The writer believes that the practice of performing high forceps operations should be greatly reduced, and in fact almost eliminated, with the exception of cases of vertex occipito-posterior positions, in which the pelvic measurements are sufficient to allow the head to come down in a normal anterior position, but do not allow it to progress in its abnormal position. In such a case, rotation to an anterior position, followed by high forceps, is justifiable.

There is, however, even in such a case, a choice between podalic version and high forceps. I sometimes resort to one procedure and sometimes to the other, the decision usually being based upon the state of contraction of the uterus at the time of operating. To illustrate, in 82 such cases, I performed 45 versions and 37 high forceps with equally satisfactory results in the cases as selected. In cases of brow presentation, face presentation with chin to the rear, and lateral deviations with presentation of one parietal bone, the podalic version should be performed instead of high forceps, as in none of

these can the best application be made and the head brought into the pelvis in a way which corresponds to the normal mechanism of labor.

The case of the head held up at the brim while in a normal position furnishes a still more trying problem and undoubtedly one in which more mistakes are made. The decision in such a case, as to whether to attempt to deliver the head through the pelvis with forceps or to perform a Caesarean Section, depends entirely upon the experience and judgment of the obstetrician, and is sometimes a most difficult question to decide. Daring attempts at forceps delivery in such cases are, to be sure, sometimes followed with success, but far more often with failure. The unfortunate result of an unsuccessful attempt at high forceps delivery is that it precludes the possibility of delivering the patient later by Caesarean Section. How often the consultant, who sees such a case, is so handicapped by the previous attempts at forceps delivery that he cannot handle the case in a manner in which he would have handled it if he had seen the patient in the first place: and can only content himself with bringing the patient out of a wretched situation as best he can under the circumstances, although most unsatisfactory to him.

I would speak most earnestly against tampering in such cases where the physician is not perfectly sure of his ground. Let him always bear in mind the fact that vaginal examinations and attempts at forceps delivery furnish contraindications to Caesarean section. I believe that the high forceps operation should be practically eliminated, with the exception of the class of posterior positions already mentioned. Of the 44 high forceps operations in the list given, 37 were for posterior positions and 7 for other reasons. The fact that in 500 operative deliveries, I performed an essential high forceps delivery only 7 times illustrates my own attempts at the abandonment of this procedure.

#### RULES FOR ROUTINE FORCEPS DELIVERIES

The real field for forceps work is therefore in those cases in which the fetal head is in the pelvic cavity. In the table given, there were 326 such forceps deliveries, in 49 of which the head was rotated with forceps from a posterior position to an anterior position, leaving 277 cases of the type which have sometimes been called *prophylactic forceps deliveries*.

In the discussion of cases of this type, suitable for forceps work, I wish to point out certain essential points which should always be followed, but which unfortunately are not, simple as some of them seem:—

(1) An accurate diagnosis of the position and station of the head must be made. If the physician does not know these facts, he has no right to apply forceps, for he can neither make a proper application, nor has he any idea of what he is doing while making traction. If the posi-

tion does not happen to be a normal one, he must necessarily exert uncalled for traction force, for he is attempting to make the head follow an unnatural course through the pelvis.

(2) An accurate cephalic application with the blades applied over the sides of the head can be made, and should be made in every case before traction is begun. The practice of making pelvic applications,—that is, of always applying the blades in the same relative position to the pelvic curve and letting them grasp the head in any manner in which they happen to,—is exceedingly crude and unscientific. In such instances, the blades tend to slip, and at best, the head does not, in its descent, follow the path corresponding to the normal mechanism of labor, necessitating an unnecessary amount of traction force with its resultant dangers. The best test of the accuracy of an application is in the relative position of the blades to the lambdoid sutures. If the application is the best, the blades will lie parallel to the lambdoid sutures and equidistant from them, being about a finger's breadth from each.

(3) All posterior and transverse positions of the head should be converted into anterior positions by forceps before any traction is made. Too great emphasis cannot be laid upon this point as a most important step toward the reduction of the traction force necessary to deliver the head. Traction should never be made upon a head in anything but a normal anterior position, *i. e.*, a position in which during the delivery, the head will follow the same path which it follows in the normal mechanism of labor. Much of the damage done with forceps is in cases of occipito-posterior position of the vertex, in which attempts are made to deliver the head without first rotating. Let me emphasize the fact that the head may be rotated by forceps at any station, although as I have said before, in some of the cases in which the head is at the pelvic brim, podalic version may be preferred.

(4) The elimination as far as possible of the resistance of the soft parts by thorough, though slow, manual dilatation of the birth canal. The aim of this step is again toward the reduction of traction force to a minimum, and in addition toward the prevention of laceration. In my own experience, this procedure has greatly reduced the number of lacerations, and the extent of the tears in cases in which they occur. It has convinced me that the routine practice of performing episiotomy or perineotomy is unnecessary. I seldom resort to them. Even the worst tears which occur are practically never as extensive as the episiotomy cut.

(5) Axis traction should always be made. If one deviates even slightly from the most accurate direction of traction, the head meets with unnatural resistance, and more force is required, all to the detriment of the child. There is no doubt that more accurate traction may be made with axis traction forceps than by the so-called *Jajot's*

*Maneuver*, with ordinary forceps. It is unfortunate that the axis traction forceps have been thought of as applicable to the high forceps cases alone. I invariably make use of them in cases of medium forceps and very frequently even in low forceps work. I would urge the more general use of this type of forceps and the principle of axis traction. The time has come for the physician to get away from the idea of simply pulling the baby out and to attempt to develop extreme accuracy in the use of forceps.

(6) During the process of making traction, every effort should be made toward reducing the force to a minimum. Let the operator see how little traction he can make and still accomplish the birth. This is best accomplished by taking a far greater amount of time that is usually done and being content to see the head make a *very* slight advance with each traction. In this connection, I have found it beneficial to revive the old, but sometimes forgotten, function of the forceps, the so-called *dynamic action*, by which is meant that when traction is made, the patient will be stimulated to strain, and add her efforts to those of the operator. It is perfectly possible to make use of this function with the patient so far under anesthesia, that she knows nothing of what is going on. For example, after having made the application and having accomplished any preliminary manipulation, such as rotation, which requires relaxation, I invariably lighten the anaesthesia with this end in view, never, however, allowing the patient to reach a state of consciousness. This is simply another step toward the reduction of necessary traction force.

(7) Efforts should be directed toward promoting flexion of the head, especially when it is being brought under the pubic arch, and through the vulvar orifice, so that the latter may be distended to the size of the sub-occipito-frontal circumference instead of the larger occipito-frontal circumference.

(8) Disuse of the so-called operative obstetric position of the patient for forceps delivery, and substitution of a position with the thighs of the patient horizontal and the knees as close together as is compatible with asepsis and convenience in working. This position undoubtedly favors relaxation of the perineum and lessens the danger of laceration.

(9) The removal of the forceps, as soon as the chin may be felt below the perineum, and the subsequent shelling out of the head by *Ritgen's Maneuver*, is preferable to the practice of keeping the blades on until the head is completely delivered, inasmuch as the blades take up an appreciable amount of room in the vulvar orifice. From what has been said, it will be seen that in the refinement of forceps work, every effort should be made toward availing ourselves of the benefit of all points in technique, which will lessen the amount of traction force required of the obstetrician, with the view to reducing this to a

minimum. An obstetrician should never be required to exert anything like his full strength in delivering with forceps. If it is necessary to do this to accomplish the birth, forceps are contra-indicated in the case in hand.

(10) Frequent watching of the fetal heart during the delivery. The slowness of the delivery may be regulated somewhat by the action of the fetal heart.

#### PROPHYLACTIC FORCEPS

Mention has been made of the so-called *prophylactic forceps operation*. By this is meant the routine use of forceps for the termination of labor when the head has passed completely through the cervix and is at the pelvic outlet. While I personally follow this policy, as you may judge from the number of low forceps deliveries in the list of operations reported, I do not feel quite ready to advocate it as a general practice. No doubt in careless hands, this would be an unwise procedure. However, if the ut-

most care is taken in following the various points upon which stress has been laid, the results will be beneficial, both to the mother and the child. The benefits consist in greatly diminishing the suffering and exhaustion of the mother; in shortening the time during which the child is subjected to pressure upon its head, and pressure upon its cord; and in lessening the dangers of laceration, because the thorough relaxation of the patient at the termination of the delivery allows of better control of the head.

In the list of indications for the use of forceps usually given in works on obstetrics, little or nothing is said of their usefulness in reducing the suffering and exhaustion of the patient. It is very gratifying to note the present day efforts towards this end. Some of these may be misdirected efforts, but are nevertheless somewhat worthy of commendation. Obstetric practice is passing through a period of extensive revision, and in this revision, the humanitarian features are receiving first consideration.

## The Newer Method in the Treatment of Burns with Report of Cases\*

GILBERT R. MICKLETHWAITE, M.D., Portsmouth

*Editor's Note.*—One of the most difficult problems, with which the general practitioner as well as the industrial physician, has to contend, is the treatment of burns. Both war work and industrial medicine have added many refinements of method in the handling of burns and Dr. Micklethwaite details these as he has adapted them to his practice, and he enumerates certain types of cases in which they have been effective. Some of the best features of these newer methods are that they are far more painless to the patient than the methods in vogue for so many years, and obviate many crippling complications.

**A**LL SUCCESSFUL treatments of burns are based on a physiological and a pathological basis. These principles should be kept in mind constantly. Enumerated, these principles are:—

1. To rid the burn of infection and to keep it clean as possible of infection.
2. To keep down the exuberant granulation tissue and form a protective coating for the burned area.
3. To splint the skin areas remaining, also the new skin coming in from the edge of the wound.
4. (a) To stimulate the new skin, and (b) to skin graft, when necessary.

Discussing each paragraph in detail, we find that a burn is nearly always dirty, containing particles of clothing, dirt, hair, cold cream, flour or talcum powder. These must all be gotten rid of, and the flour and talcum are the most difficult. They form a protective coating, or better a media in which the bacteria grow luxuriantly.

#### CLEANSING THE BURN

(1) To rid the burned area of infection, we used a wet dressing, as follows: (a) 1 per cent. aqueous solution of picric acid; (b) Dakin's solution, freshly and accurately prepared; (The reason for this is because Dakin's solution on

standing becomes alkaline in reaction and is very irritating to the tissues. The surrounding skin must be protected with zinc oxide or Dakin vaseline gauze. Dakin's solution removes the sloughs very nicely.) (c) Boric Acid saturated solution, 10 to 20 per cent.; mercury bichloride, 1-10,000 solution; and distilled sterile water.

These dressings should be changed frequently to prevent the gauze adhering to the wound. These wet dressings should be continued until all the sloughs have disappeared, leaving a healthy, red granulating surface.

Another valuable wet dressing is a 2 per cent. aqueous solution of acetic acid, especially used where there is a large amount of discharge due in the main to saprophytic bacteria.

#### CONTROLLING GRANULATION AND PROTECTING BURNS

(2) To keep down the exuberant granulation tissue and to form a protective coating for the area, as well as (3) to splint the skin areas and incoming skin, a number of different things have been used. We have found a parafine dressing the most satisfactory for every purpose. Other things used were cello-silk and unguentine on old muslin or linen. One should never use gauze on

a burn as the meshes of the gauze and network of capillaries adhere and there is tissue destruction, instead of repair. We have used ambrine, stanolind surgical wax, redintol and parresine. There seemed to be no difference in any of them. The reputed antiseptic value of ambrine did not seem to hold good for us. Our results with stanolind were just as good. Any low melting point, ductile parafine is sufficient.

The technique used was as follows:—

1. Removal of soiled parafine dressings. An advantage of parafine is that it does not adhere.

2. Cleaning of discharge with cotton sponges wet in saturated solution of boric acid, or 2 per cent. solution of acetic acid.

3. Drying with hot air drier or under the electric light bath. This is an important point, especially in children, as the melted parafine burns on a wet, moist surface.

4. Melting parafine in a tin cup; cooling until it does not burn when dropped on the hand, and applying with a camels hair brush. It forms a coating immediately.

5. Applying thin strips of cotton batting, rough side to the parafine and painting over this with melted parafine. Cotton is put up in sheets for this purpose.

The parafine dressing should not be used until the sloughs and all visible infection have disappeared.

#### STIMULATING GROWTH OF SKIN

(4) To stimulate the skin, the electric light bath was used; it has a three-fold purpose: (a) to keep down the exuberant granulation tissue; (b) to make it harder for the bacteria to grow and (c) to dry the wound that parafine may be used.

We did not have an electric light cabinet so we made one out of three barrel hoops, some 3 by 1/8 inch laths, electric light bulbs, a sheet and a thermometer. The barrel hoops were cut in two, nailed together, one over the other and the three hoops were placed 18 inches apart; six laths 36 inches long were tacked over the outside of the hoops forming a cage; across the top was a heavier piece, 3x7/8x36 inches, which formed the sockets for the Mazda bulbs. The whole was covered by a sheet. The nurses would remove the dressings the first thing when they came on duty, clean the burned area with the wet boric dressing, and place the patient under the electric light bath, where he stayed all morning. The temperature should not go above 98.5° as the granulations may become seared.

#### SKIN GRAFTING

The more severe burns need skin grafting, which has been done according to the method described in Dr. J. Staige Davis's "Plastic Surgery." It is called the *pinch graft* which is the easiest and most logical graft to use, as no expensive instruments are needed. Sufficient, are:

- (1) A sharp knife or safety razor blade.
- (2) 1/2 doz. Halstead straight haemostats;
- (3) 1 package of ordinary sewing needles;
- (4) 1 alcohol lamp, soap and water;

- (5) alcohol, ether; and
- (6) perforated cello silk.

The technique used has been as follows:—

An area as close to the burn as possible, and free from hair, is chosen. It is scrubbed with soap and water, followed by alcohol and ether. This is draped and covered with sterile towels. The burned area is similarly treated, having had a wet Dakin dressing or boric dressing for over two days. Everything should be as sterile as for a major operation, for successful skin grafting depends upon surgical cleanliness.

The needles are placed in the haemostats lengthwise. The area is anesthetized with 1 per cent. novocaine, or a general anesthetic is given in nervous adults or frightened children.

The needle is inserted in the skin, *pinching the skin*, making a small cone, the base of which should be about the diameter of a lead pencil rubber. It is cut off with a sharp knife around the base of the cone, leaving a raw, bleeding surface beneath. These grafts should be just the epithelium and not the deeper layers of the skin and should not be over 1/4 inch in diameter. They should be cut as close as possible to the preceding graft.

The *pinch graft* is next placed on the granulating area by an assistant being careful not to touch anything but the point of the needle to the graft. The graft may be removed from the needle by a sterile safety pin, opened out and kept in the other hand. The haemostat-needle is next run through an alcohol flame to sterilize, handed to the cutter and the process is again repeated.

The grafts should be placed about 1/2 to 3/4 of an inch apart. The granulating surface should be absolutely dry, else the grafts will not stick. Vaseline should be smeared around the side of the wound and sheets of perforated cello-silk should cover the grafts; further protection by means of wire gauze is advisable especially in children. Dressings should not be disturbed until 36 or 48 hours have elapsed, depending upon the amount of secretion present. At the end of this time, the dressing is removed and the light applied the greater part of the time. If successful, the grafts take on a pearly white glistening appearance and begin to bridge over to the other grafts or to the surrounding skin. One, however, must not be too pessimistic if the grafts have not taken, sometimes they become necrotic and lifeless but underneath, in a week or ten days, one will see a little pearly white skin area the size of a pin, or if no islands develop the surrounding skin seems to have received a new impetus and grows in faster.

The advantages of skin-grafting are many:

- (1) It lessens the time of convalescence.
- (2) Prevents contractures.
- (3) Makes firmer scars with a lower tendency to break down later.

#### ILLUSTRATIVE CASE REPORTS

CASE 1.—G. C., aged 5 years, was burned

from flames out of a furnace when door was opened. Had been treated with dusting powders. The burned area over the abdomen and lower third of chest was the size of a small meat platter. The surrounding skin was hard and indurated. The burn had a crust with pus oozing from beneath. Wet boric dressing was used until scabs could be removed and infection was cleaned-up. Stanolind surgical wax dressing was applied after and each morning spent under electric light bath. There were no epithelial islands, so *pinch grafting* was resorted to. The first grafting was unsuccessful, as no grafts *took*. The second, third, fourth and fifth attempts were all successful.

CASE 2.—J. S., aged 6 years, while playing with matches set fire to his clothing, he was seen soon afterward with extensive tissue loss on back and left arm. The burnt clothing and charred flesh were removed after a hypodermic of morphine had been given. A 1 per cent. aqueous solution of picric acid moist dressing was applied and changed every two hours. Infection had cleared up in five days. Redintol was then used. Dressings were changed every day. Under the electric light treatment epithelial islands began to appear. The parafine dressing was varied occasionally by unguentine spread thinly on old muslin (sterile) and scarlet ointment. Healing progressed slowly. The arm was splinted at the elbow from shoulder to wrist to prevent contracture. Skin grafting was necessary to cover flexor surface of the elbow. The grafts died and we were much disappointed but about seven

days afterward little pin dots of epithelium appeared where the grafts had disappeared and it was not necessary to graft further. His back was grafted twice; both times successfully. Five months after the original burn, healing was complete. Extension of arm on elbow was 175°. Over one-third of the boy's body's surface had been burned.

CASE 4.—G. R., aged 24 years, had fainting spells while carrying a basin of scalding hot water, and suffered severe 2° and 3° burns on both legs and extensor surface of both thighs. The same methods were followed, with healing complete in nine weeks.

#### SUMMARY

Some parafine dressing properly applied, after the burned area is comparatively free from infection, seems to be the best dressing for burns, because it is—

1. Painless, if the burned area is thoroughly dry.
2. Protective, for it keeps infection out.
3. Splinting, for it serves as a splint for the new epithelium.
4. Readily applied. The length of time necessary to apply being at a maximum about 30 minutes.
5. Relatively low in cost, a burn 12 inches square costing about \$1.00 a week for dressing.
6. Allows removal of dressing in one piece, absolutely without pain and without any further tissue destruction.

NINTH AND GAY STS.

## Original Investigation and Comparative Value of Indigo Carmine as a Functional Kidney Test\*

CHARLES M. HARPSTER, Ph. G., M.D., F. A. C. S., Toledo  
Director of Genito-Urinary Surgery, St. Vincent's Hospital

*Editor's Note.*—The accurate determination of the functional capacity of the kidneys has become a vital matter both to the internist and surgeon. In this connection Dr. Harpster notes that the great number of functional kidney tests speak for the inaccuracy of all. However, after many years of observation and the use of a number of different tests on the same patient, Dr. Harpster, along with Thomas and Furniss and many other workers in the genito-urinary field, is convinced, all things considered, that the indigo carmine, with the dye properly prepared and administered intravenously, is the most reliable and simplest of all other tests.

**I**NDIGO is a blue coloring matter derived from several species of Indigofera and other plants growing in India, Africa and South America. It exists as a glucoside called Indican which is extracted with water; the liquid allowed to ferment in the air deposits the indigo as a blue powder. Commercial indigo is a mixture of several bodies, containing about fifty per cent. of indigo blue or indigotin,  $C_{16}H_{16}N_2O_2$ .

Indigotin has a deep blue color, with a purple tinge; it is insoluble in water, alcohol, dilute

acids and alkalis, but soluble in boiling aniline, in sulphuric acid.

On neutralizing this solution with potassium or sodium carbonate, a blue precipitate of the potassium or sodium salts is obtained. These salts are insoluble in common salt solution but soluble in pure water, and are known in commerce as Indigo Carmine or Indigo Extract.

Indigo Carmine is sometimes used as a test for sugar.

The reagent is made by mixing one part of dried commercial extract of indigo with thirty parts of pure dry sodium carbonate. Add enough of this powder to 5 cc. of urine to give it a trans-

\*Read before the Section on Genito-Urinary Surgery, of the Ohio State Medical Association, during the Diamond Jubilee Meeting, at Columbus, May 3-5, 1921.

parent blue color, and heat to boiling. If sugar is present, the color changes to violet, cherry red and finally yellow. On gently agitating the tube the colors appear in the reversed order.

An aqueous solution can also be used as a test for glucose in the urine.

#### DO NOT GIVE UP

Hard work and persistence are better than genius—or maybe they are genius.

Beethoven probably surpassed all other musicians in his painstaking fidelity and persistent application. There is scarcely a bar in his music that was not written and rewritten at least a dozen times.

Gibbon wrote his autobiography nine times, and was in his study every morning, summer and winter, at six o'clock, and yet youths who waste their evenings wonder at the genius which can produce "The Decline and Fall of the Roman Empire", upon which Gibbon worked twenty years. Even Plato, one of the greatest writers that ever lived, wrote the first sentence in his "Republic" nine different ways before he was satisfied with it. Burke wrote the conclusion of his speech at the trial of Hastings sixteen times, and Butler his famous "Analogy" twenty times. It took Virgil seven years to write his "Georgics" and twelve years to write the "Aeneid". He was so displeased with the latter that he attempted to rise from his death-bed to commit it to the flames—"Rising in the World."

#### QUESTIONS IN KIDNEY DISEASE AND SURGERY

Reducing agents convert indigo-blue to indigo-white or hydro-indigotin, which in the moist state oxidizes to indigo-blue.

Dr. J. D. Windell of Spokane, Wash., calls my attention to what he says may be a pitfall.

Alkalis will decolorize Indigo Carmine. Recently he states he had a case of severe and long standing cystitis in which he could not find the ureters. He used Indigo Carmine intravenously to aid in locating the ureters. The dye came through from the left kidney quite conspicuously and he had no difficulty in catheterizing it. No color appeared from the right ureter. After several trials about the point where the right ureter normally should be the catheter entered, and re-collected a specimen of alkaline unstained urine. He used Phthalein intravenously and found a good functioning kidney.

He states he treated the patient and secured a clinical cure of the condition.

I think that we should not forget that the kidneys act as a filter and it is the filtering capacity that we determine in these tests.

In order to successfully diagnose and treat diseases of the kidney or kidneys, it is essential, if possible, to determine the structural and functional conditions of the same.

Many questions arise in our minds, and often unsurmountable conditions are found.

- (1) What is the nature of the renal disease?
- (2) Is it bilareal or unilateral?
- (3) Which kidney is affected?
- (4) Which kidney is most seriously affected?
- (5) Is the function of the least seriously diseased kidney sufficient to permit of an operation on the other kidney?

These questions were asked by Casper many years ago, and I have modified them to meet conditions today.

One question will always arise in kidney surgery, and that is, what can be stated concerning the functional capacity of the second kidney, when the other one has been found so diseased as to necessitate an operation?

The anatomical diagnosis alone will not suffice to decide the question. Let us assume that we are dealing with a tuberculous right kidney, and that the urine coming from the left kidney is slightly involved or albumen is present.

Is an operation on the right kidney contra-indicated? In a number of cases I have removed the most seriously involved tubercular kidney with the ultimate recovery of the patient.

#### THE BEST SINGLE TEST FOR KIDNEY FUNCTION

In order to determine accurately the functional capacity of the kidneys, we have a number of more or less reliable tests. I will only mention the nitrogen content, the salt content, the molecular concentration test, phloridzin, cryoscopy, urea, blood and urine, electrical tests, phthalein and numerous others.

The great number of tests speaks at times for the inaccuracy of all.

However, after many years of observation and the use of a number of the different tests on the same patient, I am convinced, with Thomas and Furniss and many other workers in this field of human endeavor, that all things considered, the Indigo Carmine test, with the dye properly prepared and administered intravenously, is the most reliable and simplest of all other tests. I realize this statement will probably meet with condemnation, and perhaps ridicule, but nevertheless, such is my honest opinion.

I was first instructed in the test in the clinics of Casper, Israel; and Nitze. At that time all urologists were floundering in the dark and Richter brought forward the Indigo Carmine test.

In 1905 Prof. Casper (Genito-Urinary Disease, p. 467,) showed at the surgical congress that the mortality from kidney operations had fallen from 25 to 17 per cent.

Since that time the mortality has been decreased so that, when the proper kidney examination and diagnosis has been made, the mortality rate should be almost nil. Two of our most earnest investigators of Indigo Carmine in this country have been Thomas of Philadelphia and Furniss of New York.

It is a well known fact that in prostatectomy the commonest cause of death is kidney insufficiency. Often the causes of death are put

down as due to hypostatic pneumonia, cardiac failure, etc., etc., while as a matter of fact the major portion of the deaths was due to kidney impairment, and you can see how important it is to determine the function of the kidneys before operating upon these patients.

There has gathered in the minds of many during the last year or two the thought that the functional tests are not of the value they were thought to be a few years ago. I am not in accord with the opinion, and depreciate it even being mentioned.

I have on many occasions checked up the different tests on the same patient and certified them at operation. I will not bore you with a recitation of cases, but I have uniformly found, (where the tests were properly made and the preparations properly prepared,) the same to be accurate, and the greatest aid in determining on which kidney to operate, and the recovery of my patient.

In those few cases, in which the tests were unsatisfactory as to determining the advisability of kidney or prostatic operations, and in which against my better judgment, I have operated, I have often met with failure.

Thomas (Trans. A. M. Assn., 1917, p. 209), says:—

“I still entertain the same love for the royal blue as formerly. I appreciate the value of the phthalein and the various other tests, and for the last two years in cases, where it has been possible, and the condition of the patient warranted the application of several tests, we have carried out no less than ten in many instances. The results of our studies, to date, indicate that there is none superior to ‘Indigo Carmine.’”

#### METHOD OF PROCEDURE

I still prepare my solutions according to the methods originally used in the foreign clinics.

Five Indigo Carmine tablets are dissolved in 100 cc. of sterile water and concentrated down to 20 cc. over a water bath and bottled in sterile glass containers.

Twenty cc. are then injected into the buttocks, or better re-sterilized and filtered and re-sterilized and injected into a vein.

The earliest time of the appearance of the dye was eight minutes. The latest time recorded of the appearance of the dye was fifty-eight minutes.

In a few cases the dye did not appear at all or at least while the patient was under our observation, which was probably three hours.

*We have come to consider a kidney as normal where the dye appeared in from ten to fifteen minutes.* Furniss has a number of times called my attention to the simplicity of the method and the rapidity with which an accurate functional diagnosis can be made.

Our usual procedure is to: Introduce the cystoscope into the bladder, distended with sterile

water, locate the ureteral orifices, inject the dye, and watch for the time of its appearance. If the dye appears on the right side in twelve minutes, on the left side in twenty minutes, we accept the findings as a slight impairment of the left kidney. If the dye appears on the right side in ten minutes and on the left side in thirty minutes or more, we accept the findings as a serious impairment of the left kidney.

We have repeatedly checked up these cases with phloridzin, phthalein, cryoscopy and other tests, which only confirm our original diagnosis. We have repeatedly “gone to the bat” on the Indigo Carmine findings alone, and not once failed to make a “home run.” It is not necessary to catheterize the ureters, and one hour or less will complete the examination, while by using all the tests, often an entire day may be consumed in making a functional kidney diagnosis.

Thomas says “There is one feature of the quantitative employment of Indigo Carmine which has placed its reliability without a peer, and that is its *index of elimination*. I believe the index of elimination shows the stability of the kidney function—that is the all-important consideration—more accurately than the mere quantitative output for the first two hours, particularly if the time required for the drug to appear is ignored.”

In other words, the time of the appearance of the dye is the vital point, and not the amount of the dye that can be recovered, after two hours’ time, from each kidney.

This was the original idea of Richter, Casper, Nitze and Israel, and has never been improved upon. Thus, when the elimination for the third hour after the injection of the dye exceeds the elimination for the first hour, the patient is said to be in the negative phase, and operation is contra-indicated.

On the other hand, when the amount for the first hour exceeds that for the third hour, the patient is in the positive phase, and should be a good operative risk.

The amount of the dye secreted each hour from each kidney can be easily determined with the Indigo Carmine colorimeter or index, and, of course, the ureters in these cases must be catheterized.

No doubt some urologists have never failed to catheterize the ureters (according to their own story), but we occasionally find cases in which we cannot, after one or two hours searching, find the ureteral orifices.

In these cases the Indigo Carmine, squirting from the mouth of each ureter, is the most valuable aid we have in locating the same. I spent many months in European clinics, under competent instructors in trying to master the use of the cystoscope and have, under these instructors, and in my own practice, catheterized the ureter many hundreds of times, and we still have



cases in which the ureters cannot be catheterized. What a great aid it is to have a method that can be used where the above conditions are found. In supra-pubic prostatectomy, often the first stage has been performed, the exact time for the performance of the second stage or removal of the gland can be best determined by the employment of this test, and the best interests of the patient conserved, financially and socially.

#### MISUSE OF THE METHOD

Some authors state that Indigo Carmine has been displaced by Phthalein for a number of reasons. Because it is less accurate, that not more than 25 per cent. of the amount injected is eliminated by way of the kidneys.

However, they concede that it is more rapid in appearance than methylene blue. In looking over the different authors, I find that those who condemn its use do not know how to properly use it.

Chetwood in his work (Urology, p. 160,) says: "About 2 cc. of a saturated solution of Indigo Carmine are injected into the gluteal region, and the time is taken of its first faint appearance, and again when the color caused by its elimination is a deep hue. Generally speaking, under normal conditions, the blue color is visible in from ten to twelve minutes after injection. In twenty-four hours about 25 per cent. is eliminated."

I have already stated the only proper method of preparation and administration.

By concentrating down from 100 cc. to 20 cc. we have a supersaturated solution, and at least 20 cc. must be injected intravenously to secure the best and most accurate results.

I have already stated, the time of the appearance is the crucial or vital point. If a quantitative elimination test is desired, the phthalein test is the best, and the checking up with the colorimeter fairly accurate. The longer the delay in discoloration, the greater the disturbance of function of the kidney, and the same is true of the intensity of the discoloration.

The total nitrogen and urea estimation is complicated by the difficulty of the test, and the diet must be exact, and a twenty-four specimen of urine should be required. This is impractical and inadvisable in collecting urine from the ureteral catheters. Normally, ureteral ejaculations begin by the meatus raising itself with an effort, as if under the influence of a wave, animated by the contraction of the muscular fibers of the ureter.

Next, the orifice opens slightly, giving passage to a jet of clear liquid. It remains open an instant and then contracts. It looks like glycerine mixing with water. The emission is ordinarily repeated every twenty or thirty seconds, or longer. Normally, after the injection of Indigo Carmine, when the kidney is not impaired, the blue can be seen readily after some minutes.

Ureteral emissions containing blood may es-

tablish the diagnosis of renal haematuria only, however, a definite cause for the bleeding must, if possible, be determined. The technique of Burroughs, Welcome & Co., is to dissolve one of their tablets of Indigo Carmine in 10 cc. of distilled water, and a portion of this solution is injected in the buttocks or a vein. It may appear in the urine in ten or twelve minutes.

Kapsammer believes that the length of the interval between the injection of the Indigo Carmine and the appearance of the blue color in the urine is of the greatest importance; and, also the degree of the intensity of the color must be taken into consideration.

#### USE IN PHYSICAL EXAMINATION

Ninety-six men applicants for employment where a rigid physical examination was made, including a thorough urinalysis, blood examination, etc., were tested with Indigo Carmine by one of my assistants.

Their ages ranged from twenty-one to fifty-six years, and all were passed as physically qualified. The tests made on these apparently normal men showed the findings as usual, accurate and very satisfactory to establish the reliability of the test.

Thomson-Walker uses 20 cc. of a .04 per cent. solution. He says the urine becomes tinged in five minutes, (we rarely find it in less than eight or ten minutes), and reaches its highest color in thirty to forty-five minutes, and remains colored for about twelve hours. Delay in secretion and diminution of the quantity of the dye are indications of a reduced renal function.

He says the amount injected (20 cc.) is its greatest draw-back. We have in only rare instances found trouble from the amount used, and never when injected in a vein.

No doubt Achard is to be given the credit for the original studies with Methylene Blue. He used an intramuscular injection of 0.05 gram of Methylene Blue, the time of the beginning of the elimination, its duration, and the amount of the excreted coloring matter all were taken into consideration. The elimination is completed in two modifications; as a chromogen, which after oxidation, or simply by heating and adding acetic acid, becomes Methylene Blue again; and as the original coloring matter which appears in the urine as a greenish blue.

Small remaining portions of kidney parenchyma are sufficient to permit the excretion of a small portion of any dye. Also the same should hold true for an increase in the normal amount of kidney tissue. I am not sure that it does.

#### COLORIMETRIC READINGS

An exact colorimetric reading is difficult. It consists in the comparison of a specimen of the well mixed twenty-four hour urine with a known solution of Methylene Blue, and by a dilution brought to the same color. In this way an

average amount of the dye eliminated is determined and is usually found to be about 25 mgr. in the first twenty-four hours.

Methylene Blue is an anilin derivative, soluble in water and when pure consists of, small, dark blue, scaly crystals, having a copper bronze tinge. Its therapeutic effect is uncertain.

Widal has pointed out, there are contracted kidneys of high grades, with severe uraemic symptoms, in which, even during the uraemic attack, the power of eliminating a dye is fully preserved.

In cases of parenchymatous nephritis, the elimination of a dye is, by some writers, said to be delayed while the reverse is true of those cases of interstitial nephritis.

Casper, in his early writings, stated that chromocystoscopy was of no value in determining the functional capacity of the kidney, but was useful in finding the orifices of the ureters.

A good plan may be to determine the total amount of urine within a given time, the time being made as long as possible, determine the concentration by cryoscopy, use the phloridizin test and phtalein, the constancy of the specific gravity, Indigo Carmine at the same or some future sitting, and as many more combinations as the creatinin and urea tests, etc., etc., as the likes of the individual and his time may dictate.

Kapsammer reported a case in which a kidney was a mere pyonephritic shell (Keen's Surgery, p. 175), which responded well to the phloridizin test, while its fellow, not thought previously to be diseased, responded very poorly to phloridizin. This latter kidney proved, when examined pathologically later on, to be the seat of a severe interstitial nephritis. Kapsammer used this case to prove the value of the test in discovering the incapacity of an apparently sound kidney. Different conclusions can be very readily worked out from this case.

Rovsing and Israel have always contended that an absolute danger line should not be drawn on the basis of these tests. A danger line, no matter where drawn, is purely arbitrary; and sometimes we are not certain when the actual danger is great, but I do not believe this makes the rule.

Walker says: "The Methylene Blue should be pure and free from arsenic, and must dissolve completely in water. Methylene Blue is absorbed from the intestine or from an intra-muscular injection into the blood, and excreted by the kidney, and to a less extent by the liver. Some of the latter is reabsorbed from the intestine. The blue cannot be recognized in the blood. It appears in the urine partly as blue and partly in the form of a chromogen or colorless body, which is transformed into blue by boiling with acetic acid."

After cleansing the skin, 15 minims of a 5% aqueous solution are slowly injected into the muscles of the buttocks.

Chromogen appears in the urine in from fif-

teen to twenty minutes and a trace of blue is detected half an hour after the injection. The urine rapidly becomes olive green and then emerald green, bluish green, prussian blue, and finally a deep blue color. The color may not, however, pass beyond emerald green.

During the first four or five hours of the elimination chromogen is present in greater quantity than blue, and may be detected by extracting the blue with chloroform, and then boiling the cleared urine with acetic acid. The excretion of blue is at its highth in four or five hours, remains stationary for several hours, and then gradually declines.

In from forty to sixty hours it has usually disappeared. The chromogen disappears from the urine some hours before the Methylene Blue. In pathological conditions of the kidney, such as chronic interstitial nephritis, tuberculous kidney or hydronephrosis, the appearance of Methylene Blue is delayed for one, two or more hours.

An early onset and rapid elimination have been observed in parenchymatous nephritis. In surgical diseases of the kidneys, elimination of blue may be prolonged for several days. I have observed the excretion during a period of eight days and seventeen hours in a man of sixty-seven years, who suffered from enlarged prostrate and interstitial changes in the kidneys.

After the first twenty-four hours only traces of blue are passed in such cases, and the total quantity of blue eliminated is usually much reduced.

The quantity of blue may be estimated by a colorimetric method, but it is usually sufficient to note the varying depths of color, and from this to judge of the quantity eliminated.

Intermittent elimination may occur, and is said to result from an inhibitory action on the kidney of bodies produced in the liver in hepatic disease, but I have observed it in the healthy.

We must not, however, forget the general clinical condition of our patient, and this must be given attention at least equal to that accorded the functional tests. Where the general physical condition is much impaired and the renal function poor, as indicated by the different functional tests, the decision to operate must depend on the urgency of the case and the possibility of death without operation.

Heitzman says:—"The excretion of the urine, I take it, will be conceded to be a process of filtration in the glomeruli, and partly by the activity of the epithelia of the uriniferous tubules. In the glomeruli, not only the water is derived from the blood, but also certain inorganic salts, such as sodium chloride, and some other solid matters are separated.

These views which were first promulgated by Bowman, in 1842, were later corroborated by Heidenhain. Heidenhain injected Indigo Carmine into the blood of animals and found that a blue color appeared in the urine soon afterward.

and that the epithelia of the convoluted and ascending branch of the narrow tubules were stained blue, while the Malpighian corpuscles did not show the slightest traces of the dye. After section of the spinal cord, which causes lowering of the blood pressure in the renal glomeruli, and injection of the Indigo Carmine the epithelia of the uriniferous tubules were stained blue with the Indigo Carmine, which was also found in the lumen of the tubules, while the glomeruli were free from the stain. This appears to show that at least under ordinary circumstances the Indigo Carmine is eliminated by the tubular epithelia, and that, when by diminishing the blood pressure the filtration of urine ceases, and substance remains in the tubules. The saline constituents of the urine are excretory products of the uriniferous tubules which are richly supplied with capillary blood-vessels and the epithelia of which are closely connected with the walls of the vessels. The blood contained in these vessels reabsorbs a portion of the liquid from the tubules and supplies the liquid in the tubules with a certain amount of salt. The whole process is accomplished through the agency of the lining epithelia, and that is not to be considered a simple process of osmosis.

In diseases, in which the function of the tubules is much interfered with, their epithelia lining being destroyed to a considerable degree, urea and allied products are retained in the system, and the phenomena of uraemia results.

#### UREA AND CREATININ OUTPUT

Let us not forget about the urea and creatinin output, for which different authors have different standardizations.

*Urea.*—Urea, or carbamide, is the chief organic constituent of urine and the most important nitrogenous waste product found in urine. The greater portion of nitrogen taken into the system as food is excreted by the kidneys in the form of urea, which substance represents between eighty-five and ninety per cent. of the total nitrogen of the urine, the other ten to fifteen per cent. being represented mostly by the uric acid, creatinin, hippuric acid, ammonia, xanthin, and allantoin. The amount of urea excreted varies greatly under different physiological conditions, ranging between 20 and 35 or 40 gm., or approximately between 310 and 620 grains in twenty-four hours; this represents from forty to fifty per cent. or more of all the solid ingredients voided.

As urea is the most abundant solid of urine, it influences the specific gravity most, which latter will, therefore, give an approximate idea of an increase or decrease of urea. A specimen of normal urine, with a specific gravity of 1,020 and voided in a quantity of about fifty ounces, will contain about 450 or 500 grains of urea, or 9 to 10 grains to the ounce, or about two per cent.

Normally the amount of urea excreted varies greatly with the diet; it is most abundant after an exclusive meat diet; less abundant after a mixed, and least abundant after a strictly vegetable diet. It is increased after muscular exercise and mental activity. Pathologically it is increased in acute fevers, owing to increased tissue metabolism; and in diabetes, sometimes to a considerable degree. It is decreased in diseases of the liver—the liver being the chief seat of the formation of urea—in diseases of the kidney, and in chronic affections impairing the vitality of the patient.

Urea is frequently decreased in normal pregnancy. It is a common and undoubtedly commendable practice to examine the urine for urea at stated intervals during pregnancy. Unfortunately, the many different factors which should be taken into account, such as diet, exercise, and the condition of the gastro-intestinal tract, are frequently overlooked, and unnecessary anxiety is caused by a continued diminution in the amount of urea excreted. In these cases too much significance should not be attached to the decreased amount of urea alone, but all the important chemical tests, as well as a thorough microscopical examination, must be resorted to before alarming the patient or her relatives.

Urea is always held in solution and can never be found under the microscope without chemical means. It crystallizes in the form of colorless quadrilateral plates or prisms, and in needles of varying sizes. It is readily soluble in water and alcohol, but, is insoluble in ether. Urea can easily be detected as nitrate of urea by placing a few drops of urine upon a glass slide, adding a drop of nitric acid, warming the slide carefully, and placing it aside to crystallize. Under the microscope more or less regular rhomboidal hexagonal plates, either single or overlapping each other, may now be found. These plates have a little color and are perfectly characteristic.

With oxalic acid it forms oxalate of urea, in the form of flat or prismatic crystals.

*Quantitative Tests.*—The quantitative tests for determining the exact amount of urea present in the urine are numerous, but more or less complicated.

The simplest is the hypobromite method, the principle of which depends upon the fact that, when urea comes in contact with an alkaline sodium-hypobromite solution, it is decomposed into nitrogen, carbon dioxide, and water.

The carbon dioxide which develops is absorbed by the sodium hydroxide, while from the volume of nitrogen liberated the amount of urea can be calculated.

The quickest way of carrying out this method is by means of Doremus' ureometer. The hypobromite solution necessary for this test does not keep well, and it is therefore best to keep the bromine and the caustic-soda solution separate. Have on hand a solution of sodium hydrate—100

gm. of caustic soda to 250 cc. of water and the bromine, in separate bottles.

To prepare the solution for immediate use, take 10 cc. of the sodium-hydrate solution and add 1 cc. of bromine; mix thoroughly, dilute with equal parts of water, and the solution is then ready for use. A glass graduate, of a capacity of 25 cc., will be found the most convenient for this purpose.

Doremus' apparatus consists of a bulb and graduated tube and a small curved nipple-pipette to hold 1 cc. of urine. The bulb of the ureometer is filled with the hypobromite solution, and by inclining the tube the long arm is filled to the bend of the bulb. By means of the nipple-pipette 1 cc. of urine is drawn up, the pipette passed through the bulb of the ureometer as far as it will go in the bend, and the nipple compressed gently and steadily. The urea instantly decomposes, and the bubbles of nitrogen rise in the long arm of the instrument, while the displaced liquid flows into the bulb. The decomposition of urea is complete in ten or fifteen minutes, and the graduation on the tube indicates the quantity of urea in 1 cc. of urine. Two forms of the instrument are furnished—one graduated to read fractions of a gram to the cubic centimetre of urine, the range being from 0.01 to 0.03 gm.; to obtain the percentage, multiply the number of divisions on the tube by 100; thus, 0.02 gm. to the cubic centimetre is two per cent. of urea; the other form of the instrument is graduated to show the number of grains of urea per fluid ounce of urine.

Hinds' modification of the Doremus' apparatus is more convenient and more accurate than the original form, as it obviates the use of a pipette. The amount of urine is measured more exactly, being introduced into the graduated small tube and the flow controlled by the stopcock.

For all clinical purposes the above method is perfectly sufficient and no other is required. For accurate scientific work, however, more elaborate methods are necessary, and of these the methods

of Morner and Sjoqvist give the most accurate results. If urine is treated with a mixture of barium chloride and barium hydrate and then allowed to stand under alcohol-ether for twenty-four hours, all the nitrogenous constituents of the urine are precipitated, while the urea is dissolved in the alcohol-ether.

The urea solution is filtered off and the nitrogen content of the filtrate determined by Kjeldahl's nitrogen method, which consists in converting all the nitrogenous constituents of the urine into ammonia by boiling the urine with concentrated sulphuric acid. The ammonia combines with the sulphuric acid to ammonium sulphate; caustic soda is then added to liberate ammonia gas, which is distilled off into a known amount of sulphuric acid.

The amount of uncombined sulphuric acid is next determined and subtracted from the known total. The difference equals the amount neutralized by ammonia, and from this factor the amount of urea is calculated.

The method is too complicated for clinical work.

*Creatinin.*—Creatinin is a normal constituent of urine, being excreted in small amount, from 0.6 to 1.2 gm. in twenty-four hours. It, as well as creatin, which is occasionally found in normal urine, is derived from the muscle tissue of the body and from meat taken as food, so that its amount is largely dependent upon the diet. Muscular activity increases the excretion of creatinin. Pathologically it is increased in acute diseases, such as typhoid fever and pneumonia, also in diabetes, and is diminished in conditions of wasting.

The simplest test is Jaffe's method, which consists in treating the urine with a few drops of a ten per cent. picric-acid and a ten per cent. sodium-hydrate solution; if appreciable quantities of creatinin are present, the liquid at once turns red, which color remains for some time.

WEDGEWOOD BLDG.

## Selling Public Health in a General Health District\*

ARLINGTON AILES, M.D., Sidney

*Editor's Note.*—With the limited personnel still at the disposal of most health commissioners, Dr. Ailes believes that the control of communicable diseases is the first duty of the general health district; to be followed by school inspection with adequate follow-up work. If this program is adopted and well carried out there should be no great difficulty in ultimately selling the new public health to the communities involved. Of course the health commissioner must listen to complaints, take care of public health nuisances and perform the other mandatory duties of the Hughes-Griswold law. In accomplishing all this it is of paramount importance for the health commissioner to make his relations with the general practitioner and the county medical society the fundamental basis of his health campaign, otherwise it cannot succeed.

**S**ELLING public health in a general health district is not as complicated a process, perhaps, as in a city district, but it is just as difficult, if not more so, because we are prac-

tically pioneers in a new field, and because it seems, the rural populations have an acquired immunity against anything new; due no doubt to successive gold brick, lightning rod and other inoculations. They hold fast to the first part of that old maxim: "Be not the first by whom the

\*Read before the Section on Public Health and Hygiene of the Ohio State Medical Association, during the Diamond Jubilee Meeting, at Columbus, May 3-5, 1921.

new is tried", but I will not say that they will "be the last to lay the old aside," because that will depend upon our individual efforts, and how we apply the scientific rules of salesmanship, *viz.*:—

(a) Be thoroughly familiar with, and understand what we have for sale.

(b) Believe in it, and be fully in love with it ourselves.

(c) Be optimistic, *i. e.*, sales are good, everybody is buying.

(d) Show, and create a feeling of need for public health, so that it will in large measure sell itself.

(e) For our particular brand of salesmen, I might add another rule: build up the field by working on the potential customers, on much the same theory that it is difficult to teach old dogs new tricks.

We all realize that an elderly person's habits, opinions and prejudices are very firmly seated, and are difficult to change, unless they happen to be one of those who have read much, and kept their minds open and up with the spirit of the times. These are the men and women, to whom we have to look, to uphold our hands and the new public health, till we as salesmen can convince the rest that they need our product, and until the rising potential customers of the next generation put it on the solid rock foundation of success. While the last rule is of tremendous importance to the growth and stability of our institution, it is by no means the first essential to keep it solvent today.

#### FACTORS INFLUENCING THE SALE OF PUBLIC HEALTH

There should be wide latitude in the way these salesmen go about selling public health, because of the great diversity of conditions in the several counties. There are almost innumerable factors that could be mentioned, which might influence the salesman in his methods, one way or another. One of the biggest of these is the nationality of the people; another is their education and the length of time in this country. To continue, we might mention topography of the country, good roads, nearness and accessibility to a city; number, kind, and condition of the schools; religion, presence of various civic clubs, previous activity of the Red Cross and other voluntary agencies, and amount of previous health work. There may also be present in the community philanthropic citizens, interested in public health, who are a big asset; and let us also not fail to mention the county auditor and budget commission.

Because of these things no health worker in any district can lay down hard and fast rules for another. It is only because I believe accounts of what others are doing in their respective districts would be of interest to me, that I imagine this paper may be of some interest to others.

#### THE BOARD OF HEALTH AND THE HEALTH BUDGET

The board of health, I believe as a rule, is no stumbling block, to an adequate budget, but without it we cannot hope to have the proper per-

sonnel. The health commissioner is after all, the big personnel, on whom it devolves to weigh all factors, and then plan his selling campaign accordingly. Since there is no doubt that public health is purchaseable, let us get busy and sell it and gradually increase our sales. In order to do this more effectually, there should be elasticity and wide latitude in our health laws to allow the health commissioner to meet the various conditions, and to develop their individuality, as well as to allow an enterprising and progressive community to buy more public health if so desired.

When I became health commissioner of Shelby county, I found conditions fairly satisfactory: *i. e.*, I found a budget of \$5,000, an intelligent and cooperative board of health, a reasonable budget commission, and a progressive up-to-date county auditor, who gave me valuable advice on the financial end of the problem. He promised me to use his influence to allow a gradual increase of the budget, but admonished me also of the difficulty of extracting the money willingly from the various taxing subdivisions, and of the importance of selling the thing to them as the extracting process went along. I do not claim to be a painless dentist, because I have heard some wails as the teeth come out, but on the other hand I have heard many compliments on the effects of the anesthesia.

There was no appropriation for a clerk, but there was \$600 available for a part-time nurse, which I was able to appropriate by having my wife act as part time nurse and clerk. This of course at a sacrifice of our domestic comfort, but she was more than willing, and assisted me in many valuable ways. Now I don't want to make this a personal narrative, neither do I for reasons given above, want to appear as telling others how to proceed. What I do say must of course be gleaned from my personal experience and environment.

#### CONTROL OF COMMUNICABLE DISEASES

The first big duty of the public health salesman is the control of communicable diseases, for if we fail in this, we fail in laying the foundation stone on which the whole superstructure is built. We cannot at first, of course, control all communicable diseases. There are some, like tuberculosis, which will require unity of action, well organized and very efficient health departments, the public health education of the masses, and a very great improvement in the general health and sanitation. This all takes time and money, and must come gradually, but it is the goal for which all health workers should seek. With our limited vision, it seems that our public health millenium is not far distant from the time, when we can say tuberculosis is controlled.

What the public expects now is the control of the acute contagious diseases of childhood. This is the gauge by which our capacity is tested, and our success in it means whether we have made

our first sale or not. The present automobile was not evolved in a year, and probably has not reached perfection yet, neither can our new public health service, with all its complexity, reach perfection in so short a time. The idea must be sold first, therefore we must get right after the simpler things with which the people are familiar, and which corresponds to their idea of public health, and the acute infections is one of them.

In my experience the acute infections yield readily to energetic measures. The very knowledge that an active health officer is on the job helps a great deal in their control; not that the germs are afraid and beat it for other fields, but there seems to be an inborn dread of a placard on the house, and I have found several instances where people have effectually quarantined themselves, keeping in, and keeping others out more rigorously than if a placard had been up. It seems, in some instances with a card up, there comes a metamorphosis of feeling, *viz.*, a desire to stretch the quarantine regulations until they crack. The great majority of people however are amenable to quarantine, accept it willingly, and obey it explicitly.

In the control of communicable diseases, the doctor of course is the biggest asset. The health commissioner must work willingly with him, and keep alert for any activity that will offend him. I do not mean that the health commissioner should be a puppet; on the contrary he should fulfill Rule No. 1 of the rules for salesmanship, *viz.*, know and understand his subject, so that he can command the respect and confidence of the medical profession. Meet the doctors on a par every time, and do not change their diagnosis no matter how far off you think they are; rather be proficient in obtaining the restrictive measures necessary, even with what you think is a wrong placard on the house. Let the doctor know that you disagree, but protect his reputation with his patient. Caution the doctors that in cases of doubt you are willing to assume the responsibility for a diagnosis, and thus avoid as many of these cases as possible. Misunderstandings frequently occur between the health commissioner and the doctor, because some people have a habit of misquoting, or of telling only half truths.

#### RELATIONS WITH COUNTY SOCIETIES

Mention frequently to the local society what you are doing, because it gives the doctors a chance to tell you collectively what they think of your activity, and you can weigh their verdict and act accordingly. I might mention two instances where discussion in the society brought out the doctors' viewpoint, or was of benefit to me. I had mentioned in the schools that two grains of sodium iodide a month would tend to prevent the development of goiter in young girls. This I mentioned in the county society one time,

with the result that I now say in the schools, "The doctors know of a remedy, which if taken two grains monthly, will tend to prevent goiter." The doctors also know that I don't mean some uncommon remedy, which some might think in the absence of such discussion. Another instance, of more importance, was in the matter of fumigation and disinfection. Our board of health, on my recommendation, elected to follow the state board's regulation regarding fumigation. I soon began to have trouble, the people telling me that their doctor believed as they did. Discussion resulted in an endorsement by the society of the local board's stand in the matter. This will no doubt help clarify the situation, as the individual doctors will more clearly understand the attitude of the health department, and explain it to their patients. As in salesmanship of any kind, I believe it is necessary to be honest if we are to continue to be successful, therefore we should not fool our people by continuing a show of fumigation, unless we expect to reap the whirlwind.

Another big factor in the control of communicable diseases, in relation to physicians, is to get 100 per cent. reports. One of the simplest ways is to be active yourself in ferreting out disease, because then the doctor cannot afford not to report. You must have an organization to uncover the cases which the doctors are not called to see, consequently you will also uncover cases which they do see.

#### COOPERATION OF PUBLIC SCHOOL TEACHERS

Next to the doctor the best possible source to obtain information is through the public school teacher. These form the best part of your organization to uncover the cases that doctors fail to see. Visit the teachers' institutes, and the monthly teachers' meetings, and explain to them our new public health, and how they can cooperate. We should do every thing we can to acquaint the teachers with a knowledge of the acute infections. This can be aided of course by posting in every school a list of the symptoms, but I believe we should go further, by appealing to educators to have these rudiments inserted into the teachers' curriculum of studies, or even further, into the course of studies of every school. I know that in our county we have nipped in the bud more than one promising epidemic, through information coming to us through the public school teacher.

The citizens themselves are another source of information, pregnant with great possibilities. We are asking each citizen to report cases of disease in his neighbor's family, in order to protect his own, and I have had quite a little success this way. In only one instance did I find a citizens' report to be totally unwarranted; and that was in regard to where a woman thought her children got head lice. On the other hand, through a citizens' report, we cut short a young

smallpox epidemic. We promise the citizen to hold his report in the strictest confidence, only asking him to be reasonably sure of the existence of some communicable disease. We have in every township a few people sufficiently interested in public health and their own firesides to do this.

It was while doing this primary duty of a health officer, *viz.*, communicable disease prevention, that I visited every part of the county, and met the people of all classes and stations; and while trying to sell them the new public health, the one big thing that caused their eyes to brighten, and their faces to change from one of apathetic indifference to one of keen interest, was the subject of school inspection. This was a big order. I felt that it was sold, but how should it be delivered. There is now and always will be, I presume, a difference of opinion as to how school inspection should be done. Of one thing I am certain, after examining about 3,000 children, that there is a wide difference of opinion as to the existence and significance of the various defects we find, both among parents and physicians, and also health commissioners.

#### THE PROBLEM OF DEFECTS

What are defects? If we include every little thing we find, our defective list would reach 100 per cent.: as it is ours reach over 80 per cent. We see tonsils in big strong children, which when we see them in the weak and undernourished, we are sure they are the cause of their defective condition. Then as we progress from the lower to the higher grades we see the tonsils disappear without enucleation. The same can be said of teeth, the defects disappearing to a large degree as we enter high school. We should not underestimate the harm of diseased tonsils and decayed teeth, but I think there is too much indiscriminate tonsil work being done, and by men insufficiently skilled in their work. I observe many children minus their uvulae, anterior or posterior pillars, and a few with serious cicatricial contraction of their throats. Many children testify that they are not improved, and a few are undoubtedly made worse.

In the absence of the parent, and a personal and family history, it is difficult to get the proper significance and relation of the defects we find, to the nutrition of the child. For this reason we must be very careful what we write on the report card to the parents, or our stock will depreciate in value in the minds of their physicians or specialists, and likewise the public, and our sale of public health be very much endangered. At first our parent report card referred the parent to a dentist, an eye or throat specialist for special things, and to a doctor for those more general, but now we most always refer to the family physician, and always add the words "for advice."

We have learned to visit the village doctor,

and talk over with him the matter of tonsils and adenoids, impacted cerumen, six year molars, cervical glands, defective vision and hearing. It is surprising how many parents believe the words "enlarged tonsils" on the card, mean a recommendation for enucleation; and the children carry home to them so many other misunderstandings, that I find the easiest way to untangle the Gordian knot is by a reference to their family physician. Then he also can have no objection to school examination, and will likely have a friendly interest in our work.

We find also that a majority of the children wearing glasses, can see for distance about as well without as with their glasses, and quite a few better. If we ask these children why they are wearing glasses, their answers are quite varied,—mostly headache. Of course some say that their eyes hurt or the letters run together. Now I ask the question "do your glasses help you", and if their answer is "yes", I am very careful about saying "They don't correct." I examine for distance first, then ask them if they notice any trouble with their eyes, and if they do, I examine for astigmatism. I find that most of the troubles that the child notices himself are due to astigmatism.

Children's eyes are being examined by all kinds of so-called eye doctors. We should try to break down their propaganda, which has caused the common notion among country people, that drops are injurious to the eyes, by explaining to them the reason why it is the only way that children's eyes can satisfactorily be examined. In connection with all errors of refraction, a proper examination of the nose and throat is very important; and this is sufficient to recommend these patients to a physician, rather than to the so-called optometrist.

I believe every health commissioner doing school examination does it differently, and I can only give here how we did it the first year, and the reasons for doing it as we did. I was reared in the country, and mingled with rural people all my life. I felt I knew their jealousies, their opinions, likes and dislikes; and I felt that the sale of this public health the first year, demanded that each taxpayer receive something in return equally with his neighbor. Accordingly we adopted a program calling for the examination of every school child in the district. Our schedule was two rural schools a day, but our actual average was about five a week, because of frequent interruptions due to many other duties.

#### METHOD OF EXAMINING SCHOOL CHILDREN

Working together always, my nurse and I gradually developed a system that resulted in no lost minutes. We picked out the schools on bad roads and visited them first. If I was notified of a case of communicable disease in one part of the county, we examined schools there also, and

thus saved time and mileage. We used the large yellow supervision cards obtained from the Stoneman Press, Columbus, Ohio, and also their parent report cards. While I examined the eyes, the nurse and teacher filled in the names of the pupils and other information as they read. In the high school each pupil filled in his own.

The examination of the eyes required about one and a half minutes to each pupil; then with our Detecto scales, and a rule against the wall we weighed and measured them at a rate of less than a half minute to each pupil. For the hearing test we stand all the children with their faces to the wall; with the index finger in one ear and then in the other, and whisper two letters or small words, which if they hear correctly allows them to be seated. This rapidly reduces the number standing to a few, and picks out those with defective hearing. These I also give the watch test when they come up for final examination, which consists of an examination principally of the ears, eyes, nose, teeth, tonsils, cervical glands, heart and lungs. We also note the thyroid, posture, nutrition, facial expression, or any other outstanding defect. We do not strip the children, but require the removal of sweaters, coats, collars and ties, and opening of the shirt and undergarments, sufficient to allow a skin examination of the upper chest. We also ask the teacher to stand near and tell us of any abnormality she may have noticed. In this way we pick up many things we would otherwise miss, such as defective speech, stammering or nervous instability. If the teacher says the pupil is retarded mentally we examine him with particular care.

As I examine the child I mention the defects, and the nurse records them, and at the same time fills out the card for the parents. While I am delivering a health talk to the pupils, the nurse sorts the cards, places them in envelopes, seals them and they are ready for distribution to the pupils. At first my health talk consisted of advice to the pupils about the cards. Now it has grown to be a half to an hour in length, depending on the intelligence of the pupils, and the presence of parents. I believe a simple talk in every school on the new public health is very important.

#### COMMUNITY TALKS

We have in our county many community clubs, and their programs are sometimes difficult to fill, thus my school talks have many times been followed by requests to repeat them to the parents at these clubs. We are always glad to accept invitations, because it gives us a chance to further sell our new public health. Similar to what Lincoln said about fooling the American people; some of the pupils will get little of what you say, some will get part, and some all, but if it is repeated year after year all will get all. What they learn in their youth they will retain

last in old age, consequently what we are doing today will bear fruit in the future, just as what we are enjoying today, had its inception some years ago.

Briefly my lecture is outlined as follows:

- (1) Defects, their significance and removal.
- (2) Cause of disease and how to help prevent it.
- (3) Food, air, cleanliness, exercise and sleep.

If you take the first letters of the words in item (3) you will notice they spell f-a-c-e-s, which makes it interesting to the child, and helps them to remember. How they apply what they learn in the three items, depends in great measure how their faces will look.

#### FOLLOW-UP WORK

Our follow-up work is being done this spring and summer. We have made a spot map of the entire county, on which the families to be visited are indicated. This map is made up from our supervision cards, tubercular reports, diagnostic clinic for crippled children and other data, and is designed to again save time and travel, and promote efficiency. With our limited personnel, we cannot hope to do extensive infant mortality work in its various phases, or pre-school work, but we can begin to plant the acorns from which the tall oaks grow. And by combining a smattering of all these as our nurse does her follow-up work, we may be able to evolve gradually a more practicable or workable, and extensive service.

I cannot follow the idea of some, especially in our new public health infancy, and with our limited personnel, of the more intensive service to a few to the neglect of the great mass; for I fear we shall lose the sale of the whole, while we tarry with the few. We must keep busy doing definite good over the whole county; and the health commissioner and nurse must not hesitate to do some of each other's work, such as quarantine, bed-side instruction and tubercular survey, for the sake of economy, time and mileage.

I have debated in my own mind the desirability of rating cards in the stores and barber shops of my district, and have practically decided on a different plan, *viz.*, the posting of some simple important requirements of the board of health, in some conspicuous place in every business house, and in conspicuous type, so that every one can read it; asking the reader if this business house conforms to these rules. The spirit of rivalry, antagonism, and selfishness is keen, especially in small places. If the health commissioner antagonizes them by rating one better than another, or licenses one and not the other, he heaps coals upon his own head, while the rules put the blame squarely on the business man himself. He cannot deny their value, and cannot afford to refuse them in his place of business. I have talked over this plan



with several business men, and most like it, while nearly all are outspoken against the rating plan.

Another thing we health commissioners should do is to study seriously what each other is doing, with reference to its practicability for adoption in our own counties. We are laying ourselves open to just criticism, by doing one thing in one county and another thing in another county; some boards of health fumigating, and others not. In the basic fundamentals we should unite under one generalissimo, and keep our battle line straight and unbroken.

We should aim to increase our program, or extend it as it seems practicable. Next year I want to demonstrate medical supervision in the schools. I have in mind the sending of a questionnaire to the teachers, and selecting one school in each township that will offer the most cooperation as to teacher, pupils and parents, and accessibility. Then visit them once a month. I hope to use our results as a demonstration to other schools of the practicability of school supervision, and to the parent of child supervision. I have already demonstrated supervision in a few isolated instances, where we had enterprising teachers and willing parents, by taking one child and showing what could be done. With one child we succeeded in making a gain of nine pounds in two months.

### Epidemic Hiccoughs and Encephalitis

At the meeting of the Daniel Drake Society held at the Cincinnati General Hospital on February 2nd, Dr. Edward C. Rosenow of the Mayo Foundation presented some of the interesting features of his work on epidemic hiccough and encephalitis. He regretted his inability to present a complete summary of the data obtained as he had not been able to devote the time necessary to making such a digest. A preliminary report was published. (*Jour. A. M. A.* 1921, 76, p. 1745).

In brief he called attention to the simultaneous and widespread occurrence of epidemics of hiccough and encephalitis in many localities. Bearing in mind the specific localizing power shown by bacteria isolated from various foci in cases of epidemic hiccough occurring simultaneously with cases of epidemic lethargic encephalitis, a study was made of pus expressed from the tonsils, washings from the naso-pharynx and pus from pyorrhea pockets. From 0.2 to 0.01 cc. of salt solution suspension of pus or from 0.2—0.0001 cc. of culture in anaerobic glucose brain broth were injected intracerebrally into rabbits and monkeys. After one to seven days, depending upon the dose, a remarkable train of symptoms developed, in which clonic spasms of the diaphragm were a striking feature.

The microorganism isolated from these animals would be classed among the heterogeneous

Then the more spectacular things should not be neglected, and have a great deal of value, especially if we follow them up; like the diagnostic clinic for crippled children, tubercular survey and clinic, and the more spectacular public health pageant. The Red Cross units in our county have taken the initiative and are holding tonsil clinics, and in cooperation with them, we hope to extend them to dental, eye and ear, and other clinics as we find it practicable.

### CONCLUSIONS

In conclusion I want to say that at present, with our limited personnel, I believe the control of communicable diseases is the first duty of the health commissioner. Then school inspection with adequate follow-up work comes second. If we adopt this program and do it well, we'll have no difficulty of ultimately selling the new public health to our people. Of course we must listen to complaints, take care of public health nuisances, and perform the other mandatory duties of the Hughes-Griswold law. We should always be busy and keep in mind the time when an increase in personnel will allow the adoption of another activity, in a more intensive manner, to our definite program.

group called Type IV Pneumococci, and is serologically identified with strains isolated from encephalitis and poliomyelitis. More occasionally similar results were obtained by intravenous inoculation of cultures. After several passages of the hiccough strains a larger proportion of the animals developed lethargic and other symptoms of encephalitis. Sections were thrown upon the screen showing circumscribed areas of necrosis, hemorrhage and round cell infiltration about the blood vessels in the basal ganglia, cortex and medulla. Other pictures showed the respiratory records of rabbits with spasms of the diaphragm with normal controls. A motion film illustrated the large variety of lesions and symptoms in rabbits inoculated with cultures of the cocci—spasms of the diaphragm; lethargy from which the animal could be aroused but which would supervene again,—animals falling asleep while eating carrots; Parkinsonian and cataleptiform states.

On the whole it would appear from this work as if a variety of clinical manifestations might be due to the same bacterium according to where it happens to localize in the nervous system.

Theobromine—P. W. R.—A brand of theobromine—N. N. R. For a discussion of the actions, uses and dosage of theobromine, see *New and Nonofficial Remedies*, 1921, p. 362. Powers-Weightman-Rosengarten Company, Philadelphia (*Jour. A. M. A.*, Dec. 10, 1921, p. 1891).

## PUBLIC HEALTH NOTES

Speaking before a Mansfield parent-teacher association recently, Dr. Walter H. Brown, director of the Child Health Demonstration, discussed briefly the need for such a demonstration on child health and gave an account of the origin and growth of the agencies that have provided funds for conducting the Mansfield demonstration. He pointed out that the demonstration is an opportunity not only for the children of Mansfield and Richland County, but that its object is to be used for the benefit of all of the children of the United States.

—Plans for expanding opportunities for the public health service of the Babies' Dispensary, Cleveland, include increased work in the clinics, with possible inclusion of morning hours for the treatment of cases, greater effort to widen the public mind toward vaccination against diphtheria and continuation of the traveling dispensary during the summer.

—Dr. Julian Benjamin has been reelected president of the Cincinnati Public Health Federation. Dr. Carey McCord is vice-president, and Dr. A. C. Bachmeyer honorary secretary.

—As a sequence to a tuberculosis clinic conducted recently in Middletown under the auspices of the state and local health department, the county medical society and voluntary health agencies, Health Commissioner Lummis of that city urged the establishment of a new sanatorium and permanent clinic for tubercular cases.

—Miss Grace Donsing, for three years public health nurse in Salem, has become instruction nurse for the State Department of Health with headquarters in Columbus.

—As a direct result of the Cincinnati Health Exposition a course of study in health education will be installed in the public schools of that city soon. Dr. H. F. Koch, who was in charge of the school exhibit at the exposition, is formulating the course with the assistance of a committee of teachers representing all the grades. The course will be based on health work now being done in Cincinnati and courses of study used in other cities. As a first step samples of all materials such as posters, pamphlets, etc., now being used in health instruction in the schools have been collected.

—Summer courses for teachers who desire to take up special work in classifying and training mentally defective and subnormal children will be opened at Miami University in June, under the provisions of an appropriation made by the Eighty-third General Assembly for the training

of teachers for this work at one of the state teachers' colleges.

—At a tuberculosis clinic conducted in Zanesville, January 17-18, by the city, county and state health departments, 60 patients were examined and an unusually high number of positives found. Dr. Casper Benson of Columbus and Dr. F. C. Anderson, superintendent of the State Tuberculosis Sanatorium, Mt. Vernon, were the examining specialists.

—The Toledo Health Federation, an organization interested in various phases of health exclusive of municipal and county agencies, was founded, February 9, with Dr. C. D. Selby, president; Dr. J. F. Wright, vice-president; and Lewis Kerns, of the Society for Crippled Children, secretary-treasurer. Groups interested in the organization of the federation were the Toledo Academy of Medicine, Hospital Council, District Nursing Association, Toledo Dental Dispensary, American Red Cross, Society for Crippled Children and Tuberculosis Dispensary. The new organization is affiliated with the Ohio Public Health Association which will hold its annual meeting in Toledo in conjunction with the Toledo federation sometime this spring.

—Upon resignation of the Lucas County medical staff which had served since 1915, county commissioners approved a list of 30 other physicians to constitute the new staff. Dr. C. W. Moots succeeds Dr. B. G. Chollett as chief of staff.

### Health Commissioners Meet at Dayton

At the invitation of Dr. A. O. Peters, health commissioner of Dayton, the health commissioners of the southwestern district of Ohio met at the plant of the National Cash Register Company on February 3. After a luncheon the visitors were shown the medical and preventive equipment and plans of the company by Dr. F. S. Barr, who also showed by means of his department's annual report that hygiene and preventive measures actually pay in dollars and cents.

Dr. C. A. Neal, health commissioner of Hamilton County general health district, was reelected president of the district organization. Dr. H. H. Pansing, of Montgomery County general health district, remains as secretary. The next meeting of health commissioners of this section will be held at the Ohio Soldiers' and Sailors' Orphans' Home at Xenia, where Dr. R. H. Grube, health commissioner of Xenia and Greene County, and Dr. F. G. Boudreau of the State Department of Health will give a demonstration of recent methods of controlling diphtheria, including the Schick test and the use of toxin-antitoxin mixture.

# Medical Economics---A Frank Study of the Financial and Business Aspects of the Practice of Medicine\*

C. D. SELBY, M.D., Toledo

Medicine is altruistic. Finance and business may or may not be—frequently are not. Lest the altruism of medicine may seem to suffer in the comparison, the writer wishes to reaffirm complete accordance with the ideas that have always characterized the profession. He wishes no assertion nor comment to be construed as a recommendation to deviate from them. At the same time he wishes it distinctly understood that adherence to the obligations of unselfish humanitarian service does not in the least require a physician to be a poor business man. On the contrary, the doctor who uses honest, sensible business and financial methods can and should be none the less a competent, ethical physician, beloved by his clientele and respected in his community.

With this introductory understanding, the practice of medicine will be considered as a business enterprise and will be discussed from that standpoint.

The justification of business is that it supplies the needs of humanity. No enterprise can succeed unless it does so. The ostensible purpose is the making of money, and the success of all business organizations is measured by that standard. But the monetary return, or profit, is merely the reward for service rendered or commodity supplied. Profit is necessary, that is granted; it is the incentive which makes the effort to do business attractive; nevertheless, it is still the reward and not the real purpose of business.

## PURPOSE OF MEDICINE IS SERVICE

The practice of medicine does not differ from other types of business enterprise in this respect. It supplies medical service, a very human kind of personal service, and the reward is the fee that is collected. Owing to the fact, however, that medicine is practiced under conditions which are necessarily of the most intimate personal nature, it must be governed by certain stringent rules that seemingly do not need to be applied to ordinary business transactions. These are known professionally as ethics. Because of long adherence to these rules, the physician measures his success, probably more than any other class of business man, by the quality of the service he renders rather than by the standard of monetary return.

It appears then that the basis of business and financial prosperity is a desire to attain a commendable purpose, a wish to create or make available something that humanity needs. In other words, there must be a worthy motive

which meets a public demand. The foundation upon which the physician erects the structure of a successful practice is the desire to prevent disease, alleviate suffering and to effect cures of such bodily ailments as are possible.

## ELEMENTS OF MEDICAL PRACTICE

With the purpose of the practice of medicine defined and thoroughly understood, the elements which enter into its organization may be considered. Fundamentally these do not differ from those of other forms of business pursuit. They are (1) capital, (2) labor, and (3) management.

Capital is usually in the form of invested money. It is used for the carrying on of business. The capital of a physician is relatively unimportant, though by no means negligible. It represents the cost of his medical education and the expense of equipping himself for practice. This initial investment is comparable to the original issue of stock of a corporation. If a physician takes a post-graduate course, increases his equipment, or otherwise enhances his original investment, the cost may properly be added to the value of his capital investment and regarded as comparable to secondary issues of industrial stock for expansion purposes. Every physician should know what his capital investment amounts to otherwise he is not able to prepare a proper balance sheet.

Labor, the second element, is physical in nature. It is the element that does the actual work. It needs no further description. Comparable to this in the practice of medicine is the physical ability of the physician to withstand the strenuity of his work. The importance of this element is readily evident to a physician, because he knows, perhaps better than any other class of professional or business men, that a sick or devitalized person is more or less incapacitated. Everybody knows that a very sick person, considered from the standpoint of ability to work, is of no use at all.

The labor element is so important in the practice of medicine that it is worthy of personal conservation. A physician should never do anything that tends to impair his health or vitality. On the other hand, he should apply all the known methods of preventive medicine to himself. To describe them to a physician is hardly in good taste. At the same time, one wonders how many doctors have immunized themselves against typhoid fever, how many take systematic exercises, and how many apply the same care to their personal habits that they expect in their patients!

This element also includes the assistants that

\*Read before the Seneca County Medical Society, Tiffin, January 19, 1922.

a physician employs—his personal professional assistant, the nurse, stenographer, et cetera. The manner in which he utilizes the service of these is important and has much influence upon his accomplishments.

#### SERVICE MUST BE SYSTEMATIZED

Management is the brains of business organization. It bears the same relation to business that the brain bears to the human body. It is the directing, planning and co-ordinating element, using capital and labor to the best advantage in order that the purpose of business may be accomplished.

Management is just as essential to the practice of medicine as it is to business. The physician must plan and systematize his work. If his practice grows to the point where he cannot personally do it all, he is faced with the necessity of delegating certain minor duties to others, such as telephone service, the reception and preparation of patients, the taking and recording of histories, the making of laboratory tests, et cetera. The organization of service in a hospital is an excellent illustration of the application of the principle of delegated service. It is imperative that busy physicians utilize this element of order that they may get the most out of themselves and also obtain the rest and recreation that are necessary to the maintenance of their physical and mental vitality.

Consciously or unconsciously, the successful practitioner of medicine utilizes and correlates all of the foregoing elements and thereby creates and maintains a balanced organization for personal service. But these alone cannot function with results. They must be supported and assisted by two minor, yet very important, elements. Using purely business terms, these are (1) equipment and (2) raw materials. Through the instrumentality of his organization of capital, body and brains, aided by the use of equipment peculiar to medical needs, the physician fashions out of certain raw materials the product he has to offer to the public, which is his personal service.

The equipment is readily classified under three heads, (1) office and furnishings, (2) hospital facilities, and (3) transportation facilities. These need not be discussed; what they comprise, all physicians know; it is sufficient to say that the office is the doctor's place of business, the hospital is his workshop, and the automobile is his means of getting from place to place, wherever and whenever his services may be required.

The raw materials out of which the physician fashions his product are (1) his medical knowledge, (2) his experience, (3) his library, and (4) the supplies he uses from day to day. These also are self-explanatory. With the exception of the library, they need only to be mentioned. The library consists of medical journals as well as books. It is the physician's great source of

knowledge after he leaves college. Many physicians depend chiefly upon their own experience for the enhancement of their medical knowledge after graduation. The value of experience should not be belittled, but this fact must be recognized, that the physician who depends upon his own experience gets the experience of just one physician. On the other hand, medical literature brings to the practitioner the professional experience of the world and makes available to him a vast quantity of extremely valuable medical knowledge. A good working library, which certainly contains the files of current medical literature, is an adjunct that no physician can afford, in the interest of his business to ignore or neglect.

#### GOOD SERVICE IS THE BEST RECOMMENDATION

Having perfected his organization according to the foregoing analysis and having provided himself with the necessary equipment and preparation as described, the doctor is then in a position to serve the public. He is at this time also face to face with the necessity of creating a demand for his service, and this is true of all physicians at all times. The doctor must always be creating a demand for his services; otherwise he will lose ground. The public must know of that which he has to offer. He is limited in the methods by which he is permitted to inform them. He is limited by the ethics of medicine. He cannot advertise, using the word in its ordinary sense. However, he is permitted to utilize two very productive means for securing public interest. The first, and most important, is (2) the quality of the service he renders. The second is (2) ethical publicity.

The quality of the service a physician renders is influenced by (1) his availability, (2) his personality, and (3) his ability to apply his medical knowledge. Unfortunately for the really able though relatively unknown physician, the public does not always judge of the quality of service by ability only. On the contrary, availability and personality are very influential factors. However, when a physician becomes well established and has created a reputation for sheer ability, the public recognizes his accomplishments and accepts him in spite of inavailability and poor personality. To build up a practice, a physician certainly must be on hand when needed, and his contacts with people must be pleasing. All physicians, to succeed continuously, "must study to the limit of their resources, think to the limit of their intelligence and strive to the limit of their endurance."

The physician is permitted to obtain publicity through the making of (1) contributions to medical knowledge and (2) contributions to social betterment. The making of contributions of this nature is not frankly regarded as a means for obtaining publicity. It is considered a duty of the medical profession, a duty created by the position the profession occupies and the

special knowledge that is peculiar to medicine. It is the application of the French saying, that "position confers obligation." But the effect is publicity just the same. Contributions to medical knowledge attract the attention of other physicians. The outcome may be referred patients. Contributions to social betterment attract the attention of the community. Here also the result may be more requests for service. Be that as it may, overlook not these facts, that the physician who serves his patients best is the best advertised, and he who serves his profession best will become best known. The saying of the Rotarians is likewise appropriate to this thought: "Who serves best profits most."

The reward for service is profit or remuneration. Although there are undoubtedly many physicians who practice their profession for the love of it, there are few who ignore the reward, the fees they collect. As a matter of fact, the monetary return is not only a true incentive, but is necessity as well. It is just as imperative for a physician to have money as any other business man. He needs it for the development and maintenance of his practice, the immediate support of his family and the support of himself and dependents in his old age. No one can gainsay the attractiveness of a substantial income.

GROSS INCOME IS NOT ALL REMUNERATION

Unfortunately for themselves a great many physicians judge their remuneration by their gross income. They think in terms of what they take in. In reality their remuneration is what is left after all expenses chargeable against their practice have been deducted. The balance is their real income, their profit. Gross income is the whole amount derived from practice. It should be distributed in four ways as follows: (1) expense, (2) maintenance, (3) interest on capital investment, and (4) recompense, or profit.

Expense represents the cost of supplies of all kinds, the cost of running the automobile, keeping up the office, et cetera. It is in reality the cost of practicing, the cost of carrying on the business. It is usually a very considerable item and frequently far in excess of what most physicians think it to be. It should not be more than 15 per cent. of a physician's gross income.

Maintenance covers all items of expenditure that go into replacements, of equipment, such as office furniture, special office equipment, new automobile, etc. It should not be more than 10 per cent. of a physician's gross income.

Interest on the capital investment is the return at current interest rates upon the original cost of getting a medical education and obtaining equipment for practice, also the cost of post-graduate courses and all other unusual expenditures necessary to the betterment of practice. The amount is determined as follows:

(These Figures are Estimated)

Cost of medical education.....	\$5,000.00
Cost of automobile.....	1,800.00
Cost of office furnishings and equipment .....	1,400.00
Cost of post-graduate course.....	900.00
	\$9,100.00

Six per cent., the current interest rate, of \$9,100.00 is \$546.00. This amount should be taken out annually. It would have to be if the physician were in debt for that amount. If not, it might be treated as any other investment return, reinvested in interest bearing securities or used in living expense. It is better to deposit this in a special fund to be used in covering the cost of further post-graduate work or attendance on medical meetings.

The profit, or what a physician actually receives for his services, is what is left after the three foregoing items are taken out. It should be called recompense, for that is just what it is. It is his personal remuneration. All the rest is legitimate and necessary business expense. Let it be supposed, for example, that a physician's

Gross income for the year was.....	\$12,000.00
His expense was.....	\$1,800.00
His maintenance expense..	1,200.00
His interest charges.....	546.00
	\$ 3,546.00

Balance.....	\$ 8,454.00
--------------	-------------

His net personal income was \$8,454.00. This hypothetical physician is now prepared to ascertain the value of his organization for practice, the value of his investment in himself. His income of \$8,454.00 is his return on this investment. At the rate of six per cent. this return represents an investment of \$140,900.00. That is the physician's worth, as determined by his earning capacity.

Any physician's net income will vary from year to year. On the whole it should gradually increase. It will, if he perfects his organization and increases his fees from time to time as his ability improves. As a business man he will always guard against the disproportionate increase in expense and maintenance cost. These two items together, should never be more than 25 per cent. of the gross income. A practice in which they are more than 25 per cent. is in a dangerous condition, viewed from a business standpoint.

A PHYSICIAN MUST FIX HIS OWN FEES

The problem of fixing fees is always a difficult one. There is no known scientific method for determining what is a fair charge. Each physician must decide that for himself, taking into consideration the nature of the service he has rendered and the circumstances of the person he has served. On this question the analogy be-

tween the practice of medicine and the carrying on of a business ceases, for business has an accurate means for determining costs and, therefore, selling prices. It is this feature that differentiates medicine from business and places the former in the professional class.

If a physician charges too little he does himself an injustice, and in time he will force himself out of practice into a job of some sort. This has happened. If he charges too much, he contributes to the socialization of medicine, for the reason that he does just that much toward depriving the great mass of the people of paid medical service and forces them into the free and part pay dispensary classes. On the whole, the average of the medical fees of any community finds its proper level within the means of the people, the same as with any commodity. If the price is too high the public does not buy; if too low, the business is unprofitable; and thus the price finds its level. This is an economic law.

#### THE MENACE OF SOCIALIZATION

Physicians need not worry particularly about their fees, but they should give great concern to the constantly growing demand for free and semi-free service. Reference is made to the so-called socialization of medicine and the tendency toward state and community control of practice. If this continues as it has in the past three or four years it will constitute a serious menace to the practice of medicine and, eventually, to the health of the people. The practice of medicine is essentially a personal service and there is no more justification for its socialization than for the socialization of law, or art, or any other type of service that depends upon highly specialized knowledge and individual skill. This is, indeed, a serious matter; it is worthy of the thoughtful consideration of organized medicine.

What the physician does with his income is a personal matter with him. Be that as it may, the most pathetic figure in the whole social scheme is the old doctor who has spent years of a useful life in the service of humanity and desires to retire but cannot because he has not accumulated enough to care for his needs. Gradually failing in health and clinging to a disappearing clientele, he plods on, day after day, until cast aside a broken old man, more or less an object of charity.

#### WISE INVESTMENTS THE BASIS OF PROSPERITY

Compare this pathetic figure with the banker who retires at an early age to live in opulence and bask in the sunshine of local respect, a commanding figure in his community. Has such a man served his people better than the old doctor, that he should be so lavishly rewarded? Probably not, most likely positively not! The only difference is that he has served for money and has gotten it, while the old doctor has served for love,

and money he has not acquired. There is a lesson in this for every doctor. It is a lesson in the management of personal affairs. It is a warning to the physician that he should so conserve his personal financial resources by safe investments that he may retire when he desires in competence as does the banker.

Physicians, as such, cannot acquire great wealth. The practice of medicine does not permit that. There is not enough money in it. But the physician can save and invest, and re-invest. His secret for moderate financial success, it cannot be otherwise, is in the kind of securities he buys. He should never put his money in any security that is not absolutely sound. He cannot afford to purchase speculative securities. In them the element of chance is too great, and in the long run the average return is greatly reduced by losses. Six per cent., or even four, year in and year out, without any losses, will enable the average physician to retire in ease if not in wealth. The investment of choice for a doctor is government or municipal bonds. In fact there is none better. If the physician will put one-fourth of his net income into securities of this type and re-invest the interest he receives, he need have no worry for the future.

Life insurance is also a good investment, although not quite as profitable to the physician himself. Its special advantages are that it immediately creates an estate and that it forces the doctor to meet premium payments regularly. This latter is an important feature, for most doctors must be forced to save. Their usual plan is to invest what they have left, their surplus in other words. Frequently there is none. If the doctor creates an obligation he meets it. Thus it is with life insurance. If he considers 25 per cent. of his net income an obligation for investment and takes it out of his current income, he will not have so much need for life insurance as an investment.

Real estate makes a good investment for those who know real estate conditions. It is safe and possesses a speculative element. It may enhance in value and pay a goodly profit in addition to a moderate interest return. Many doctors have done very well by investing in real estate.

Industrial stocks need to be mentioned only to warn physicians against them. They are too speculative for a people who are so ignorant of industrial conditions as doctors and in the long run are a losing investment for them.

The business side of the practice of medicine may be summarized in the following admonitions:

- (1) Organize your resources, physical, mental and material;
- (2) Deputize minor duties as rapidly as the demands of your practice warrant;
- (3) Supervise all activities; you are personally responsible;
- (4) Charge what your service is worth; no more;

- (5) Limit the cost of your expense and maintenance to 25 per cent. of your gross income;
- (6) Invest 25 per cent. of your net income in government and municipal bonds;
- (7) Re-invest all interest returns;

(8) And finally, bear always in mind that even though yours is a noble profession, it has certain business phases that must be respected as such and treated with business sense. Otherwise you may fail as a doctor and a provider for your family. You alone are responsible.

### Medical Schools and Medical Practice

(Continued from page 172)

Hugh Cabot, dean of the Medical School, is summarized as follows:

1. A basis of mutual understanding has been reached and past apparent differences have been obliterated.

2. The University and its Medical School are not in favor of "State Medicine," so called, nor do they endorse or subscribe to those policies or movements that have for their object the establishment of any such forms for the practice of medicine.

3. Doctor Hugh Cabot, Dean of the Medical School, has been and is opposed to "State Medicine," so-called. He desires his opposition to be known to the entire profession and that in the past he has been unjustly accused of being favorable to that type of socialization of medical practice.

4. In response to the invitations of the President and Council of the Michigan Medical Society, the University of Michigan through its Extension Division and Medical School has expressed its desire and readiness to cooperate with the profession of Michigan in a movement to educate the public in regard to scientific medicine and the benefits to be derived therefrom.

5. The Medical School is concerned chiefly with the education of students in scientific medicine, with the promotion of medical research, and with cooperation with the profession in the advancement of scientific medicine in Michigan.

To these ends have we pledged ourselves and through duly appointed representatives we propose to enter into a campaign of concerted and co-operative activity. Coincident with this action we believe that the profession at large should be acquainted with our avowed attitude. We therefore issue this statement at this time for the explicit purpose of discrediting false assertions of the past and to make clear for the future the policies and purposes of the principals concerned in this announcement.

### Anti-Cult Literature

It is readily conceded that the public needs more accurate information on the actual character of extravagant claims being made by the various cults. Unusual information from an unbiased, straight-forward viewpoint has been published in a series of six articles entitled "Is It Chiro-Quack-Tic?" by Severance Johnson in *Leslie's Weekly* which started with the issue of January 7.

With large appropriations being made in the various states to aid in the education of competent medical men the public at large has a direct financial interest in being definitely informed against the fallacious claims made through propaganda and extensive publicity by the chiro and other cults.

Undoubtedly many Ohio physicians read the

"chiro-quack-tic" series with interest. It has been suggested that physicians might well provide this entire series as a part of their ready reading for patients in their waiting rooms.

### U. S. Public Health Service

In spite of the proposal of the joint committee on reorganization of the administration branch of the government, to place the reserve corps of the United States Public Health Service on a civilian status, President Harding on protest from many state and national medical and health groups has refused to issue an executive order placing it in effect.

The reserve corps is composed of about 1,200 physicians without private practice. The minimum pay is \$3,150 and with commutation amounts to about \$3,800. With the exception of twenty-five, these physicians have served in the medical branch of the army during the war, the majority of them overseas. Those who protested against the previously proposed plan to abolish the reserve corps declare that the physicians understood there was to be security of tenure of office and promotion at regular intervals. The proposed plan would have practically disrupted the Public Health Service, since it would break down a staff which has been built up through years of painstaking effort, and men of smaller calibre would probably be drawn into the service. They contend that the service should be strengthened at this time rather than weakened, and that medical officers, if drawn from civilian ranks, should be added but not substituted for those now in the service.

Surgeon General Cummings of the United States Public Health Service had opposed the proposed change from the outset, on the ground that it would demoralize the main personnel of the service and would make it impossible to continue the present care and treatment of disabled soldiers.

An important proposal pending in Congress (H. R. 9775 introduced by Representative Newton) would transfer not to exceed 550 officers of the reserve corps, including 50 dental surgeons and 50 scientists other than medical surgeons, to the regular corps. The bill states that officers shall be entitled to promotions, retirement privileges and the same pay allowances and increases as officers of corresponding grade in the army medical department, and that no officer shall be transferred to the regular service in any grade above assistant surgeon unless he has had a total of three years' satisfactory service in the army,

navy, marine corps, coast guard, coast and geographical survey or public health service, part of which must have been between April 6, 1917, and November 11, 1918.

The importance of the Public Health Service is not always recognized. For many years it has been a very important factor in maintaining the health of the nation, guarding against the invasion of epidemics and supervising other important matters concerning public welfare. The scope of its functions was enormously increased as a result of the world war. In consequence of the expansion from this source the number of hospitals under its supervision increased in a little more than two years, from twenty-two to sixty-five, containing approximately twenty-three thousand patients. It is estimated that the care of disabled veterans will probably continue for a period of fifty years. The merchant marine has increased nearly three times in the past six years, with a proportionate increase of the beneficiaries of the Public Health Service. There has likewise been a great increase in the quarantine functions, emigration duties, the control of interstate spread of diseases and carrying on a constructive program relative to the preservation of the national health.

#### Chiropractic Incompetence

"Recently, in New York, two deaths of patients treated by chiropractors were reported to the county medical examiner's office within a week. The second was that of a 14-year old boy who died—so the necropsy showed—of a ruptured appendix, following two days' treatment by a chiropractor. The chiropractor is alleged to have diagnosed the illness as a 'little stomach ache' and when the family of the sick child became alarmed at the boy's screams of pain during the 'manipulations' and the 'bending and stretching' of the practitioner, they were told to 'not worry' and that the apparent pain went with 'the proper treatment.' In an editorial comment on this case the *New York Times* says: 'Legislators who have voted for the legitimatizing—no, the legalizing—of medical practice by men without a medical education and consequently unable to diagnose disease must have had a decidedly unpleasant feeling of responsibility as they read yesterday about the boy who, while suffering from appendicitis, was subjected to the rough treatment of a so-called chiropractor and died a few hours later of general peritonitis. . . . Few laymen, nowadays, are so ignorant of pathology as not to know what the effects of heavy pressure on an inflamed and infected appendix would be. . . . The chiropractor, however, did not know even that. He went ahead with his usual and invariable procedure. . . . —but the lesson ought to be obvious, for this is the second death in this neighborhood within a week, and how many more there have been, and how many cases in which harm has been done and proper treatment delayed and made less effective than

it might have been if given in time—that is something the legislators who have permitted the irregular medical cults to exploit the credibility of the public seriously should consider.'

"It is heartening to learn that the lay press is coming to see a distinction between the well-qualified practitioner of medicine and the individual who in a few months has learned a little about massage and bone manipulation and nothing else. More inspiring still is the fact that a metropolitan newspaper of established standing is willing, apparently from purely altruistic motives, to put itself editorially on record as opposed to legislation which legalizes unscientific and ignorant treatment of the sick," says the Bulletin of the Federation of State Medical Boards of the United States.

#### Income Tax Reports

In the February issue of *The Journal* detailed regulations including special exemptions for physicians in making income tax returns for the last year were set forth in detail. Through some inadvertence, in reference to deductions for automobile expense the word "cost" was included. Obviously the original cost of an automobile is an investment rather than an overhead expense as legally construed. Only the *upkeep* of an automobile used exclusively in professional practice is to be included as a deduction.

#### Old Age Pensions

The agitation for old age pensions has taken on new life lately. Some of the labor unions have expressed their belief in such a national policy and now in Colorado an amendment to the state constitution has been made ready for submission to the voters providing for the payment of annual pensions to needy persons more than 60 years old who have lived in the state 10 years and levying taxes for this purpose.

The disposition to substitute reliance on the government for the work and thrift without which lives stand a poor chance of being useful or happy is a deplorable thing. One great incentive to work and thrift is preparedness for independence and comfort in old age. If the government should step in and relieve the people of necessity for provision for their declining years the foundation of the republic, which is the character and industry and prudence of its citizens, would wobble considerably. The Socialists' beautiful dream that all people would do their best for the sheer love of the working would prove only an illusion. Yet, so subservient is our law-making power to the supposed popular demand, so ready to cut loose from safe moorings when votes are sighted, that there is real danger that before long an old age pension scheme will be written into the law of the land. The ruinous tendency is to build up paternalism and to break down the individual independence which makes a nation strong.—Ohio State Journal.



# Cincinnati Hotels and Rates Listed for Your Convenience in Making Early Reservations for the Annual Meeting

The Cincinnati Hotel Men's Association guarantees that there will be no increase in the regular rates of hotels during the Annual Meeting of the Ohio State Medical Association in that city, May 2, 3 and 4. On the contrary, assurance is given that if members will apply for reservations in time, the most desirable rooms, affording the best accommodations available, will be reserved without additional cost. Applications for reservations should be made direct to the hotels.

## HOTEL GIBSON

Fourth and Walnut Streets

514 Rooms—All rooms with bath

Single room with bath.....	\$3.00—\$6.50
Double room with bath.....	4.25— 9.00
Twin Beds if desired.....	5.00— 9.00

## HOTEL SINTON

Fourth and Vine Streets

750 Rooms—All rooms with bath

Single room with bath.....	\$3.50—\$6.00
Double room with bath.....	5.50—10.00
Twin Beds if desired.....	7.00—10.00

## PALACE HOTEL

Sixth and Vine Streets

200 Rooms

Single room without bath.....	\$1.25—\$1.50
Single room with bath.....	2.00— 3.00
Double room without bath.....	2.00— 3.00
Double room with bath.....	3.00— 4.00

## HOTEL METROPOLE

Sixth and Walnut Streets

Single room without bath.....	\$1.75—\$2.25
Single room with bath.....	2.50— 3.50
Double room with bath.....	4.50— 7.00
Double room without bath (men only)	3.50— 4.00

## GRAND HOTEL

Fourth and Central Avenues

255 Rooms

Single room without bath.....	\$1.50—\$2.00
Single room with bath.....	2.50— 4.00
Double room without bath.....	2.50— 4.00
Double room with bath.....	4.00— 6.00

## HAVLIN HOTEL

Vine and Opera Place

192 Rooms

Single rooms with bath.....	\$3.00—\$5.00
Double rooms with bath.....	5.00— 8.00

## EMERY HOTEL

421 Vine Street

150 Rooms

Single room without bath.....	\$1.50—\$2.00
Single room with bath.....	2.50
Double room without bath.....	3.00— 4.00
Double room with bath.....	4.50

## DENNISON HOTEL

Fifth and Main Streets

140 Rooms

Single room without bath.....	\$1.00 and up
Single room with bath.....	2.00 and up
Double room without bath.....	3.00 and up
Double room with bath.....	4.00 and up

## HOTEL STAG

420 Vine Street

90 Rooms

Single room.....	\$ .50—\$ .75—\$1.00
Double room.....	.75— 1.25—

Free use of shower and tub baths

## HOTEL SAVOY (Stag)

5 E. Sixth Street

90 Rooms

Single room without bath.....	\$1.50—\$2.00
Single room with bath.....	2.50
Double room without bath.....	3.00— 4.00
Double room with bath.....	5.00

Use of shower bath

## Proposed Amendments to the By-Laws of the Association

At the 1921 annual meeting of the State Association the Section on Dermatology, Proctology and Genito-Urinary Surgery adopted a resolution abolishing that section. The resolution was formally presented to the House of Delegates, which, in turn, placed it on file for action by the House of Delegates at the 1922 annual session. In accordance with the provisions of Chapter XIII of the By-Laws of the Association, which provides that "these By-Laws may be amended at any annual session by a majority vote of the delegates present at that session, if the proposed amendment has been published in *The Journal* two months before the annual meeting", the above mentioned resolution is here published:

"Resolved, That the Section on Dermatology, Proctology and Genito-Urinary Surgery be abolished, and that the By-Laws be so amended."

At the January 8, 1922, meeting of Council, a petition requesting the establishment of a section of the State Association to be known as the "Section of Clinical Laboratory Diagnosis" was presented. The petition was the result of a conference of representative laboratory workers from various parts of the state held during the last annual meeting of the State Association in Columbus, May, 1921, when the needs of such a section were discussed under three general heads:

1. The need for a closer relationship and better understanding between the laboratory workers and the general profession.
2. The need for opportunity to discuss the more technical problems of peculiar interest to workers in this field.
3. The need of some added stimulus for the more accurate and scientific work, which may be gained only by closer association and cooperation among those whose special interest is in these branches.

Council by formal action recommended the request to the House of Delegates for action at the 1922 annual meeting. To comply with the provisions of Chapter XIII of the By-Laws (quoted above) and permit the House of Delegates to finally dispose of the matter if it so desires, the substance of the petition is here published in resolution form:

"Resolved, That Chapter II, Section 1, of the By-Laws of the Ohio State Medical Association be amended to include a Section of Clinical Laboratory Diagnosis, to be composed of those members of the Association whose chief interests lie in the clinical and laboratory branches.

### Attention World War Doctors

Medical men who served in the World War are planning a big spread for the state meeting in Cincinnati. At last year's meeting a permanent organization of the ex-service men was affected

and a committee appointed to make plans for a jollification at the 1922 session. This will take the form of a bountiful supper, with good stories, war songs and reminiscences on the side. Further details will be announced in the next issue of *The Journal* by Dr. E. S. Jones, Warrensville, chairman of the committee. Reservations may be made by post card to Dr. Frank B. Cross, 707 Race Street, Cincinnati.

### Wertheim Moving Picture Clinic in Wapakoneta March 16

A large attendance is expected at each of the two showings of the Wertheim moving picture clinic to be held in Wapakoneta, March 16, for physicians of Auglaize and surrounding counties, as well as others who wish to attend. Arrangements are in charge of Dr. C. L. Mueller, Wapakoneta, secretary of the Auglaize County Society, who is receiving orders for tickets at \$1.00 each. Hours for the clinics are 3 p. m. and 7 p. m. In ordering tickets physicians should enclose check and state which showing they wish to attend.

Made by the late Professor Wertheim and Professor Weibel of Vienna, the films to be shown have been pronounced the most instructive medical films in existence and are considered a splendid medium of teaching. Two years were occupied in the collection of films of different subjects which were considered perfect for clinical demonstrations. The collection represents a complete post-graduate course in obstetrics, illustrating explicitly the details of diagnostic technique and obstetrical manipulation.

Although the pictures are replete with explanatory sub-titles, it is planned to have an obstetrician deliver a short lecture in connection with the showings. The clinical demonstration requires over two hours and consists of the following subjects:

1. Clinical examination for pregnancy.
2. Abnormalities of skeleton.
3. Normal delivery.
4. Breech presentation.
5. Face presentation and delivery.
6. Resuscitation of a child.
7. Walcher posture.
8. Eclampsia.
9. Breech presentation with extraction of child.
10. Podalic version from head presentation and extraction of the fetus by the foot.
11. Extraction of the dead fetus by the foot with perforation of the aftercoming head.
12. Craniotomy.
13. Forceps delivery.
14. Caesarian section.
15. Caesarian section with hydramnios.
16. Examination of prolapse of uterus.
17. Removal of an ovarian cyst by laparotomy.

### Hotel Reservations and Railroad Rates for A. M. A. Meeting

The annual meeting of the American Medical Association will be held in St. Louis, May 22-26. Those who anticipate attending should make hotel reservations well in advance of the meeting as the A. M. A. meetings tax all cities to the limit of hotel capacity. Applications for reservations should be made direct to the hotel; if satisfactory arrangements cannot be made in this way, the matter should be taken up with Dr. Louis H. Behrens, chairman of the Committee on Hotels, 3525 Pine St., St. Louis. The following hotels have been designated as section headquarters:

Section	Headquarters
Practice of Medicine	Hotel Statler
Surgery, General and Abdominal	Hotel Jefferson
Obstetrics, Gynecology and Abdominal Surgery	Hotel Claridge
Ophthalmology	Planters Hotel
Laryngology, Otolology and Rhinology	Marquette Hotel
Diseases of Children	American Hotel
Pharmacology and Therapeutics	American Annex
Pathology and Physiology	American Annex
Stomatology	Warwick Hotel
Nervous and Mental Diseases	Majestic Hotel
Dermatology and Syphilology	Majestic Hotel
Preventive Medicine and Public Health	Warwick Hotel
Urology	Maryland Hotel
Orthopedic Surgery	Hotel Jefferson
Gastro-Enterology and Proctology	Maryland Hotel

To obtain special railroad rates for the meeting it is necessary to secure identification certificates by writing to Dr. Alexander R. Craig, secretary of the American Medical Association, 535 N. Dearborn St., Chicago, enclosing self-addressed, stamped envelope.

### Christian Science Conviction

Arthur W. Marriott, Christian Science practitioner, has been found guilty in Municipal Court, Cleveland, of practicing medicine without a license and fined \$100 and costs. The case was brought by Anna J. Dietrich, State Medical Inspector, at the request and with the co-operation of the family involved.

In passing judgment Chief Justice John P. Dempsey stated that he was bound by the ruling of the Supreme Court of Ohio in the Marble Case, brought about 14 years ago, that under the laws of Ohio "the practice of Christian Science treatment is the practice of medicine."

Throughout the trial Judge Dempsey required that a definite distinction be made between Christian Science religion and Christian Science treatment.

By agreement between the attorneys for the defense and the public prosecutors it was agreed that a test be made on the constitutional question involved and the Christian Science attorneys were given every privilege to place in the record everything which they thought might assist them in their purpose which was "to contest the constitutionality of that decision (the Marble case), and in connection therewith, the construction of the statute including Christian Science treatment within the definition of the practice of medicine."

To this end the case will be appealed to the Supreme Court of Ohio.

Prior to the trial Christian Science interests requested of the daily newspapers that no notice of the trial be published and this request was complied with.—Bulletin of the Cleveland Academy of Medicine.

### DR. PIRRUNG ABROAD

Dr. J. Edward Pirrung, instructor in surgery in the Medical College of the University of Cincinnati, and member of the surgical staffs of General and Good Samaritan Hospitals, sailed for Europe, February 4, to engage in three months' post-graduate study in the clinics of Paris, Lyons, Rome, London and Munich. He will also visit the clinic at St. Andrews, Scotland, established by Sir James McKenzie. Dr. Pirrung was accompanied abroad by his wife.

### Small Advertisements

*For Sale*—Splendid practice, southern Ohio. Lovely modern home, equipped office, waiting room; town of 5,000 people; thickly settled farming community. Low price. Cause of selling taking up surgery. Address W. S. J., care *The Journal*.

*For Sale*—In Dayton, Ohio, one of best locations in city with offices and residence combined. Will sell for value of property alone. If interested investigate promptly as I am going to quit. Address B. G., care *The Journal*.

*Wanted*—Salaried appointment; industrial or mine contract. Class A school graduate; hospital training; Protestant; married; references. Address 100, care *The Journal*.

*Wanted*—Assistantship with a general surgeon by Ohio State University graduate of personality and resourcefulness. Gentle; aged 29; married; internship; Mason; best of references. Address 222, care *The Journal*.

*Wanted*—Location in Northeast Ohio. Small town preferred. Address H. L., care *Journal*.

*Wanted*—Two physicians, well trained, with hospital experience, for a tuberculosis sanatorium. Young, unmarried, preferably athletic and vividly interested in getting people well. Apply to Pennsylvania State Health Commissioner, Harrisburg, Pa.

*Fort Rent*—Doctor's residence, offices on first floor, four-room apartment above. Modern except furnace. Busy district. Address Mrs. C. Groenewold, 549 Winthrop St., Toledo, Ohio.

*Location Wanted*—Prefer unopposed, with first-class high school, good roads and on railroad; will consider any location, with or without real estate; must stand the very closest investigation. A cash proposition. Address M. D., care *The Journal*.

*Location*—Office for rent and equipment for sale by a physician and surgeon retiring on account of age. Office fully equipped, library, furniture and all kinds of instruments. Good town of about 8,000 population in southern Ohio, with good roads and rich country surrounding. Office centrally located. Fine opening for good, energetic doctor. Address W. R. T., care *The Journal*.

*Wanted*—By graduate nurse of Bellevue Hospital, New York City, a position as superintendent, assistant superintendent or supervisor of small hospital or dispensary, nurse in a large store or manufacturing plant, with salary not less than \$100 a month. Elma E. Smith, 29 Clinton Ave., Tiffin, Ohio.



## HOSPITAL NOTES

On February 9, the staff of St. Vincent's Hospital, Toledo, re-elected the following officers: Drs. C. D. Selby, chief of staff; Thomas Crinnion, vice-chief; John F. Wright, secretary; W. W. Brand, Frank Jacobi and William Fisher, members of the executive committee.

—A site near Kingsville has been chosen for the location of Ashtabula County's new tuberculosis hospital. Starting with an expense of about \$25,000, it is planned to so construct the building or buildings that they may be used as units of others which may be erected in the future. A building now standing will be used for administrative purposes.

—Cincinnati General Hospital and the Medical College of the University of Cincinnati were highly praised by a delegation representing the Medical School of Columbia University which inspected the Cincinnati institutions, February 4, for the purpose of gathering ideas for the proposed new medical school at Columbia.

—Dr. Samuel St. John Wright, who recently announced his retirement from the staff of the Children's Hospital, Akron, was honored at the monthly meeting of the staff, January 20, when he was elected as an emeritus member. Dr. Wright gave the hospital its first X-ray equipment and was an active worker at the institution for many years.

—A surgical building that will have a 100-bed capacity will be built by Bethesda Hospital, Cincinnati, within the next year, at a cost of approximately \$300,000. The hospital did \$37,341 worth of charity work last year.

—A banquet in honor of the staff reorganization of Good Samaritan Hospital, Zanesville, was held at the hospital January 12, with 34 physicians present. Drs. Robert Carothers, Cincinnati, president-elect of the Ohio State Medical Association, and Joseph Price, Columbus, were present as guests. Dr. H. T. Sutton, president of the staff, was toastmaster.

—An extensive enlargement program for Rocky Glen Sanatorium, McConneisville, was mapped out at a recent meeting of the directors. This provides for the building of a 40-bed addition at once and continued construction as rapidly as conditions warrant. A tuberculosis colony will be established where the families of patients can find suitable living arrangements during the treatment of the patient. To meet the cost of these developments the sanatorium has issued preferred stock bearing eight per cent. dividends. Dr. Emmett Fayen, former chief of the tuberculosis section of the United States Veterans' Bureau, is medical director of the institution.

## Data on State Hospital Population Shown by Comprehensive Charts

Many interesting facts concerning the population of Ohio institutions for the insane are brought out in a series of charts issued recently by Dr. Guy H. Williams, superintendent of the Cleveland State Hospital. The charts compare the data relative to the admission and discharges of patients of the Ohio state hospitals for the insane for the years 1911 and 1921, and give data relative to the nativity, race, education and economic condition of the first admissions for the year ending June 30, 1921. The classification used by Dr. Williams was prepared by the American Psychiatric Association in collaboration with the National Committee for Mental Hygiene.

One of the charts reveals a decided increase in the percentage of paresis cases and a very marked decrease in the percentage of alcohol-drug psychoses. A comparative study of the individual hospitals shows that with the exception of the Athens State Hospital, where the percentage remained the same, the percentage of increase was general in the cases of paresis. The decrease in the percentage of alcohol and drug cases was noted at all the hospitals and was very pronounced at the Cleveland State Hospital.

Dr. Williams believes that a survey of the "discharge" charts will afford ground for considerable discussion as to when a case should be discharged recovered or improved.

The "nativity" chart shows that the two institutions located in the most densely populated section of the state, viz., Cleveland and Massillon State Hospitals, are being rapidly filled with foreign born. This is due to the large foreign population in Cleveland, Akron, Youngstown and other cities in northeastern Ohio, and emphasizes the need of more stringent immigration restrictions.

A "race" chart gives some interesting facts relative to the different types of psychoses in the different races. However, the number of cases involved is not sufficient to give any basis for use as a standard in judging the frequency or susceptibility of any race to any definite psychosis.

The "education" chart reveals that a large number of insane patients do not pass beyond the common school. Only 6.2 per cent. reach high school and but 2.1 per cent. have college training.

The final chart, showing the ratio of insane to the whole population for the years 1911 and 1921, furnishes much ground for discussion. In 1911 there was one patient in the hospitals for every 460 of population, and in 1921 one to every 349. This may mean an actual increase in the number of mental cases; earlier and better diagnoses with commitments, or the sending to the hospital of cases who were in times past

either treated at home or in the private institutions.

Taking all hospitals as a group the charts bring out the interesting information that of the total admissions in 1911 amounting to 2830, 11.8 per cent. were attributed to alcohol-drugs, while in 1921 with total admissions of 3593 the percentage from the same cause was only 2.7.

In 1911 the admissions were thus classified: manic-depressive, 28 per cent.; dementia praecox, 18.2 per cent.; paresis, 8 per cent.; senile, 11 per cent.; alcohol-drugs, 11.8 per cent.; all others 23 per cent.

In 1921 the admissions were thus classified: manic-depressive, 20.7 per cent.; dementia-praecox, 23.2; paresis, 13.6; senile, 9.8; alcohol-drugs, 2.7; all others 26.3.

At the Columbus hospital the admissions attributed to alcohol-drugs in 1911 was 11.5 per cent. while in 1921 it was reduced to 2.6 per cent. in spite of the fact that new admissions in 1911 were 484 as compared with 570 in 1921.

At the Cleveland hospital 51.1 per cent. of the admissions during the year 1921 were foreign born, while at Massillon it was 31.3 and at the Columbus hospital but 15.5. The lowest percentage of foreign born was at the Athens hospital, where it was only 3.1 per cent.

#### Pseudo Physician Arrested and Banished

As L. C. Wolfe, of Sullivan, Ashland County, was entering a hospital to assist in an operation, January 19, the state narcotic inspector and an inspector from the State Medical Board put in an appearance and arrested Wolfe on two charges of practicing medicine without a license and with selling narcotics in violation of the law.

Arraigned in court the "doctor" was fined \$25 and costs on each of the two medical charges and \$500 on the narcotic charge. Four hundred dollars of the last fine was remitted on condition that he turn over to the state between 400 and 500 bottles of medicine and that he leave the state immediately.

The man was arrested following an investigation requested by a prosecuting attorney in Pennsylvania, where he had been called as an alibi witness for a man on trial in Pennsylvania for murder. When Wolfe testified that he had treated the defendant in Cleveland on the day of the murder, the prosecutor wrote the State Medical Board asking if Wolfe was a registered physician. When his name was not found on the list of accredited physicians, an investigation was started and his arrest followed.

*Zanesville*—Local druggists entertained physicians of the city and a number of out of town guests at a banquet, February 1. Among the speakers were Professor Edward Speas, Cleveland; Theodore Wetterstroehm, Secretary of the State Pharmaceutical Association; William Wendt, State Representative from Franklin County; N. M. Ford, Secretary of the State Board of Pharmacy, and Executive Secretary Don K. Martin of the Ohio State Medical Association.

## IODALBIN

a Protein-Iodine Compound  
for Internal Administration

THE therapeutic effects for which you prescribe iodides are produced most readily by those iodine compounds that are easily split up in the body. It is the available iodine that does the work.

In the case of Iodalbin, contact with the intestinal juice severs the loose bonds that unite the iodine with the protein base.

That's what makes Iodalbin rapidly effective.

And besides being effective, its blandness makes it acceptable to sensitive patients. It is especially gratifying to those who object to the taste and nauseating effect of sodium or potassium iodide.

**PARKE, DAVIS  
& COMPANY**

# The Present Situation with Regard to Narcotic Addiction in the United States\*

ROGER G. PERKINS, M.D., Cleveland

Although there has of late years been an immense amount of publicity on this subject, I believe that there is an undue amount of smoke in comparison with the size of the actual blaze. Analysis of statements and statistics leads me to feel that the whole proposition is comparatively simple and can be well expressed in a series of syllogisms, somewhat as follows:

## I.

1. An addict is a person who habitually takes doses of narcotics in amounts toxic to the non-addict, and who suffers withdrawal symptoms when deprived of the drug.

2. Addicts are developed through curiosity, through bad company (much the same thing) and through medical treatment.

3. There are three sources of drug supply for addicts, prescriptions of physicians and purchase from peddlers, together with specific exempted compounds, such as paregoric, which are readily accessible.

4. The Harrison Law and interpretations, or any other law and interpretations can effectual control and record only the legitimate traffic.

5. Restrictions intended to control illegitimate traffic, or smuggling, can only result in increased prices and consequently greater profit to the smugglers.

6. The only method of control of the underground traffic is to eliminate the supply.

7. The only way to eliminate the supply is through prevention of sales to irresponsible persons, and the only way to do this is to get an agreement by the governments holding the monopolies that they will not sell save to persons whose disposition of the supplies can be recorded and controlled.

8. It is therefore quite futile to expect material reduction of the underworld trade at present.

## II.

1. Addicts either have an associated condition which is a contra-indication to withdrawal or they do not.

2. Those who have such a condition should be kept comfortable, regardless of objections to addiction, or to their social status.

3. Those who do not have such a condition are either defectives or are not defectives.

4. Defectives will not co-operate in attempts at cure and must be forcibly dealt with if at all.

5. The main "contagion" of addiction is through defectives and criminals.

6. Non-defectives tend to concealment of their

addiction and are therefore less likely to spread the habit.

7. The present number of defectives and criminal addicts is probably greater than that of the other group.

8. It is at least possible to consider different methods of treatment for the two groups.

## III.

1. Addicts as such are suffering from a defective disease or they are not.

2. Opinions on this subject vary, both at home and abroad.

3. Scientific research abroad (there is little published in America) voices the opinion that addiction is a disease and attempts to show its characteristics.

4. The work presented, while very suggestive, requires further confirmation but cannot be rejected without attempts at such confirmation.

## IV.

1. The present laws and rulings, while nominally of a revenue character, are intended to reduce addiction by making it harder to get the drugs.

2. The latitude given the officials in charge of administration of the Harrison Law has led to considerable variation in the interpretations.

3. The law acts in establishing a form of registration and record which admits of following the distribution of the drug from wholesaler to consumer, save in a limited number of exceptions.

4. The point of greater danger as regards possible avoidance of the intention of the law is the prescription of the physician.

5. It is claimed that in New York only a small fraction of one per cent. of the physicians are involved in this avoidance.

6. The peddling trade, being extra-legal from the beginning, need not be considered here.

On the basis of these syllogisms, which I think cover the fundamentals, one can base further discussions, even if some of the original items cannot be accepted.

1. There is no dispute as to the status of the degenerate and criminal addict, who must be separated from the drug by force, and prevented from obtaining a new supply.

2. There is no dispute as to the status of addicts with conditions agreed to contra-indicate withdrawal.

2. The discussion centers about two points:

(a) The character of the treatment of all cases, but more especially those not in the criminal or degenerate class.

(b) The interpretation of the phrase "conditions contradicting withdrawal."

\*Summary developed by the writer in the course of preparation of the report on Narcotic Addiction for the American Public Health Association in 1921, as a basis of discussion for the Committee, and in no way an official document. Reprinted from Illinois Medical Journal, January, 1922.

4. The *current* headings of the types of treatment are "ambulatory" and "institutional," but these apparently simple terms are variously interpreted by various persons.

5. "Ambulatory" in its strict sense, appears usually to mean that persons able to be about and carry on their daily routine more or less successfully are given bulk dosage to cover a given period, with or without the service of a personal attendant or guard.

6. "Institutional" in its strict sense, means the hospitalization under close restriction, and the carrying out of definite courses of treatment, until the patient is freed from the craving.

7. Ambulatory treatment can be carried out either by private physicians who prescribe a number of doses at one time, these doses to be taken at the will of the patient, or through a dispensary which acts in the same manner.

8. Various dispensaries have been opened in New York, New Orleans, Shreveport, Cleveland, and other places, and nearly all have been closed. The reason for closing has been usually stated as the abuse of the facilities in one way or another.

It seems clear that a dispensary which, with no more individual attention than the average institution of that kind gives, dispenses the drug in multiple doses, will cater not only to those who should have the drug without question, but to the ordinary criminal and degenerate addict.

On the other hand, it would appear from the reports of Dr. Butler of Shreveport, where the dispensary is still functioning, that it is possible, at least in a community of that size, to meet the problem successfully and to avoid the abuses. Whether this is possible in a large population center, with a number of floaters, is a separate and important question.

Where the community is not too large, and treatment is confined to actual residents, it may be possible to select cases so as to avoid danger.

9. The relation of the practicing physician to the question has caused perhaps the most excitement. It is obvious that when a physician is found supplying addicts without inquiry into each case, and is making no attempt at cure, he is acting in opposition to the spirit and letter of the law. On the other hand, we find the argument that a physician has the right to treat in his own way, and that it may not be possible to take certain patients off the drug at once, without a more or less continued preparation. This argument claims that any arbitrary rules as to the speed of reduction are a trespass on professional rights.

10. Hospitalization is a failure if it confines itself to a brief routine treatment, with no provisions for the long after-treatment emphasized as necessary by European writers and by our

**23 Years**  
+  
**14,000 Claims and Suits**  
=  
**Medical Protective Service**

*Service is considered valuable in proportion to the amount of experience it has acquired.*

*For Medical Protective Service  
Have a Medical Protective Contract.*

**The Medical Protective Co.**  
of  
**Fort Wayne, Indiana.**

own. Absence of this results in 90 per cent. relapses within a short time.

There is at present no financial provision for such after-treatment, and there are few places outside of jails and correctional institutions in which the addict without funds may obtain routine treatment. Moreover, even in the pay sanatoria, the course of treatment is brief.

#### POSSIBLE REMEDIES

1. As noted earlier, there is no hope of checking the underground traffic without international agreement.

2. The present laws show the disposition of all drugs legitimately obtained by the physician.

3. If the smuggled supply were unobtainable, the only source for the underworld supply would be thefts from legitimately obtained supplies.

4. It is generally agreed that this would be a small matter and in no way competent to supply the peddling trade.

5. The percentage of dispensers of legitimately obtained drugs who cater primarily to addicts is small and easily ascertained.

There are really two problems, one for the future, one for the immediate present.

Granting the removal of the underground trade through national agreement, and adding to this the time-worn factor of education of the medical practitioner to prevent the type of addiction for which he has been responsible, it is clear that the addiction of the future generation, as far as opium and its derivatives are concerned, would not be serious.

For the present, however, the problem is more complex. We cannot get international action all at once. We cannot develop adequate hospital facilities all at once, and if previous contentions are accepted, mere hospitalization without convalescent care would be unwarranted expense.

The mere forbidding of an action without removal of the means to carry out the action has never been more than temporarily successful, and it is well known that the best of reforms occur in waves, with long intervals between waves.

In reality how serious is the condition, and how much of a menace is it? In the earlier propaganda, the percentage of our population who were addicts was placed as high as four per cent. Now it is claimed as affecting one-fourth of one per cent. or less, a notable drop, and one not claimed as the result of the execution of the law.

The great majority of the addicts who may be considered as a public menace are in the large cities, and according to such statistics as we have available, are for the most part in the criminal classes. Inasmuch as addicts of this type are resistant to all treatment save by force, the only way they can be cared for is in correctional institutions, in which they may be re-

tained till detoxicated. At least this portion then may be considered as a police problem rather than as a public health problem.

If this is true, the fact that the reason for relapse is the accessibility of the drugs through peddlers, brings us back to the same point in the circle, namely, the checking of smuggling and its checking by the only possible means, removal of the foreign source of supply.

If the peddlers' supply were limited to thefts from registered stocks, it would certainly be insufficient to *spread* addiction, even if it was adequate for the present group. The problem would be self-limiting, far more than would even adequate hospitalization and after-cure.

In summation it seems to me that the solution for the future lies primarily in the international limitation of the sale of opium products to registered and responsible persons, and secondarily in the education of physicians and the public as to the development of addiction.

The solution for the present is far more difficult. The supply is accessible, there is no adequate hospitalization in sight, the educational side is incomplete. There is little disagreement among reputable persons as to the disposition of most of the cases. The main argument concerns the interpretation of the proper control and treatment in a limited number of individual cases. There are, it seems to me, two main points of difference. First, can the physician be trusted to play fair with the law? Second, is the number of such cases and their relation to society a menace?

Decisions and recommendations must be made on the basis of facts. It does not appear likely that further investigation will do more than to increase our statistical knowledge, and fill out the records of types and cases. The only point under serious dispute which may be cleared up by scientific investigations, and which should be most carefully studied, is the classification of addiction as a disease or as something else. Until this is done in a manner sufficiently clear to carry conviction, the present argument will continue.

EAST NINTH AND ST. CLAIR AVE.

#### OFFICIAL AUTO INSIGNIA IN SUMMIT COUNTY

Because of confusion resulting from the use and abuse in Akron of eighteen different styles of auto "crosses" by physicians, ambulances, dentists, osteopaths, chiropractors, factories and others, the Summit County Medical Society has adopted a distinctive insignia bearing its name, for the use of members only. The police departments of Akron, Barberton, Kenmore, Cuyahoga Falls and Wadsworth are cooperating to the end that all other designs may be eliminated after sufficient time has been allowed for distribution of the new insignia.



# R A D I U M

## Six Years Experience with Radium Over One Thousand Cases Treated

*Adequate amounts of Radium in both tubes and needles to meet any and all requirements at any time. Patients requiring hospital accommodations are treated at Mt. Carmel, Grant, Protestant, St. Francis or McKinley Hospitals at the option of the physician or surgeon referring the patient.*

*Ethical co-operation assured.*



**BEN. R. KIRKENDALL, M. D.**  
137 E. State St. Columbus, Ohio

## ACADEMIES AND COUNTY SOCIETIES

### Toledo

(E. J. McCormick, M. D., Secretary)

The annual meeting, banquet and election of officers of the Academy of Medicine of Toledo and Lucas County took place, January 6, with 134 members present and Dr. L. A. Levison presiding. Reports for the year were given by the Auditing, Public Health, Milk Commission, Telephone, Trustee and Bulletin Committees and the retiring officers. Among these none was of greater interest than the report presented by the Milk Commission which showed splendid progress in improving the quality of milk distributed. Resolutions were adopted urging the reduction of telephone rates in Toledo and Lucas County and the physical consolidation of the telephone systems. Officers were elected for 1922 as follows: President, J. F. Wright; vice-president, Norris Gillette; secretary, E. J. McCormick; delegates, R. L. Bidwell, J. T. Murphy, Ben Gillette; alternates, J. G. Keller, H. E. Smead, L. A. Levison.

On February 3 the academy enjoyed an address by Dr. Wilfred P. Grenfell, for 28 years medical missionary on the coast of Labrador, on his experiences there. The program of the Surgical Section on February 10 included papers on "Pelvic Roentgenograms With the Aid of Intra-Abdominal CO<sub>2</sub> Injection," preliminary report, demonstration of slides, by N. W. Gillette; "The Newer X-ray Technique in the Treatment of Malignancy," by L. M. Dolloway, and "Treatment of Puerperal Sepsis," by S. J. Goodman, Columbus.

Meetings of the Medical Section and the Eye, Ear, Nose and Throat Section were held on February 17 and 24, respectively.

### Cleveland

(Lester Taylor, M.D., Secretary)

The February 17 meeting of the Cleveland Academy of Medicine was devoted to the subject of tuberculosis. Speakers for the occasion were Dr. James Alexander Miller of New York City on "Some Principles in the Diagnosis and Treatment of Tuberculosis", and Dr. H. Kennon Dunham, associate professor of Clinical Medicine of the College of Medicine, University of Cincinnati, on "Roentgenological Classification of Pulmonary Tuberculosis and Its Bearing upon the Prognosis". Dr. Edwin W. Ryerson, professor of Orthopedic Surgery, Rush Medical College, addressed the Academy on "Low Back Paines" on January 20th. Discussion of Dr. Ryerson's address was led by Dr. Ansel G. Cook of Hartford, Connecticut.

### SECOND DISTRICT

*Darke County* Medical Society met at the Greenville Opera House, January 12, with 25 members present. The program was devoted to the presentation of moving pictures demonstrating thyroidectomy and herniotomy by Dr. Joseph L. DeCourcy of Cincinnati. On February 9, when the society met at Henry St. Clair Memorial Hall, the speakers were Drs. J. C. Walker and T. H. Dickinson of Dayton. The former's subject was "Common Foot Deformities" and the latter's "Diseases of Children." Both papers were practical and brought out good discussions. Attendance 20.—B. F. Metcalfe, Correspondent.

*Miami County* Medical Society, February 2, passed the following resolution:

WHEREAS the Public and Profession are being sold out to:—

- (1) Foundation control of "full time" medical education.
- (2) Lay board domination and the "closed shop" hospital.
- (3) Socialized state medicine, subsidized community health centers and hospitals under political or university control.
- (4) Legislative dictation of therapy and fees.
- (5) Demoralization of medical standards by the expansion of cults.
- (6) Exploitation of the specialties by lay technicians.

THEREFORE BE IT RESOLVED that all the Delegates of the Ohio State Medical Society to the A. M. A. meeting in St. Louis, Mo., May 22-26, 1922, are hereby instructed to vote for—

- (A) A change of policy and leadership in the A. M. A. pledged to the immediate abolition of the evils mentioned, and constructive protection of medical interests.
- (B) The repeal of multiple representation and plural voting privilege by Section Delegates.
- (C) The election of Trustees for a period of two years; five Trustees to be elected one year, and four the next, to prevent the Trustees from perpetuating oligarchical rule.

BE IT FURTHER RESOLVED that copies of these Resolutions be sent at once to the Official Organ of the Ohio State Medical Society, the Journal of the A. M. A. and the Medical Advisory Committee.

(Signed)

MIAMI COUNTY MEDICAL SOCIETY.  
G. J. Hance, Secretary.

*Montgomery County* Medical Society heard an excellent address on "Building a Body" by Dr. C. L. Patterson, January 20. On February 3, Drs. Gertrude Felker and Eleanora Everhard were the joint participants in a program devoted to "A Study of Headaches." The society recently passed the resolution published in the Miami County Society report.

### THIRD DISTRICT

*Auglaize County* Medical Society's meeting at Wapakoneta, January 27, was attended by 22 physicians including a number from nearby counties. Speakers were Robert G. Paterson, secretary of the Ohio Public Health Association, Executive Secretary Martin of the State Association, and Dr. A. N. Wisely, Jr., of Lima. Following the meeting an enjoyable banquet was served, at which Dr. George B. Faulder presided as toastmaster.

*Hancock County* Medical Society met, February 1, at the Elks' Home, Findlay. Six o'clock dinner was served, after which Dr. J. C. Tritch gave the paper of the evening on "Two Years of Radium." Among some things reported by Dr. Tritch was a series of 10 cases of inoperable carcinoma of the cervix uteri, all verified by laboratory findings and regarded as past the borderline of operability. Four of these cases are apparently in good health and show no evidence of recurrence, four are under treatment, all very much improved; two have died. Both of the fatal cases were very much improved for a while and each lived to the end with lessened discharge, freedom from odor and comparative absence from pain, neither one receiving a single dose of morphine. Ten cases of menorrhagia at the menopause, non-cancerous, one of this series tubercular, were each cured by a single radium treatment. Eight cases of uterine fibroid have been treated. Complete retrogression has taken place in two cases; two cases each had one treatment and failed to return; two cases had, respectively, three and four treatments each, with a checking of the menorrhagia but with little reduction in size of tumor; two cases, very large tumors, each well above the umbilicus, who refused operation, were very much improved and marked reduction in the size of the tumor occurred. Seven cases of exophthalmic goitre have been treated; four of these have lost their tachycardia and tremor and

# RADIUM

Cancer of the Cervix responds particularly well to Radium, especially when supplemented by X-Ray, applied externally.

Some of our most prominent surgeons are not operating upon Cancer of the Cervix at the present time.

Your inquiries are invited.



DR. CHAS. F. BOWEN  
344 EAST STATE STREET  
COLUMBUS, OHIO

are apparently in normal health. The cases of keloid, one following a burn, the other post-operative, have apparently been cured. Two cases of carcinoma of the rectum have been treated, one of which has almost shown, to date, a complete retrogression; the other is unimproved. A great many cases of basal cell growth, of the face, have disappeared but squamous cell growths of the dire results expected, happened, on the proved very intractable. A point brought out in the paper was, that notwithstanding it has been generally claimed that radium should not be used in the uterine cavity, where there have been serious adnexal infections, the writer has been compelled to use it in several such cases and none of the dire results expected, happened, on the contrary the old trouble apparently cleared up. The paper was the subject of a general discussion. A number of physicians present who had referred patients to Dr. Tritch for treatment told of the condition of patients. The evening was one of profit.—Nelia B. Kennedy, Secretary.

*Logan County* Medical Society held its regular monthly meeting in Bellefontaine, February 3. Approval was given the recommendation of Dr. O. P. Kimball, Cleveland, who made a survey of Bellefontaine schools in January, that school children whose parents were willing to cooperate be given a prophylactic course of iodides twice yearly for the prevention of goitre, under the supervision of the boards of health and education. Dr. C. J. Broeman, Cincinnati gave a very interesting as well as instructive talk on "Radium in Malignant Diseases," illustrated with well chosen lantern slides. Attendance 22.—M. L. Pratt, Secretary.

#### FOURTH DISTRICT

*Sandusky County* Medical Society had as guests at its first meeting of the year in Fremont, January 26, Drs. L. A. Levison and J. T. Murphy of Toledo. The former, in a paper on "Asthenia of the Heart", presented a strong appeal for all physicians to add quinodin to their armamentarium of therapeutic agents, declaring that it proves especially beneficial in recent attacks. He advised care in its administration, the best form being capsules, and recommended its use in febrile conditions such as peritonitis, puerperal sepsis, pneumonia, etc. Dr. Murphy demonstrated a number of fine plates on cardiac pathology and some good drawings. He emphasized the fact that in all cases the X-ray must be considered as an added rather than the determining factor in ultimate diagnosis. Dr. F. M. Kent led the interesting general discussion that followed the two papers. The communication from the "Medical Advisory Committee" was referred to the board of trustees.—C. I. Kuntz, Secretary.

#### FIFTH DISTRICT

*Lorain County* Medical Society and the staff of Elyria Memorial Hospital enjoyed a joint meeting at the hospital, February 9. Dr. R. K. Updegraff, Cleveland, counselor of the Fifth District of the State Association, and Dr. C. A. Hamann, also of Cleveland, were visitors. The latter gave an excellent talk on "Some of the Unexpected Things That Happen in Surgery."—W. E. Hart, Secretary.

*Trumbull County* Medical Society held its annual meeting and banquet at the Warner Hotel, Warren, January 19. Fifty physicians were in attendance from Niles, Girard, Newton Falls and Warren. The address of the evening was given in a forceful and interesting manner by Dr. W. S. Stoner of Cleveland on "A Practical Consideration of the Internal Medicine Problems". In the business session which followed the following officers were elected: president, James J. Tyler;

vice-president, E. E. Goodman; secretary-treasurer, J. D. Knox; medical defense committeeman, R. B. Dobbins; legislative committeeman, Paul C. Gauchat; delegate, J. J. Tyler. The retiring president, R. R. Rogers, was elected to the board of censors.—J. D. Knox, Secretary.

#### SIXTH DISTRICT

*Mahoning County* Medical Society in session, January 5, at the Youngstown Library, elected John L. Washburn to the presidency and A. W. Thomas as secretary for the year 1922. William P. Connor was re-elected treasurer and E. W. Coe was elected vice-president. Warren D. Coy, retiring president, read an address entitled "Ourselves" that was very well received.

The regular January meeting of the society was held on the 17th, with an attendance of about 50 members. The communications from the "Medical Advisory Committee" were read to the members as were the letters from the president of the Ohio State Medical Association, and from the Council. After a thorough discussion of the resolution of "Medical Advisory Committee" it was the sense of the society that we were quite satisfied with conditions as they stand and that we have utmost confidence in our governing officers and in the Council, etc.

There followed a discussion of the tuberculosis problems in this county. The county commissioners are planning the erection of a tuberculosis sanitarium here, and the site proposed by them is one already owned by the county, adjacent to the county infirmary, and about 10 miles from Youngstown with practically no provision for transportation to and from the location. After lengthy discussion, the following resolution was adopted:

WHEREAS, The County Commissioners are proposing the erection of the Mahoning County Tuberculosis Hospital at Canfield, adjacent to the County Infirmary, on a piece of property already owned by the county, and which we deem not a suitable location, therefore, be it,

RESOLVED, That the members of the Mahoning County Medical Society do hereby protest that site and urge that a more desirable location be secured and that in the selection of this new site, due consideration be given the following suggestions:—

First: A more desirable environment for the tuberculous patients.

Second: Easier accessibility for friends and relatives who wish to visit patients.

Third: A location nearer to the center of population from whence most of the patients are derived.

Fourth: Accessibility to the medical center of this county, which will be extremely valuable to both the patients and the institution.

Fifth: Such a location will permit of the selection of better attendants.

Sixth: Such a location would be of great benefit to the institution in that it would be located in connection with the hospital center of the county.

Seventh: In such a location, the new hospital would be of far greater educational value in the prevention, treatment and care of tuberculous patients in Mahoning County.—A. W. Thomas, Secretary.

*Portage County* Medical Society met for its February session at the office of Dr. R. D. Worden, Ravenna. An interesting paper on focal infections, particularly as originating in the throat, ear and nose, given by P. H. Zinkham, was followed by a lengthy discussion and illustrated by numerous case reports.—E. J. Widdecombe, Secretary.

*Stark County* Medical Society held its annual election of officers in Canton, January 17, with the result that David S. Banker was chosen president; G. S. Hackett reelected secretary, and E. O. Peterson elected treasurer.

*Summit County* Medical Society's meeting of February 7 was attended by 62 members from Barberton, Wadsworth, Northfield and Akron. The program consisted of papers on "The Diagnosis of Variola", presented by W. A. Mansfield and discussed by T. D. Hollingsworth; and "The Use of a Clinical Laboratory", presented by V. D.

# Radium Laboratory

350 East State St., Cor. Grant Ave.  
Columbus, Ohio



**Edward Reinert, Ph. G., M. D.**  
**R. R. Kahle, Ph. B., M. D.**

Citz. 9215

Bell, M. 7417

---

Adequate dosage for all conditions.  
Radium Needles for suitable cases.  
We desire to communicate and co-  
operate with physicians and sur-  
geons interested.



## The Holzer Hospital

Gallipolis, Ohio

*Announces the pur-  
chase of a sufficient  
quantity of radium  
for all therapeutic  
uses.*

# Radium Service

By the Physicians Radium Association of Chicago (Inc.)

Established to make Radium more available for approved therapeutic purposes in the **Middle States**  
Has *the* large and complete equipment needed to meet the special require-  
ments of any case in which Radium Therapy is indicated. Radium furnished  
to physicians, or treatments referred to us, given here, if preferred. Mod-  
erate rental fees charged.

Careful consideration will be given inquiries concerning cases in which  
the use of Radium is indicated.

BOARD OF DIRECTORS

- William L. Baum, M. D.
- N. Sproat Heaney, M. D.
- Frederick Menge, M. D.
- Thomas J. Watkins, M. D.

## The Physicians Radium Association

1104 Tower Bldg., 6 N. Michigan Ave.  
CHICAGO

Telephones: | Manager:  
Randolph 6897-6898 | William L. Brown, M. D.

Keiser and discussed by A. S. Robinson, C. R. Steinke, T. H. Boughton and C. E. Held.—A. S. McCormick, Secretary.

*Wayne County* Medical Society, in session at Wooster, January 17, elected the following officers for 1922: president, O. P. Ulrich, Orrville; vice-president, Jean Douglas, Wooster; secretary-treasurer, O. G. Grady, Orrville; delegate, R. C. Paul, Wooster; alternate, G. W. Ryall, Sr., Wooster. An interesting paper on "Vitamines" was read by J. R. Jameson and freely discussed.—O. G. Grady, Secretary.

#### SEVENTH DISTRICT

*Columbiana County* Medical Society had as its guest in East Liverpool, January 17, Dr. Curtis C. Mechling of Pittsburgh, who delivered a splendid address on "Ano Rectal Diseases". Forty physicians attended the meeting. The following officers were chosen: J. M. King, Sr., president; George P. Ikert, vice-president, and C. R. Larkins, secretary-treasurer.

#### EIGHTH DISTRICT

*Muskingum County* Academy of Medicine, meeting in Zanesville, January 4, heard addresses by Dr. J. D. Frank, Columbus, a member of the staff of the State Department of Health, on "Tuberculosis", and Dr. C. H. Higgins on "Neurasthenia", which was discussed by many members.

#### Appointed to New Medical Post

Dr. Edmund M. Baehr of Cincinnati, who became chief neuro-psychiatrist of the State Bureau of Juvenile Research, Columbus, in February, has announced that his work in the State Department of Welfare in connection with state institutions will be directed toward the institution of a system seeking to prevent and cure insanity rather than house the mentally ill. Dr. Baehr served as a member of the last board of administration until the board was abolished under the reorganization code. To assume his new duties Dr. Baehr resigned as associate professor of physiology in the University of Cincinnati College of Medicine, with which he has been connected since 1911.

#### Sixth District Meeting at Canton

The 192nd meeting of the Union Medical Association of the Sixth Councilor District was held in Canton, February 14. The program opened at 8:00 a. m. with a two-hour surgical clinic on gall bladder cases conducted by Dr. John B. Deaver at Aultman Hospital. Following this there was a brief business session after which papers were read by Dr. O. G. Grady, Orrville, on "Treatment and Prognosis of Syphilis by a General Practitioner;" Dr. George A. Reibel, Ashland, on "Curing Deafness by Operation on the Nose;" and Dr. Harry Myers, Mansfield, on "The Relation of Industrial Medicine to General Practice." In the afternoon session Dr. Deaver delivered an address on "The Upper Right Abdominal Quadrant" and Dr. H. H. Goddard, Columbus, on "Child Psychopathy and the Medical Aspect of Juvenile Delinquency." Physicians from outside the county were guests of the Stark County Medical Society at luncheon.

# The Kennedy Radium Laboratory

Established 1914

Dr. Thomas C. Kennedy  
Dr. Will H. Kennedy

For application of radium in malignant and other diseases where indicated.

Co-operation with physicians or surgeons desired.

All inquiries or request for information will receive prompt attention.

709 HUME-MANSUR BLDG.  
INDIANAPOLIS, INDIANA

# Cincinnati Radium Laboratory

22 West Seventh Street

Needle, Tube and Plaque  
Applicators



CHARLES GOOSMANN, M. D.

X-Ray Treatment with the New High Voltage Equipment Used When Indicated.

## WE ARE LOOKING FOR TROUBLE!

It is the purpose of this laboratory to aid physicians in solving  
ANY KIND OF TROUBLE

that may be solved in a pharmaceutical laboratory.

This laboratory manufactures preparations worthy of the confidence of the medical profession.

We purposely avoid non-essentials as being poor investments for physicians.

The medical profession may confidently rely upon the accuracy and the honesty of our manufacture, as being the best that can be made, to produce the full physiological affects.

We have a complete assembly of supplies and accessories for physicians' uses.

Our price list-bulletin is chock full of good and interesting things. Send for it doctor. A card brings it.



1104-1108 N. High Street, at Fourth Avenue

Columbus, Ohio

The Management of an Infant's Diet

## Infants' Stools

Regularity in bowel movements contributes much toward normal, healthful progress, and a knowledge of the number and character of the stools during each twenty-four hours is an important part of the general management of early life and assists much in properly adjusting the diet.

Suggestions for the regulation of infants' stools by slight changes in the make-up of the diet and particularly in relation to

## Constipated Movements

are given in our book, "Formulas for Infant Feeding," and in a pamphlet devoted especially to this subject. This literature will be sent to physicians who are interested in the matter.

Mellin's Food Company, Boston, Mass.

## School Health Crusade Forms Basis of Hygiene Course Adopted by Department of Education

The course of study in hygiene entitled "Health For the Child" prepared by the Ohio Public Health Association and adopted by the State Department of Education, is now in the hands of the county school superintendents and their teachers, and in many places it is already being used as the regular course of study in hygiene. The requests for this outline indicate a genuine interest in health education in the schools and that this work is supplying a very great need.

Practically every superintendent in Ohio has placed orders for enough copies of the outline to supply his teachers and requests have come for copies of the outline from colleges, normal schools and from school health authorities in other states. One sample copy was sent to each county superintendent and he was asked to order what he would need. Use of the course is not made compulsory by law as are some other subjects which have been introduced in the schools, and the fact that practically all of them have asked for the outline indicates a genuine interest in the subject.

This interest is no doubt due in large measure to the demonstration work which has been going

on for the past two years, the work of the school nurses and the voluntary and official health agencies. The Ohio Public Health Association has been demonstrating the Modern Health Crusade work in the schools of a number of rural counties. The new outline is based upon this crusade with some modifications. Other states have probably made greater advances in the promotion of the Modern Health Crusade in a voluntary way but Ohio is one of the first states to secure adoption of the course through the State Department of Education.

While the teacher's outline is furnished free there are certain other supplies which are necessary, including forms for checking the health chores, pamphlets and charts which are furnished at cost by the Ohio Public Health Association. There is a chore record book for the pupils, containing space for checking health chores for one year, with blank pages for pasting in certificates which are awarded at the end of five, ten and fifteen weeks. These records show the child what he should weigh and how much he should gain each month. There are also chore records for the primary grades and pamphlets to the parents of underweight children which

### FOR SALE---Country Home and Forty Acres



This substantially built Colonial home surrounded by 40 acres of beautiful, open, rolling country is admirably adapted for use as a sanitarium.

12 miles out from Cincinnati on a good pike; 9 rooms, furnace, cement cellar, electricity, garage, etc. Abundance of fruit and shade trees. House back from road about 800 feet.

Price \$15,000.00—good terms. Telephone Cincinnati Main 3737 after 6 P. M., or write for particulars, K. H., care Ohio State Medical Journal.



# Artificial Pneumothorax

**Pulmonary Tuberculosis**

Progressive cases of pulmonary tuberculosis, especially when only one lung is actively involved, respond very well to compression of the active lung with nitrogen gas.

Treatments given at the patients home or in the office, under local anesthesia.

*Inquiries invited.*

**LOUIS MARK, M. D.**

327 East State Street  
Columbus, Ohio



**Rent This TYCOS  
Nine Months  
Then It's Yours**

**\$2.50 Monthly Brings It**

The new 1922 model celebrated Blood Pressure Apparatus, Dr. Rogers' Sphygmomanometer is very accurately made and registers both systolic and diastolic pressures. The cash price of the Tycoeverywhere is \$25.00. We will send it to you on receipt of only \$2.50 and, if after ten days' trial, you wish to keep it, simply pay the balance—\$22.50—the same as rent—in nine monthly payments of \$2.50 each. You pay only the cash price (no interest—no extras) and have nine full months in which to make it pay for itself.

**Leather Case and Booklet Free**

With every Tycos is included Free a genuine morocco leather case. You can put your Tycos into this case and carry the entire instrument in your pocket. Besides the case, we give you Free, a 44-page booklet which explains accurately, thoroughly and plainly just how and why the Sphygmomanometer is essential to the intelligent practice of medicine.

**Ten Days' Trial—Money Back**

Send today. Just sign and mail the coupon below—enclose \$2.50 for first month's rent and we will immediately send you the instrument and you will only have to pay \$2.50 each month until the cash price, \$25.00, is paid in full. Send that \$2.50 today. Remember, we give ten days' trial and return your money if you are not satisfied. The price for all cash with order is just the same, \$25.00.

----- SIGN AND MAIL COUPON -----

**A. S. ALOE CO. Factory Distributors, 570 Olive St., St. Louis, Mo.**

I enclose first payment, \$2.50, for which send me Dr. Rogers' TYCOS and outfit on ten days' trial as per your offer. I agree that the title is to remain in you until paid in full.

Name \_\_\_\_\_  
Address \_\_\_\_\_

## 6 Points to Remember When Choosing Mead's Dextri-Maltose to Modify Cow's Milk for Bottle Babies

**POINT No. 1**

It does not have directions on the package as these interfere with the doctor's instructions to mothers.

**POINT No. 2**

It is not advertised in the women's magazines and other lay papers as this is unethical.

**POINT No. 3**

Literature on infant feeding is not mailed to mothers.

# MEAD'S Dextri-Maltose

(Dextrins and Maltose)

Has been used by thousands of physicians for over 10 years because it gives gratifying results in infant feeding and because it is a strictly ethical product.

**A Three Way Winner**

10 days' trial will prove its value to the doctor, the mother and the infant.

**POINT No. 4**

It contains the proper food salts. Sodium Chloride for average babies, Potassium Bicarbonate for constipated babies.

**POINT No. 5**

It contains no protein, cellulose or fat. It is used as a malt sugar and a sugar it should be.

**POINT No. 6**

It contains:  
 Dextrins -----43%  
 Maltose -----52%  
 Moisture ----- 5%  
 These proportions were selected by Pediatricians.

*Samples and literature furnished on request.*

**MEAD JOHNSON & COMPANY**

**EVANSVILLE, INDIANA**

can be had at cost by ordering from the Ohio Public Health Association, 83 South Fourth Street, Columbus, Ohio.

During the past year many counties have already supplied their schools with scales. Much weighing and measuring of children has already been done. This is the first step in the course.

Establishment of nutrition classes and the supplying of milk and hot lunches to school children is seen as the first result of this preliminary work. Underweight children are, in many schools, being furnished milk at the morning and afternoon recess. Where the children are able they bring their pennies to school and pay for their service.

The Parent Teacher Associations, the local voluntary health leagues and in the rural districts, the Farm Bureau women in many places are behind the nutrition work in the school. Money raised from the sale of the tuberculosis Christmas seals is being used to build up the undernourished children.

The health crusade course aims to train all the children how to keep strong and healthy by daily practicing the rules of hygiene and health. The element of romance is provided, making it interesting and attractive to the child.

Where the health crusade is used, results may be expected in a decreased number of pupils absent due to illness and in reduced number of "repeaters." These are the measuring rods

Prescribe

**"Horlick's"**

the Original and Genuine

Endorsed by the medical profession, who for over a third of a century have proven its reliability in the feeding of infants, nursing mothers, convalescents, and the aged.

*Samples prepaid upon request.*

**Horlick's Malted Milk Co.**  
Racine, Wisconsin

## The Physiatric Institute

devoted to the study and dietetic treatment of

Diabetes, Obesity, Nephritis  
and High Blood Pressure

will offer short practical courses in the summer months to a limited number of physicians.

*Inquiries may be addressed to the Director*

**DR. FREDERICK M. ALLEN**

The PHYSIATRIC INSTITUTE

MORRISTOWN - - - NEW JERSEY

or the city office, 660 Park Ave., New York

## To Prevent Hydrophobia

Use

Pasteur Treatment

With a

**Potent Product and Prompt Service**

**PRICE \$25.00**

Order from

**James McIlvaine Phillips, M. D.**

2057 N. High St.

Columbus,

Ohio



Has finally demonstrated the fallacy of the so-called uric acid solvent therapy (lithia, etc.) and made unnecessary the employment of Colchicum with its always to be feared deleterious effects on heart and intestines.

Accomplishes a definite scientifically and clinically established, physiologic stimulation of the uric acid excretion. Performed innocuously and controllable to a nicety by dosage and by urine and blood tests.



Information, Literature and Ample Trial Quantity from

SCHERING & GLATZ, INC.  
150 Maiden Lane, New York

# GOUT

## THE STORM BINDER AND ABDOMINAL SUPPORTER

PATENTED



For Men, Women, Children and Babies

Modifications for Hernia, Relaxed Sacroiliac Articulations, Floating Kidney, High and Low Operations, Ptosis, Pregnancy,  
:: Pertussis, Obesity, Etc. ::

Send for new folder and testimonials of physicians. General mail orders filled at Philadelphia only—within twenty-four hours

KATHERINE L. STORM, M. D., 1701 Diamond Street - - - Philadelphia

**D**o you believe that the fitting of trusses is a part of the Practice of Medicine? If so, send your patients needing trusses to

### The Columbus Truss & Optical Co.

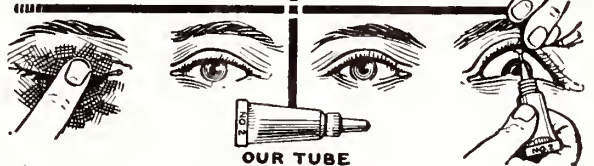
PARKER W. PHENEGER, M. D., Mgr.

We Specialize in Elastic Stockings Made to Measure

Office and Fitting Rooms

Suite 303-309 Rowlands Bldg., Broad and Third Sts. COLUMBUS, OHIO

### THE OLD WAY | THE NEW WAY



OUR TUBE

### Better Ocular Therapeutics

Can be obtained by the use of "M-E-S-Co" brand of Ophthalmic Ointments. Reasons: Selected Chemicals, Thorough Trituration, Perfect Incorporation, Sterilized Tubes, Billed and Strained Petroleum, Excellent Service, No Waste, No Dirty Salve Jar, Right Prices. Write for complete information  
**MANHATTAN EYE SALVE CO., Inc.**  
Louisville, Ky.

which may be used in determining the results of any health work among the school children.

How many children failed in their recent examinations? How many of these were out of school on account of illness? and what per cent. of them also come within the malnourished and underweight group? These are questions which present themselves to every teacher and which should inspire the teacher to undertake instruction of the children in matters of health.

## DEATHS IN OHIO

*Alexander Logan Cope, M. D.*, Western Reserve University School of Medicine, 1888; aged 73; member of the Ohio State Medical Association; died at his home in Winona, January 28, from angina pectoris. Dr. Cope had been in general practice in Columbiana County for 47 years.

*Samuel Bradbury Hanlin, M. D.*, Hahnemann Medical College and Hospital of Philadelphia, 1895; aged 49; died at his home in Middleport, January 19. Dr. Hanlin began practice in Pomeroy in 1898 and practiced there and at Middleport until a week before his death. He was the son of the late Dr. W. A. Hanlin of Middleport. One sister and one brother survive.

*Peter Jaglenski, M. D.*, College of Homeopathic Medicine, Ohio State University, 1921; aged 28; was found dead in his home in Cleveland, January 13, death having resulted from acute pneumonia.

*Aid B. Jordan, M. D.*, Detroit College of Medicine and Surgery, 1892; aged 53; member of the Ohio State Medical Association; died at his home in Marblehead, January 19, after a brief illness with ptomaine poisoning. Dr. Jordan spent his entire medical career of 29 years in Marblehead, where he was held in much esteem by the public which he served. He leaves his wife, four sons and one daughter.

*James A. Judkins, M. D.*, Medical College of Ohio, Cincinnati, 1866; aged 79; former member of the Ohio State Medical Association; died at his home in Barnesville, February 2, from pneumonia. Dr. Judkins was a life-long resident of Barnesville. He leaves a widow and one daughter.

*Jacob Anthony Kimmell, M. D.*, Western Reserve University School of Medicine, 1869; aged 77; former member of the Ohio State Medical Association; died at his home in Findlay, February 2, from hardening of the arteries. Dr. Kimmell was a veteran of the Civil War and a pioneer physician of Findlay, having practiced there continually since 1872. While a member of the Ohio legislature from Hancock County in 1895 he secured the passage of the "Kimmell bill" for registration of physicians in the state. Dr. Kimmell had served as president of the Han-

## SAVE MONEY ON YOUR X-RAY SUPPLIES

Get Our Price List and Discounts on  
Quantities Before You Purchase  
HUNDREDS OF DOCTORS FIND WE SAVE  
THEM FROM 10% TO 25% ON X-RAY  
LABORATORY COSTS

### Among the Many Articles Sold Are

- X-RAY PLATES.** These brands in stock for quick shipment. PARAGON Brand, for finest work; UNIVERSAL Brand, where price is important.
- X-RAY FILMS.** Duplitzed or Dental—all standard sizes. Eastman, Ilford or X-graph metal backed. Fast or slow emulsion.
- BARIUM SULPHATE.** For stomach work. Finest grade. Low price.
- COOLIDGE X-RAY TUBES.** 5 Styles. 10 or 30 milliamp.—Radiator (small bulb), or broad, medium or fine focus, large bulb. Lead Glass Shields for Radiator type.
- DEVELOPING TANKS.** 4 or 6 compartment stone, will end your dark room troubles. 5 sizes of Enameled Steel Tanks.
- DENTAL FILM MOUNTS.** Black or gray cardboard with celluloid window or all celluloid type, one to eleven film openings. Special list and samples on request. Price includes your name and address.
- DEVELOPER CHEMICALS.** Metol, Hydroquinone, Hypt, etc.
- INTENSIFYING SCREENS.** Patterson TE, or celloid-backed screens. Reduce exposure to one-fourth or less. Double screens for film. All-metal Cassettes.
- LEADED GLOVES AND APRONS.** (New type glove, lower priced).
- FILING ENVELOPES** with printed X-Ray form. (For used plates). Order direct or through your dealer.

If You Have a Machine Get Your Name on Our Mailing List



**GEO. W. BRADY & CO.**

771 So. Western Ave.,  
Chicago

## Dares Haemoglobinometer

Candle lighted, or Electric lighted.  
We are accepting orders for prompt delivery.  
Write for booklet and prices.

## Tycos Office Sphygmomanometer

With 6 inch silvered dial.  
A distinct advance over the pocket type.  
Immediate delivery. Price \$37.50.

Surgical Instruments—Dressings,  
Pharmaceuticals, Biologicals

Your orders will receive prompt attention—  
"You will do better in Toledo."

**The Rupp and Bowman Co.**

319 Superior St.

TOLEDO,

OHIO

# LOESER'S INTRAVENOUS SOLUTIONS



## Accepted by the Council

### LOESER'S INTRAVENOUS SOLUTION OF MERCURY OXYCYANIDE

*Each ampoule, 5cc contains 8 milligrams (1/8 gr.)  
Mercury Oxycyanide.*

The result of years of study of the chemical, physical, and clinical properties of mercury salts employed in syphilis. The evident irregularity of absorption, the pain and irregular clinical results have long suggested the intravenous administration of mercury.

Intravenous, Mercury Bichloride, and other so-called soluble acid salts have proved impractical as they cause phlebitis and hardening of the vein, preventing continued routine of injections. We have ascertained that this fault is associated with the ionization of the solution employed.

Mercury Bichloride solution, 16 milligrams ( $\frac{1}{4}$  grain) in 5cc has H-ion Conc. of Ph 4.5-5. LOESER'S INTRAVENOUS SOLUTION OF MERCURY OXYCYANIDE shows H-ion Conc. of Ph 7, approximately the H-ion of normal blood. We offer this solution as being free from the objectionable qualities of other soluble salts of mercury, permitting an intensive and continued routine of mercury in syphilis.

TESTED CHEMICALLY, CLINICALLY and BIOLOGICALLY  
TOXICITY TEST

### LOESER'S INTRAVENOUS SOLUTION OF MERCURY OXYCYANIDE

*(Animals used—White Rats)  
Intravenous Method employed.*

*15 times normal human dose.*

130g	.14cc
120g	.13cc
140g	.15cc
115g	.12cc
105g	.11cc

Descriptive Literature, Price List, "Journal of Intravenous Therapy", will be sent to any physician on request.

## NEW YORK INTRAVENOUS LABORATORY

100 West 21st Street  
New York, N. Y.

*Producing Ethical Intravenous Solutions  
for the Medical Profession Exclusively.*



cock County Medical Society and the North-western Ohio Medical Society. Surviving are his widow and one son.

*William Henry Kirkland, M. D.*, Cleveland University of Medicine and Surgery, 1878; aged 82; died at the home of his nephew in Galion, January 24. Dr. Kirkland was formerly a resident of Massillon but came to Galion last September.

*Frank Bates Livermore, M. D.*, Cleveland University of Medicine and Surgery, 1895; aged 49; former member of the Ohio State Medical Association; died at his home in Youngstown, January 17. Dr. Livermore practiced in Barberton for 20 years before removing to Youngstown last April. During the World War he served assignments at Walter Reed Hospital, Washington, and Rockefeller Institute, New York, as a captain in the Medical Corps of the Army. He leaves a widow and one daughter.

*Jonathan Moffett*, licensed to practice in Ohio, 1897; aged 87; died in Malvern, January 17. Dr. Moffett had resided in Malvern for more than 45 years.

*Ernest DeWitt Murphy, M. D.*, Starling Medical College, Columbus, 1903; aged 50; member of the Ohio State Medical Association and Fellow of the American Medical Association; died at his home in Antwerp, January 19, after a week's illness with lobar pneumonia complicated with pleurisy and endocarditis. Dr. Murphy was a life-long resident of the vicinity in which he made his home and practiced in Antwerp continually after completing his medical education. Surviving are his wife and one daughter.

*Lycurgus Rogers, M. D.*, State University of Iowa College of Medicine, Iowa City, 1893; aged 69; died at the home of his sister in Negley, January 9, from pneumonia. Dr. Rogers practiced in East Liverpool prior to his eighteen years' residence in Negley. He is survived by a sister and five brothers.

*Estell H. Rorick, M. D.*, University of Michigan Medical School, Ann Arbor, 1869; aged 70; member of the Ohio State Medical Association; died at his home in Fayette, January 27, from apoplexy. Dr. Rorick was elected to the state legislature from Fulton County in 1888 and served two terms. Later he was superintendent of the Athens State Hospital for 10 years, and also was superintendent of the Institution for the Feeble-Minded at one time. During the Willis administration Dr. Rorick was a member of the old state board of administration. He leaves a widow and one daughter.

*Arthur P. Schulze, M. D.*, Cleveland College of Physicians and Surgeons, Medical Department of Ohio Wesleyan University, 1905; aged 38; died at Grace Hospital, Cleveland, December 12. Dr. Schulze was a former physician at St. John's Hospital.

*James S. Sweeney, M. D.*, Starling Medical College, Columbus, 1853; aged 91; died at his home in Kent, December 22. Dr. Sweeney had

## Every Physician

Is Interested In

## Physician's Supplies

In dispensing, he requires a great variety in his office—in prescribing he uses the **PRESCRIPTION DEPARTMENT** that is **UP-TO-DATE**.

If you are unacquainted with our plan of handling the physician's requirements, you may profit by giving us an opportunity to show you what we can do.

## The Wendt Bristol Co.

47 South High St., Columbus, Ohio

**FINE PHARMACEUTICAL SPECIALTIES**

## Our Business

is confined exclusively to the manufacture of Strictly High Grade Medicines and Pharmaceuticals for Physicians, Dispensing and Prescribing.

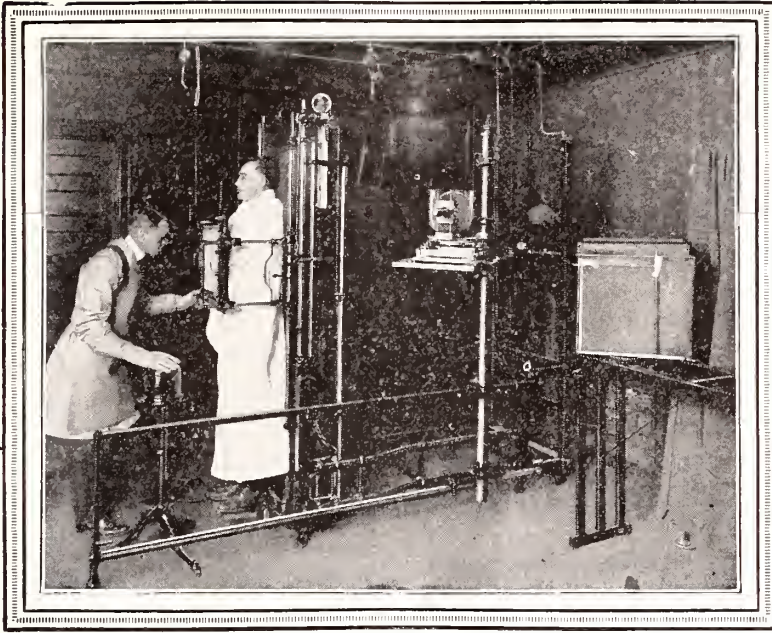


Our Offices and Laboratories are now located in our New Building, 330-336 Oak Street, one square north of Grant Hospital.

NO GOODS SOLD AT RETAIL

**The COLUMBUS PHARMACAL Co.**

COLUMBUS, OHIO



## JUDGING THE FUTURE BY THE PAST

**T**HE present Victor X-Ray Corporation is the result of a rapid growth of a business established soon after the X-Rays were discovered. It is therefore practically as old as the X-Ray art.

The Victor X-Ray Corporation has always made it their purpose not only to manufacture and install, but to develop apparatus, to follow it into the very hands of the physician and maintain it in perfect operative condition on request, and to advance the scientific application of the X-Rays according to approved medical methods.

The past speaks for itself. No other manufacturer of X-Ray equipment has contributed so much to the advancement of X-Ray technique, to the training of Service and field representatives, to the education of the medical profession

as a whole in the proper manipulation of X-Ray devices, and to the perfection of tubes and current-controlling devices.

This record of co-operation with the medical profession, extending over a period of nearly thirty years, is a guarantee of the future. Only an organization backed up by research such as that which the Victor X-Ray Corporation has built up, an organization with also a history of achievement behind it, is able to assure the physician who uses X-Rays in his practice that ten or twenty years hence it will continue to serve him by developing new technical aids, by assisting him to make the most of the apparatus that it places at his hands, and by co-operating with the most skilled roentgenologists in meeting the medical needs of the time.

**VICTOR X-RAY CORPORATION, Jackson Blvd. at Robey St., Chicago**

*Territorial Sales and Service Stations:*

Columbus: J. L. Taylor, 145 E. State St.



served as mayor, member of the board of education and the council in Kent. He was a veteran of the Civil War.

*Ernest Gustave Zinke, M.D.*, Medical College of Cincinnati, 1875; aged 75; died in Palm Beach, Florida, January 30. Grieved over the death of his wife a short time before and suffering greatly from neuritis, Dr. Zinke had gone from Cincinnati to Florida in the hope of securing relief. Death was due to heart disease.

Dr. Zinke was born at Spremberg, Province of Brandenburg, Germany, in 1846. In 1870 he came to the United States. In 1875, two months prior to the time he was entitled to American citizenship, Dr. Zinke was graduated from the Medical College of Ohio, now the Medical Department of the Cincinnati University, and one year later became a member of the junior faculty of his alma mater. In 1891, Dr. Zinke was made adjunct professor of obstetrics, and in 1896, full professor of obstetrics and clinical gynecology. From 1896, until 1916, he acted in that capacity. Altogether, he was an instructor for a period of 40 years.

Dr. Zinke formerly was president of the Cincinnati Obstetric Society, of which he was an honorary member until his death; president of the Academy of Medicine of Cincinnati, 1894; chairman of the Section on Obstetrics, Gynecology, and Abdominal Surgery, American Medical Association, 1914; president of the American Association of Obstetricians, Gynecologists,

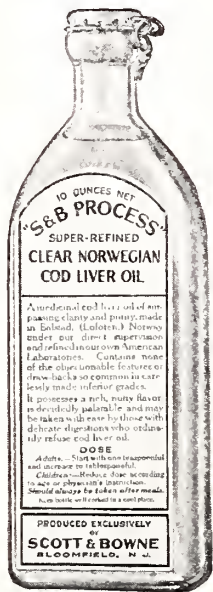
and Abdominal Surgeons, of which he has been secretary for the last ten years. He was emeritus professor of obstetrics in the Medical College of the University of Cincinnati; consulting obstetrician to the Cincinnati General Hospital; honorary chief of staff and obstetrician and gynecologist to the Deaconess Hospital.

In addition to affiliation with the professional bodies enumerated above, Dr. Zinke held membership in the Ohio State Medical Association, the Southern Ohio Surgical Association and the Jackson County Medical Society of Kansas City, Missouri, and Fellowship in the American College of Surgeons and the American Medical Association.

*William G. Hier, M. D.*, Pulte Medical College, Cincinnati, 1884; aged 66; member of the Ohio State Medical Association; died at his home in Madisonville, Cincinnati, February 2, after an illness of 10 days. Dr. Hier practiced in Madisonville for more than 40 years. He is survived by his widow and two daughters.

*Clayton R. Truesdall, M. D.*, Chicago Homeopathic Medical College, 1891; aged 55; member of the Ohio State Medical Association; died at his home in Fremont, February 7, from apoplexy. A resident of Fremont for 30 years, Dr. Truesdall took an active interest in civic affairs and at the time of his death he was serving as county commissioner. He is survived by one daughter and one son.

## 100% True Gadus Morrhuæ



There are many grades but only one best. The therapeutic efficiency of cod-liver oil depends largely upon its purity and palatability—its freedom from admixture with inferior, carelessly made oils.

Cod-liver oil must be made right from the start and kept right to assure maximum efficiency.

### The "S. & B. PROCESS"

Clear Norwegian (Lofoten) Cod-liver Oil is made right and stays right. It is the culmination of half a century of purpose to excel. It is guaranteed 100% pure oil of true *Lofoten Gadus Morrhuæ*.

It is the efficient oil for the efficient physician.

Stocked by most  
R druggists and by  
Wholesalers generally

Liberal samples will  
be sent to any  
physicians upon request.

SCOTT & BOWNE, BLOOMFIELD, N. J.



# Serobacterin Immunity

## Only One

"There is only one concern in this whole country which puts out a rubber cap on their containers that will not absolutely ruin a platinum needle."

"Thin rubber of the best quality is all that is needed to cap these containers."

(The Medico, Nov. 1921)



The Mulford vial and cap described above.

Is a development of the researches of Besredka and Metchnikoff, in the Pasteur Institute, Paris.

Serobacterins are suspension of killed bacteria, with their corresponding antibodies.

They produce both passive and active immunity.

The *Passive Immunity* is conferred immediately by the specific antibodies carried by the serobacterin and promptly liberated when injected into the body.

The *Active Immunity* follows when the body cells of the patient have responded to the stimulation of the injected bacteria, by producing additional antibodies which replace the antibodies of the serobacterin and remain for a considerable period.

The following Serobacterins are available from the Mulford Laboratories:

- |                      |                            |
|----------------------|----------------------------|
| ACNE SEROBACTERIN    | STAPHYLO-SEROBACTERIN      |
| COLI SEROBACTERIN    | STAPHYLO-ACNE SEROBACTERIN |
| MENINGO-SEROBACTERIN | STREPTO-SEROBACTERIN       |
| NEISSER SEROBACTERIN | TYPHO-SEROBACTERIN         |
| PNEUMO-SEROBACTERIN  | TYPHO-SEROBACTERIN MIXED   |

Ask for Mulford Working Bulletin No. 18

H. K. MULFORD COMPANY, Philadelphia, U. S. A.

51843

# Mulford

THE PIONEER BIOLOGICAL LABORATORIES

## Ohio Now Has Two Women Health Commissioners; Other Appointments

Dr. Beatrice T. Hagen has been appointed health commissioner of the city of Zanesville to succeed Dr. G. W. McCormick, who has held the office for several years. Dr. Hagen specializes in anesthesia, and has always taken an active interest in child welfare. She is the second woman to be appointed health commissioner of a local health district in Ohio, and possibly the third to hold such a position in the United States.

Miss Eleanor Loomis, health commissioner of Painesville, was the first woman to be appointed to such a position in Ohio. Miss Loomis is a public health nurse of considerable experience, and besides being health commissioner is also public health nurse to the board of education of Painesville and supervising nurse of Lake County, which district is under the leadership of Health Commissioner Kenning.

Dr. J. L. Gray of Caldwell has been appointed health commissioner of Noble County to succeed Dr. F. W. Murrey, resigned.

Dr. M. L. Helfrich of Galion has obtained six months' leave of absence. His place as health commissioner of Galion is being filled by Dr. George E. Kerns.

Dr. D. R. Williams, has been appointed health commissioner of Girard, which became a city January 1.

Dr. J. S. Mariner has been appointed health commissioner of the city of East Youngstown which became a separate health district, January 1.

Dr. O. U. O'Neill has been appointed health commissioner of Ironton to succeed Dr. E. E. Wells. Dr. Wells has been health commissioner of Ironton for many years. Since 1920 he had been serving as an appointee of Dr. A. W. Freeman, formerly commissioner of health of Ohio.

Dr. W. K. Ruble, health commissioner of Clinton County, has also been appointed health commissioner of Wilmington, which became a city January 1.

Dr. T. T. Church has been appointed acting health commissioner of Salem succeeding Dr. R. M. Schwartz, who resigned to take up similar work in Santa Fe county, New Mexico. Dr. S. A. McCullough, former health commissioner for Meigs County, has assumed his duties as health commissioner of Columbiana County.

W. J. Reeves has been appointed health commissioner of the city of Kent, which was part of the general health district of Portage County until 1922. Dr. R. D. Worden continues as health commissioner of the Portage County general health district.

Among other commissioners recently re-elected to their posts are: Dr. W. H. Brundage, commissioner of Delphos; Dr. G. E. French, commissioner of Elyria; Dr. J. J. Martin, commissioner of Crawford County; and Dr. C. W. Chidester, commissioner of Delaware city.

**M**ORE people die from pneumonia than any other disease.

Approximately 25 out of every 100 cases end fatally. Dr. Gustav Goldman has demonstrated that at least twenty of these twenty-five deaths may be prevented by employing Bacterial Vaccines.

Why delay and chance a fatal termination?

*Dr. Gustav Goldman's article appeared in American Medicine, March, 1921*

Bacteriological Laboratories of

**G. H. SHERMAN, M. D.**

DETROIT, U. S. A.

## Fort Wayne Medical Laboratory Inc.

ESTABLISHED 1906

CLINICAL AND X-RAY

DR. BONNELLE W. RHAMY, Director

Bacteriological, Serological, Pathological, Toxicological and Chemical examinations of all kinds given prompt, personal attention.

Full instructions, fee table, sterile containers, Keidel and culture tubes sent on request.

As early diagnosis is the important factor in successful treatment, it will pay to utilize dependable laboratory diagnosis early and often.

Wassermann Tests (Daily except Sunday).....\$5.00  
(Send 3-5 cc. of blood)

On every blood I use two antigens and run two tests; the regular method and the latest and best, the ice box method which is especially valuable when testing for cure, and in cases giving doubtful reactions. This insures an accurate report.

Gonorrhoea Complement Fixation Test.....\$5.00  
(Send 3-5 cc. of blood)

This serologic test is the very best means of determining the presence or absence (cure) of systemic Gonorrhoeal infection.

Tuberculosis Complement Fixation Test.....\$ 5.00

Blood Chemistry—Sugar—Urea—Nitrogen, etc.,

Each..... 5.00

Spinal Fluid Gold Curve..... 5.00

Blood Typing for Transfusion..... 5.00

Blood Cultures..... 5.00

Tissue Diagnosis..... 5.00

Basal Metabolism Estimation..... 10.00

**AUTOGENOUS VACCINES**

Bacteriologic Diagnosis and cultures.....\$ 2.00

Twenty Doses Vaccine in 2 cc. vials..... 5.00

**COMPLETE X-RAY DEPARTMENT**

Diagnostic and Therapeutic

*Special Delivery Postage Insures Prompt Delivery*

327 W. Berry St. Ft. Wayne, Indiana

1 Block South from Interurban Station.

# Have you read the History of S.M.A.?

## *A New Chapter in Baby Feeding— a Food to Keep Babies Well*

When you read the purpose back of the development of S. M. A.\*; when you follow the nine-year period of laboratory work, and the results gained from seven years of actual experience in the feeding of S. M. A. in the dispensary; when you learn of the additional experience gained by pediatricists, and finally, by physicians in general practice; when you find how simple it is to feed; how surely it prevents nutritional disorders like rickets and spasmodophilia; and how successful are its results in producing happy, solid, breast-fed-looking infants—then you will appreciate the splendid opportunity which S. M. A. offers you for the care of babies who

have been deprived of mother's milk, or who require food in addition to what the mother can supply.

It will be to your advantage to start prescribing S. M. A. at the earliest opportunity. The success of hundreds of physicians, in thousands of cases, gives you every assurance that it fills the age-long need for a food adapted to mother's milk—a food to keep babies well.

If you haven't already done so, please write for the S. M. A. bulletin for physicians, or better still, write for a supply of S. M. A. itself.

The Laboratory Products Co., 3829 Cedar Ave., Cleveland, Ohio

\*H. J. Gerstenberger et al. I. Studies in the Adaptation of an Artificial Food to Human Milk. Am. J. Dis. Child. Vol. X, Pg. 249-265.

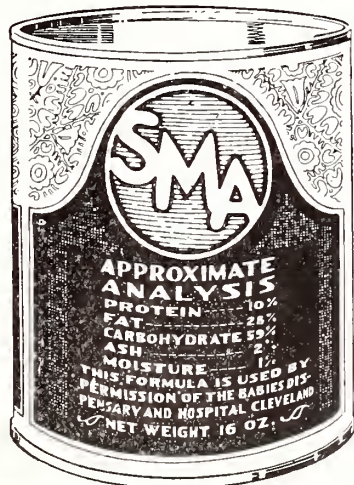
H. J. Gerstenberger et al. II. Studies in the Adaptation of an Artificial Food to Human Milk. (A Report of Three Years' Clinical Experience with the Feeding of S. M. A.)

Am. J. Dis. Child. Vol. XVII, Pg. 1.

*Distributing Agent*

Cleveland

The Telling-Belle Vernon Co.



*Distributing Agent*

Akron

The Akron Pure Milk Co.



## NEWS NOTES of OHIO

*Columbus*—Dr. J. M. Dunham is spending the winter at Auburndale, Florida.

*Bellefontaine*—Dr. E. R. Henning has been elected president of the Association of Big Four Railway Surgeons. He has been local surgeon for the company for the last nine years.

*Leontonia*—Dr. J. M. King, Jr., graduate of Western Reserve University School of Medicine, 1922, has located in this city for practice. He is the son of Dr. J. M. King of Wellsville.

*Sandusky*—Dr. F. M. Houghtalling, health commissioner of this city and Erie County, has been appointed captain of the 308 Medical Regiment, Organized Reserves, by Colonel G. H. Davis, Columbus Barracks.

*Washington C. H.*—Dr. F. E. Hyer, who formerly practiced in Milledgeville and Bloomingburg, has opened office for practice here.

*Bellaire*—Dr. James S. McClellan is recuperating in Florida, from a recent illness.

*Galion*—Dr. M. L. Helfrich is engaged in a six months' post-graduate course in pediatrics at the New York Post-Graduate School and Hospital.

*New Concord*—Dr. W. D. Forsythe received painful injuries, including several broken ribs and cuts about the head, January 24, when the horse which he was riding slipped and fell on an icy roadway.

*Cincinnati*—Dr. George H. Heuer, professor of surgery at the University of Cincinnati, was guest of honor at a dinner given, January 31, by the local section of the American College of Surgeons. Dr. C. L. Bonifield acted as toastmaster.

*Cleveland*—Dr. and Mrs. J. M. Moore are spending the month of February in Florida and will remain there throughout March.

*Youngstown*—Called from his home on a fake call, January 31, Dr. Lloyd L. Hall was the victim of an assault by unknown persons as he alighted from his machine at the given address.

*Cincinnati*—Dr. Louis Schwab has been re-elected president of the Cincinnati Obstetrical Society. Dr. F. H. Miketta is the secretary-treasurer.

*Coshocton*—Dr. Jesse McClain is wintering at St. Petersburg, Florida.

*Kenton*—Dr. Leroy L. Belt, who has been associated in practice here with his father, Dr. W. A. Belt, has moved to Marblehead, where he has taken over the practice of the late Dr. A. B. Jordan, his father-in-law.

*Akron*—Dr. William E. Gallagher of this city and Miss May Rieger of Niagara Falls were married, January 29.

## Nausea of Pregnancy

In some instances is being controlled, and in many is being alleviated by the hypodermic injection of

### LUTEIN SOLUTION

H. W. & D.

A sterile solution of *Corpus Luteum*, each cubic centimeter containing the purified water soluble extractive of two decigrams of the dried substance, in ampules.

'H. W. & D.'—Specify—'H. W. & D.'

Reprint of an authoritative article on its use will be supplied upon request.

## Hynson, Westcott & Dunning

BALTIMORE—MARYLAND

## Distributors to the Medical Profession

### NEOSALVARSAN

Dosage VI	0.9 gram	\$1.35 per ampoule
Dosage V	0.75 gram	1.20 per ampoule
Dosage IV	0.6 gram	1.00 per ampoule
Dosage III	0.45 gram	.90 per ampoule
Dosage II	0.3 gram	.70 per ampoule

### NEOARSPHENAMINE (D.R.I.)

Dosage VI	0.9 gram	\$1.35 per ampoule
Dosage V	0.75 gram	1.20 per ampoule
Dosage IV	0.6 gram	1.00 per ampoule
Dosage III	0.45 gram	.90 per ampoule
Dosage II	0.3 gram	.70 per ampoule

We are distributors to the Medical Profession of every available Drug and Apparatus used successfully in the treatment of Venereal Diseases. Delivery charges prepaid and all orders shipped on day of receipt. Send for Price Lists and literature.

TELEGRAPH OR MAIL ORDERS TO

## Charles E. Findlay Co.

Physicians' and Hospital Supplies  
710 N. Park Street Columbus, Ohio  
Bell Phone, Main 5707

# MEDICAL ECONOMICS

PUBLIC HEALTH - SOCIAL WELFARE *and* ORGANIZATION PROBLEMS  
WITH EDITORIAL COMMENT *by* D. K. M.

## Ohio's Policy

A clearly stated, generally applicable principle of the state's relationship to public health and medical practice is thought to have been arrived at through the efforts of the State Association's Committee on Public Policy and Legislation which for many months has given its attention to the problem. It will be remembered that numerous resolutions were introduced in the house of delegates of the A. M. A. at its last annual meeting relative to "state medicine", and it is thought to be now possible for the medical profession of Ohio to again lead the way and establish a policy which may be the foundation for solution of difficulties which have arisen so repeatedly in recent years.

In approaching the problem the Committee on Public Policy and Legislation recognized the fact that medical science touches and more nearly comprehends all phases of human conduct, social welfare and matters involving human life and happiness than any other group or agency, and that, therefore, there must be proper recognition by the members of the medical profession and the public of reciprocal, individual and collective obligations.

In the definition finally evolved and approved by the State Department of Health, primarily through cordial cooperation of the State Director of Health, Dr. H. H. Snively, with the officers of the State Association, the existence of "state medicine" is recognized in certain particulars, but the "state practice of medicine" is disapproved and discountenanced as a function of public authority.

In promulgating the principle as officially adopted, Dr. J. H. J. Upham of Columbus, chairman of the Association's Committee on Public Policy and Legislation, emphasized that the task of protecting the public is essentially the duty of the state and that maximum results may be expected when its trained agents, guided by and working with the organized medical profession, systematically attack the problem; and that rather than to foster or organize more private health bodies which frequently duplicate work and waste effort, concentration of effort on the activities of the state health service through a firm contact between the medical profession and the official state function should result in the formulation of a policy defining the character and scope of the state program such as to insure

the cooperation of the profession and result in a working solution of the problem at least for the present.

In arriving at a general policy it is realized that the various angles involved are not fixed or permanent and that doubtless different conditions will arise and readjustment will be necessary from time to time, but that in the present as well as in the future the recognition of certain fundamental principles will still exist as the means of solution.

In considering the entire subject on behalf of the profession the committee realized that the profession must at all times maintain its self respect as well as a just regard for its rights and privileges coupled with an earnest appreciation of its obligations to the state and to the public and that in return there must be a sympathetic comprehension on the part of the state health officials of the problems of medical practice as well as those of public health service, and that solution is only possible when public health officials are keenly alive to the importance of these phases as well as skilled in the technical side of their work.

Based on the understanding that public health administration has for its purpose the prevention of disease, the promotion of health and the education of the public in these matters, and that private medical service concerns itself with and is essential to the treatment and cure of disease whenever presented as an individual problem, and with the additional inter-relationship and cooperation of both the official and private group, the following resolution defining and limiting the proper activities of the state in medicine may be said to represent the policy in this state at the present time:

Whereas, the conservation and promotion of public health is the object of the State Department of Health, and

Whereas, the public is constantly increasing its interest in and support of a comprehensive program to this end, and

Whereas, a definite general policy in public health administration activities is desirable, therefore

Be it Resolved, that the State Department of Health of Ohio, endorses the policy of continuing and extending the educational program toward the prevention of disease and toward informing the public in fundamental health subjects; that it welcomes and needs the cooperation of scientific and educated practitioners; that it is interested in warning the public to discriminate against the dangerous, incompetent and unquali-

fied practitioners, whose unsound and unscientific methods of practice exploit sickness for commercial gain;

Second, That the primary functions of the State Department of Health being Educational and Preventive, the actual treatment of disease is not a function of public officials nor to be provided from public funds except in the

(a) Institutional care of the wards of the state, delinquent, diseased and defective;

(b) The treatment of the indigent;

(c) The treatment of those whose treatment is directly essential to prevention; and

(d) The inspection, recognition, and recommending the correction of common defects of school children, as a primary feature in health education.

And that otherwise in the holding of public clinics under the auspices of public health officials, they shall be so conducted that the purpose shall be purely educational and diagnostic.

Analysis of the foregoing resolution develops the principle that official health administration is concerned not only with the prevention of disease and the education of the public but that such public service is charged with the duty of protecting the public insofar as possible from incompetent and uneducated types of practitioners whose unscientific methods exploit sickness for commercial gain.

It will also be observed that the resolution further states the principle that the actual treatment of disease is not a function of public officials or the state, nor should such treatment be provided from public funds. The exceptions to this latter fundamental are those principles and policies already established for the care of the wards of the state in the penal, correctional and charitable institutions; the treatment of the indigents with which the public authorities are charged under laws long established; and finally the treatment only of those cases and classes of diseases where treatment is essential to prevention; and that in the holding of clinics which have been established as one of the newer activities, the policy of maintaining such efforts along purely educational and diagnostic lines is emphasized.

#### Nostrums—A Health Problem

A clearer realization by health agencies of their duties to educate the public concerning nostrums and their attendant evil, with a more comprehensive understanding of the problem of nostrums and misbranded drugs, the advocacy of uniformity in state codes, with greater cooperation between federal, state and local supervision and enforcement, are among the high points in a recent report submitted to the American Public Health Association by the Committee on Drugs and Nostrums of which Dr. Harold J. Knapp, Cleveland city chemist, is chairman, and which report, of unusual interest, is reproduced on page 297 of this issue.

In his report Dr. Knapp points out the relationship between the economic and health features of the nostrum evil and emphasizes that proprietary concerns through their advertising

and methods of exploitation promote self-diagnosis, inspire fear, induce self-medication and place responsibility of treatment in the hands of the unformed individual.

#### Restrictions—Plus

That the present consists largely of an environment of every conceivable kind of emotionalism, that the medical profession suffers more acutely than ever before from all sorts of ills; and that active as well as constructive effort on the part of the organized medical profession is greatly needed, perhaps may be assumed.

"We are at this moment living in the period of control of things by the *epicene*", declared Dr. Horace Manchester Brown, of Milwaukee, Wisconsin, president of the Tri-State District Medical Association, at a recent meeting of the North Side Branch of the Chicago Medical Society, which was also addressed by Dr. George J. de Schweinitz, president-elect of the A. M. A.; Dr. Alexander R. Craig, secretary of the A. M. A.; Dr. Edward H. Ochsner, and others.

The word *epicene*, Dr. Brown explained, is a Greek or Latin noun which is sometimes feminine, sometimes masculine, but never quite either. "The period of domination by the *epicene*—in other words, the fat-thighed man and the skinny-hipped woman—has been the period in the history of every great nation, just preceding the fall of that nation. Their mind is one that is given to strange fanaticism, much emotionalism and agitation. The *epicene* wishes to uplift everything, but lifts up nothing in reality but his voice, and his or hers is the voice that is heard wherever you go in the United States today. We are dominated today by the long-haired man and the short-haired woman. Any man who is not bald can let his hair grow and any woman who wishes can cut hers off. The fat-thighed man and the skinny-hipped woman are but anatomical, outward and visible signs of an inward physical distortion of their anatomical and endocrine processes. These are the conditions at the present time. If there is any one who can imagine anything that has not been thought of to reform mankind and particularly the medical profession, I would like to know it. Many of these reforms are brought about by the ladies of the 'Dorcas Society of the Second Baptist Church,' or some other like thing; many of them are brought about by people hopelessly ignorant of the history of mankind or the history of the medical profession", he said.

Right here in Ohio, in spite of the universally recognized need for narcotic drugs as a part of the armamentarium of the practicing physician in many cases, but because of the involved regulations of "officialdom", there are cities of 5,000 population and more where no physicians and no druggists have qualified to prescribe and dispense those drugs governed by the Harrison Narcotic Law.

## Communication from Council to the House of Delegates of the Ohio State Medical Association

With the belief that medical organization has a two-fold purpose—first, a direct responsibility for the best interests of the public; and secondly, service to the members of the profession individually and collectively, the Council of the Ohio State Medical Association emphasizes to the House of Delegates, the imperative need for stronger unity, greater harmony, and more concerted thought and combined team-work in approaching and solving the innumerable problems with which we are confronted.

It is further emphasized that distrust and suspicions within the profession multiply distrust by the public toward the profession. Therefore difficulties whether they be economic, social or matters of policy either within the profession or between the profession and the public, must be based on public interest and justice and must be pursued in regular and constituted organization channels if they are to be successful.

Irregular methods may be actuated by irregular motives. Medical organization should always be representative of and responsive to its membership. This policy is being adhered to in Ohio. We do, however, realize the need for closer contact and more responsiveness between the various state medical associations and between the A. M. A. and its membership through its constituent associations.

We believe that the plan for establishing such relationship as embodied in resolutions introduced by the Ohio Delegation into the House of Delegates of the A. M. A. at the Boston meeting in 1921 are constructive, feasible and should be adopted, to the end that the will of the great majority may constantly determine the official policies of medical organization; the unity of thought and concerted activity within the profession may be promoted; and that contact may be maintained with governmental functions in which health and medical problems are involved.

In furtherance of this program and because

the profession of Ohio has often led the way in sound and practical policies, we feel that Ohio should have representation at this time on the governing body of the A. M. A. through membership on the Board of Trustees. Because of the understanding of present problems, by the delegates from this Association to the A. M. A., a re-election of the same delegation is advocated.

We do not, however, approve of a perpetuation of governing authority and feel that the present terms of the members of the Board of Trustees should not be extended through amendment to the By-laws. It is always possible to re-elect members of governing bodies as long as they fully and faithfully serve their constituents.

Problems must be studied before they can be solved. A clear perspective must be maintained toward the intricate and interrelated problems with which we are confronted. Your officers, your council and standing committees have attempted to maintain constant touch with and surveillance over all developments in which the profession is involved.

The danger of the profession itself being "sold out" (as has been charged) to socialized state medicine, or demoralization of medical standards or exploitation of medical service can only be met if the profession realizes the absolute necessity of strong and harmonious organization.

It is believed that problems with relation to the policies and leadership in the A. M. A., with relation to medical education, foundation subsidies, the inter-relation of state medical societies, medical economics, questions of state medicine, legislation, medico-political situations, cults and other matters of general interest can only be met through official organization channels which have proved themselves of service and that whatever defects and shortcomings now exist can best be approached through the plan and policy outlined above.

Adopted by Council, March 5, 1922.

If, as has been stated, there are upward of a million drug addicts in this country, if there is seventeen times more opium imported annually into this country than into any other civilized nation, and if only a fraction of this amount is required or used in medical practice; there is, of course, an immense social and criminal problem.

This fact, however, does not justify regulations which not only restrict but destroy needed medication. "Reasonable regulation",—yes; "prohibitive restrictions",—no.

Likewise governmental delays in transactions controlling intoxicants for legitimate therapeutic purposes, are indefensible. During the recent recurrence of influenza, physicians found that it required from six weeks to two months to secure a "permit" to prescribe or use intoxicants in

these cases. Federal authorities acting as "prohibition" agents and as "criminal prosecutors" have been too prone to consider the medical profession, in this connection, as merely an incident—a "necessary evil."

The Ohio returns to the American Medical Association questionnaire on intoxicants are being widely misconstrued. While, of the number of replies from this state nine to seven replied *no* on whisky and almost three to one replies indicated the proportion not holding a federal permit; the entire number of replies totaled only about one-sixth of the number of practicing physicians in this state.

Moreover, while many (perhaps the majority) oppose whisky itself as a therapeutic agent,

Program of the  
**Seventy-Sixth Annual Meeting  
 of the State Association**

\* \* \* \* \*

Cincinnati, May 2nd, 3rd and 4th

GENERAL SESSIONS

OPENING SESSION

Tuesday, May 2, 10:00 A. M.

Meeting Place—Main Ball Room (Ball Room Floor), Hotel Gibson.

1. Call to order by the President, Wells Teachnor, Columbus.
2. Address of welcome on behalf of the city of Cincinnati.
3. Address of welcome on behalf of Cincinnati Academy of Medicine, by Gordon F. McKim, the President.
4. Annual address by the President of the Ohio State Medical Association.
5. Announcement of the general details of the program by J. Louis Ransohoff, the general chairman of the Committee on Arrangements.

SECOND SESSION

Wednesday, May 3, 3:30 P. M.

Meeting Place—Main Ball Room (Ball Room Floor), Hotel Gibson.

1. ORATIONS:

*Medicine—*

THE INTERNIST AND THE PSYCHONEUROSES—by Charles Phillips Emerson, Dean and Professor of Medicine, Indiana University of School of Medicine, Indianapolis.

*Surgery—*

(1) DIAGNOSIS AND SURGICAL TREATMENT OF CHRONIC DIARRHEA—COLITIS.  
 (2) TECHNIQUE OF PERFORMING COLONIC, RECTAL AND ANAL OPERATIONS UNDER LOCAL-INFILTRATION ANESTHESIA (Illustrated)—Samuel Goodwin Gant, New York City.

THIRD SESSION

Thursday, May 4, 9:00 A. M.

Joint Medical and Surgical Section.

HOUSE OF DELEGATES

FIRST SESSION

Tuesday, May 2, 11:00 A. M.

Meeting Place—Main Ball Room (Ball Room Floor), Hotel Gibson.

1. *Call to order by the President.*
2. *Roll Call.*
3. *Miscellaneous Business.*

(a) Appointment of a special committee to act on recommendations embodied in President's address; a committee on resolutions; a committee on annual reports; and a committee on credentials of delegates.

(b) Consideration of minutes of previous meeting. Minutes were published in *The Journal*, June, 1921, page 412.

(c) Action on proposed amendments to the Constitution and By-Laws:

"Resolved, That the Section on Dermatology, Proctology and Genito-Urinary Surgery, be abolished, and that the By-Laws be so amended."

"Resolved, That Chapter II, Section 1, of the By-Laws of the Ohio State Medical Association be amended to include a Section of Clinical Laboratory Diagnosis, to be composed of those members of the Association whose chief interests lie in the clinical and laboratory branches."

(These resolutions were published in the March, 1922, *Journal*, to comply with Chapter XIII of the By-Laws which provides that "these By-Laws may be amended at any annual session by a majority vote of the delegates at that session, if the proposed amendment has been published in *The Journal* two months before the annual meeting."

(d) Introduction of resolutions. (In accordance with custom and with the official order of procedure, no resolutions will be acted upon at the same session of the House of Delegates in which they are introduced nor until after reference to and subsequent report from the Committee on Resolutions.)

4. *Nomination and Election of Nominating Committee—*

(Nominations from the floor with one representative on the committee to be elected from each district. This committee shall report to the Second Session the result of its deliberations in the form of a ticket containing the names of three members for the office of president-elect, and one member for each of the other offices to be filled. This procedure is necessary under Chapter V, Section 1, of the By-Laws.)

5. *Report of Officers—*

(a) Treasurer's report.

(b) Reports of Councilors as to the condition of the societies in their respective districts.

6. *Report of Standing Committees—*

(a) Public Policy and Legislation—J. H. J. Upham, Columbus, chairman.

(b) Publication—L. L. Bigelow, Columbus, chairman.



- (c) Medical Defense—J. E. Tuckerman, Cleveland, Chairman.
- (d) Medical Economics—H. L. Sanford, Cleveland, chairman.
- (e) Medical Education—E. F. McCampbell, Columbus.
- (f) Auditing and Appropriations—S. J. Goodman, Columbus.

7. *Report of Special Committees—*

- (a) Hospital Standardization—C. D. Selby, Toledo.
- (b) Crippled Children—B. G. Chollett, Toledo.
- (c) Control of Cancer—Andre Crotti, Columbus.

**SECOND SESSION**

**Wednesday, May 3, 1:30 P. M.**

Meeting Place—Foyer, East End of Main Ball Room (Ball Room Floor), Hotel Gibson.

1. *Report of Nominating Committee.*
2. *Annual Election of Officers and Committees—*
  - (a) President-elect. (One year.)
  - (b) Chairman and two members of Committee on Public Policy and Legislation. (One year each.)
  - (c) Three members of Publication Committee. (One year each.)
  - (d) One member of Committee on Medical Defense. (One year.)

The term of J. E. Tuckerman, Cleveland, expires.

  - (e) Three members of Committee on Medical Economics. (One year each.)
3. **ELECTION OF MEMBERS OF COUNCIL—**

Members of Council are elected for two year terms, those representing odd-numbered districts expiring in even-numbered years. To be elected, therefore:

  - Councilor, First District—Present incumbent, W. D. Haines, Cincinnati.
  - Councilor, Third District—Present incumbent, R. R. Henders'ott, Tiffin.
  - Councilor, Fifth District—Present incumbent, R. K. Updegraff, Cleveland.
  - Councilor, Seventh District—Present incumbent, J. S. McClellan, Bellaire.
  - Councilor, Ninth District—Present incumbent, J. S. Rardin, Portsmouth.
4. *Election of Delegates and Alternates to the American Medical Association—*
5. *Selection of Place for the Annual Meeting of 1923.*
6. *Miscellaneous Business.*
7. *Installation of Officers for 1922-1923.*
8. *Final Adjournment of House of Delegates.*

**SURGICAL SECTION**

F. C. HERRICK, Cleveland.....Chairman  
 HOWARD STITT, Cincinnati.....Secretary

Meeting Place—Main Ball Room (Ball Room Floor), Hotel Gibson.

**FIRST SESSION**

**Tuesday, May 2, 2:00 P. M.**

**I. GALL BLADDER INFECTIONS**

1. **GALL BLADDER INFECTIONS—**by Fred Fletcher, Columbus.  
 Modes of infection. Symptomatic stages of cholecystitis. Symptoms, digestive, intestinal, peritoneal, arthritic, muscular and cardio-vascular. Diagnosis. Prognosis. Treatment.

2. **THE PRESENT STATUS OF GALL BLADDER AND PANCREATIC DISEASE AS IT PERTAINS TO ETIOLOGY, DIAGNOSIS AND TREATMENT—**by Kelly Hale, Wilmington.

Predisposing and exciting causes. Diagnosis. Misleading symptomatology. The duodenal tube as a diagnostic aid. Functional pancreatic test. X-ray examination and physical findings. Jaundice. Differential diagnosis. Treatment. Cholecystectomy, internal drainage. Drainage of common duct for pancreatitis. Complications, jaundice, ruptured gall bladder and repair of damaged ducts. Treatment of pancreatic cysts.

Discussion opened by C. S. Hamilton, Columbus; W. D. Haines, Cincinnati, and L. G. Bowers, Dayton.

**II. CHEST**

1. **THE DIAGNOSIS OF PLEURO-BRONCHIAL AND PLEURO-CUTANEOUS FISTULAE—**by J. A. Sherbondy, Youngstown.

Etiology of persistent fistulae resulting from empyema cavities. Causes of failure to close. Varieties, (a) bronchial, (b) cutaneous and (c) broncho-cutaneous. Diagnosis. Types of operations. Closure of bronchial openings and sterilization and closure of cavities. Illustrative case reports, with radiographs before and after treatment and cure.

Discussion opened by R. H. Birge, Cleveland, and C. S. Hamilton, Columbus.

**III. HEAD SURGERY**

1. **THE DIAGNOSIS OF CEREBRAL TRAUMATISM—**by J. E. Pirrung, Cincinnati.

Physiology of the brain and its influence on other organs. Symptoms, general and focalized, of severe injury. Inter-cranial hemorrhage. X-ray and ophthalmoscopic examinations. Value of blood pressure and spinal fluid tension readings. Differential diagnosis. The sinus syndrome.

2. **THE OPERABILITY AND TECHNIQUE OF OPERATION OF CEREBRAL TRAUMATISM—**by T. S. Jackson, Cleveland.

Cerebral injury without fracture. Simple fracture (a) without immediate, (b) with delayed and (c) with immediate symptoms. Compound fractures with or without immediate symptoms. Technique of operation. Types of incisions. Handling of fragments. Control of hemorrhage. Handling of brain.

Discussion opened by Robert Ingram, A. P. Kramer, Cincinnati, and R. H. McKay, Akron.

**IV. BONES AND JOINTS**

1. **CHRONIC INFECTIOUS ARTHRITIS (STIL'S DISEASE)—**by S. D. Foster, Toledo.

Similar history and common pathology. Proliferative and degenerative lesions. Bacterial and toxine effects, duration and susceptibility of patients. Hyperemia and ankylosis of joints. X-ray differential diagnosis. Nodes of Heberden. Rheumatism a treacherous diagnosis. Removal of focal infections. Treatment, hygienic care, rest of joints, use of pituitary and thymus extract. Operations. Case report.

Discussion opened by Fred Fletcher, Columbus, and Ralph Carothers, Cincinnati.

## SECOND SESSION

Wednesday, May 3, 9:00 A. M.

V. CHAIRMAN'S ADDRESS—HYPERPLASTIC TUBERCULOSIS OF THE CECUM—by F. C. Her-  
rick, Cleveland.

Need of surgical attention and amenability to surgical care and insufficiency of consideration. Gross and microscopic pathology. Frequency. Association with other tuberculous lesions and variation from the usual tuberculous focus. Chronic clinical course. Pre-operative and operative diagnosis. Differential diagnosis from cecal tumors and duodenal ulcer. A cause of partial or complete intestinal obstruction. Case report. Results of operation. Lantern slides.

## VI. INTESTINE

## 1. A SHORT CONSIDERATION OF SOME PHASES OF INTESTINAL OBSTRUCTION—by W. D. Haines, Cincinnati.

Recognition of slowly developing symptoms not so insistent. Demand for prompt relief of acute symptoms. Delay in calling doctor. Too much time spent in differential diagnosis. Over-treatment of obstruction and additional trauma to overtaxed peritoneum as factors in mortality. Types of operation. Two-stage procedure. Necessity of celerity and gentleness. Urgency of the surgery of acute intestinal obstruction.

Discussion opened by C. D. Hoy, Columbus, and J. A. Sherbondy, Youngstown.

## 2. THE TREATMENT OF ACUTE PURULENT APPENDICITIS WITH PERITONITIS—by C. D. Hoy, Columbus.

Excessive mortality of acute appendicitis and causes. Personal statistical data. Etiology, symptomatology, clinical course, diagnosis and differential diagnosis. Treatment. Operative technique. Drainage, Fowler's position, continuous saline solution, diet, medication and action of opiates. Prognosis, complications and sequelae.

Discussion opened by W. D. Haines, C. L. Bonifield, Cincinnati, and M. E. Blahd, Cleveland.

## 3. CANCER OF THE COLON—by George W. Crile, Cleveland.

Primary problems, control of immediate mortality and factors effecting permanent cure. Short-circuiting the fecal stream to exclude the field of operation. Two-stage operation. Iodoform gauze pack to prevent contamination of raw surfaces and to protect the retro-peritoneal space against infection. Wide resection of cancer and use of radium and deep X-ray to prevent recurrences. Number of permanent cures increasing.

Discussion opened by Wells Teachnor, Columbus, Curtiss Ginn, Dayton, and J. H. Weber, Akron.

## 4. THE PROBLEM OF RADIUM AND SURGERY IN THE TREATMENT OF MALIGNANT DISEASE—by A. Strauss, Cleveland.

Use of surgery alone; of radium alone; of surgery preceded or followed by radium; of surgery preceded and followed by radium. The answer depends on the organ involved and also on the individual case. Consideration of statistics of results of treatment of malignancy by radium and by surgery. The effect of radiation on tissues. What deep X-ray therapy has to offer as an aid to radium. Difficulty of preventing metastasis even when the local lesion reacts well to radiation. Lantern slides illustrating some of above points and showing treatment of metastases in bone to relieve pain.

Discussion opened by Lawrence Pomeroy, Cleveland, C. W. Moots, Toledo, and J. Louis Ransohoff, Cincinnati.

## MEDICAL SECTION

C. L. CUMMER, Cleveland.....Chairman  
J. E. BENJAMIN, Cincinnati.....Secretary

Meeting Place—Foyer, East End of Main Ball Room (Ball Room Floor), Hotel Gibson.

## FIRST SESSION

Tuesday, May 2, 2:00 P. M.

## 1. CARCINOMA OF THE COLON—by John Phillips, Cleveland.

Anatomy, physiology and pathology of the colon in relation to clinical symptoms. Symptomatology. Physical signs and X-ray findings. Points leading to early diagnosis. Differential diagnosis. Illustrative case reports.

## 2. SIGNIFICANCE OF MENINGEAL REACTIONS—by Oscar Berghausen, Cincinnati.

Pathological changes in the central nervous system, vascular, meningeal and parenchymatous. Tuberculosis, as indicated by an examination of the spinal fluid, shows chemical and cytological changes. Serous, lymphocytic, and polynuclear types of meningitis. Etiologic diagnosis by correlating clinical and laboratory findings.

## 3. THE TREATMENT OF TYPHOID FEVER—by Howard Jones, Circleville.

Two hundred cases of typhoid fever in private practice treated by diet alone, with notes and conclusions from the data obtained. Also 87 cases treated by diet and intestinal antiseptics, with final comparison and conclusions.

## 4. VITAL CAPACITY WITH RESPECT TO DIAGNOSIS AND PROGNOSIS—by L. A. Levison, Toledo.

Definition of vital capacity. Definite relation of decreased vital capacity to true cardio-vascular dyspnea, and differentiation from spurious types found in nervous conditions. Method of DuBois in relation to height and weight and in respect to cardiac function. Consistently decreasing vital capacity and unfavorable prognosis. Vital capacity in tuberculosis. Reports of clinical experiences.

5. LETHARGIC ENCEPHALITIS—by G. F. Zin-  
ninger, Canton.

Lethargic encephalitis a new or historically unrecognized disease. Prevalence in Ohio. Etiological and serological considerations. Functional rather than syndrome interpretation of varied symptomatology. Differential diagnosis. Disseminated foci of infection and toxins. Practical points in diagnosis. Conclusion.

## SECOND SESSION

Wednesday, May 3, 9:00 A. M.

## 6. THE USE OF CONVALESCENT SERUM AS PROPHYLAXIS IN MEASLES AND CHICKENPOX—by Kenneth D. Blackfan, W. F. Peterson and F. C. Conroy, Cincinnati.

Use of blood serum from patients convalescing from measles and chickenpox has met with considerable success in the clinics abroad as a protection to patients who have been exposed to these diseases. During the past few months opportunity has been had of employing this procedure in the wards and in the contagious division of the Pediatric Service, at Cincinnati General Hospital. Results obtained in a large number of patients have demonstrated that a temporary immunity does occur when the serum is given

sufficiently early in the incubation period, and that it may lessen the severity of the symptoms if it does not afford complete immunity. Recommend it as a valuable prophylactic measure in the prevention of epidemics, either in hospitals or private practice. \*

7. **OBSERVATIONS ON THE RATIONAL USE OF DIGITALIS, ESPECIALLY IN AURICULAR FIBRILLATION**—by Richard Dexter, Cleveland.

Brief review of the literature. Principles of drug pharmacodynamics to be followed out in the use of digitalis. Discussion of preparations of the drug. Class of cases in which digitalis is most efficacious. Results illustrated by case reports.

8. **BLOOD CHEMISTRY AS AN AID IN THE DIAGNOSIS, PROGNOSIS AND TREATMENT OF NEPHRITIS**—by C. S. Mundy, Toledo.

A report on the results of 200 blood chemistry examinations. Important illustrative case reports with correlations of clinical and laboratory findings in relation to the conclusions drawn. Blood chemistry tests cannot supplant physical examination and clinical history. Value of evidence and amount of retention of end-products of metabolism in relation to diagnosis, prognosis and treatment.

9. **THE DIAGNOSIS AND TREATMENT OF HAY FEVER AND ASTHMA**—by Milton B. Cohen, Cleveland.

Historical data and review of literature. Etiological considerations. Sensitization to protein in hay fever and asthma as a basis for classification. Evolution of the cutaneous and intra-cutaneous tests and their relative value. Methods of treatment. Results and resumé. Lantern slides.

10. **THE MANAGEMENT OF SEVERE DIABETICS**—by C. D. Christie, Cleveland.

Feeding diabetics in whom the carbo-hydrate tolerance is only from 25 to 50 grams. The management of coincident acidosis in such patients. The effect of infections on diabetic patients with low carbo-hydrate tolerance.

3. **LABORATORY FINDINGS AND DIAGNOSIS OF SURGICAL DISEASE OF THE KIDNEY**—by Roger S. Morris, Cincinnati.

Unilateral renal disease. Examination of separate urine specimens from both kidneys for specific gravity, turbidity, albumen, sugar, sediment, pus, blood, casts and bacteria also phthalein output. Usual results. Value of blood chemistry in indicating total renal function before operation. Bilateral renal disease, primary and secondary to obstruction in lower part of urinary tract. False ideas of renal function. Value of uric acid, urea N., non-protein N. and creatinin determinations. Necessity of repeated tests after relief of obstruction to determine improvement in function and stability of results. Danger of relying on one test. Summary and conclusions.

4. **SURGICAL TREATMENT OF KIDNEY LESIONS**—by E. Otis Smith, Cincinnati.

Surgical anatomy including anomalies. Emergency operations rare. Preparation of patient. Importance of bilateral renal function test. Conservative treatment of apparently infected kidneys. Renal calculi may pass via naturales after cystoscopic manipulation. Kidney surgery should be undertaken advisedly and cautiously. Two-stage operations in desperate cases. Kidney infections in pregnancy. Traumatic injuries of the kidney. Summary. Lantern slides.

Discussion opened by M. A. Blankenhorn, W. E. Lower, Cleveland, and V. A. Dodd, Columbus.

---

OBSTETRICS AND PEDIATRICS

---

W. W. BRAND, Toledo.....Chairman  
WAYNE BREHM, Columbus.....Secretary

Meeting Place—Room No. 3, North-east Corner, Ball Room Floor, Hotel Gibson.

---

JOINT MEDICAL AND SURGICAL SECTION

---

Thursday, May 4, 9:00 A. M.

Meeting Place—Main Ball Room (Ball Room Floor), Hotel Gibson.

(This program has been prepared to interest all members of the Association and for that reason no other section meetings will be held on Thursday morning.)

SYMPOSIUM ON THE SURGICAL KIDNEY

1. **PHYSIOLOGY OF THE KIDNEY WITH SPECIAL REFERENCE TO SURGICAL DISEASE OF THE KIDNEY**—by Carl J. Wiggers, Cleveland.

Physiological anatomy of the kidney. Modern theory of urinary secretion. Factors modifying kidney function. The application of these factors to disease. Testing of normality by functional tests. Urine vs. blood examinations.

2. **SURGICAL PATHOLOGY OF THE KIDNEY**—by Ernest Scott, Columbus.

Congenital malformations, horseshoe, polycystic kidney and hydronephrosis. Causative organisms and routes of infection. Pathology. Etiological factors and pathology of hydronephrosis. Formation of stones and resulting lesions. Benign and malignant tumors. More common sites of origin. Relationship of adrenal and cortical types.

FIRST SESSION

Tuesday, May 2, 2:00 P. M.

1. **CHAIRMAN'S ADDRESS**—by W. W. Brand, Toledo.

2. **BLOOD TRANSFUSION IN OBSTETRICS**—by W. R. Barney, Cleveland.

Resumé of technique. Grouping and matching of bloods. Dangers of blood transfusion. Utility in post-partum hemorrhages, placenta previa, premature separation of the placenta, hemorrhage of the newborn and eclampsia.

3. **THE FEEDING OF INFANTS BASED ON RECENT EXPERIENCES**—by S. D. Giffen, Toledo.

Breast feeding. Nursing ability of the modern mother. Proper feeding intervals. Weaning. Special formulas and foods. Lactic acid, albumen, dry, evaporated and goat's milk. Thick cereals gruels. Cxerny-Kleinschmidt, butter flour mixture. Relation to parental infections.

4. **STUDIES OF MORBIDITY DURING THE PUERPERIUM**—by Andrews Rogers, Columbus.

Morbidity during the puerperium as a cause of considerable recent investigation. Rôle of infections of the kidney. Pyelitis as a source of worry to the obstetrician. New data regarding this complication.

5. **HIRSCHSPRUNG'S DISEASE**—by R. R. Rogers, Warren.

Hirschsprung's description and general conception of the condition as a congenital disease. Two types, true and delayed. Etiological theories. Congenital anomaly of the sigmoid. Mechanical interference in the lower sigmoid or rectum during the first month of life. Review of literature on etiology. Pathology, symptomatology and treatment. Case report and surgical notes.

6. **TREATMENT OF HYPEREMESIS GRAVIDARUM**—by W. D. Inglis, Columbus.

Review of 22 cases of severe vomiting in pregnancy. Causative factors. A method of treatment somewhat different from the average remedial measures employed.

7. **PREMATURE SEPARATION OF THE NORMALLY IMPLANTED PLACENTA**—by W. D. Fullerton, Cleveland.

Brief historical review of this condition. Etiological considerations. Frequency of incidence. Symptoms. Diagnosis and treatment. Illustrative case reports.

**SECOND SESSION**

Wednesday, May 3, 9:00 A. M.

8. **THE INTER-RELATION BETWEEN OBSTETRICS, GYNECOLOGY AND ABDOMINAL SURGERY**—by J. L. Bubis, Cleveland.

Present controversy as to the position and status of the gynecologist. Gynecology as the connecting link between obstetrics and abdominal surgery. Necessity that the specialist in female diseases should be able to handle any complications or pathology that may occur in these three divisions of major surgery. This entails a thorough knowledge and mastery of obstetrics, gynecology and abdominal surgery.

9. **SPONTANEOUS EVOLUTION IN TRANSVERSE PRESENTATION**—by S. J. Goodman, Columbus.

Case report. Rarity of occurrence. Discussion of causes. Historical review of cases. Description of cases reported by others. Spontaneous evolution merely a coincidence and not a remedial maneuver.

10. **CHOREA OF CHILDHOOD**—by E. G. Horton, Columbus.

Chorea one of the oldest of known diseases. No satisfactory explanation as to etiology or treatment. General considerations. Method of handling.

11. **HEMORRHAGE OF THE NEWBORN**—by L. E. Leavenworth, Canton.

More frequent incidence than has been recognized in the past. Many cases of death from unknown causes, occurring shortly after birth, may be due to internal hemorrhage. No definite cause as yet established. Different methods of treatment. Blood transfusion the safest procedure. Report of several types of cases. Blood transfusion by veni-puncture of the longitudinal sinus.

12. **TUBERCULOSIS IN INFANCY**—by L. E. Payne, Toledo.

The relation of infantile to adult tuberculosis. Special reference to differences in physical signs, symptoms and pathology. Diagnosis of primary lesion of the disease and development of secondary manifestations. Method of examination. Special signs. Value of tuberculin tests and X-ray examination. Prognosis and treatment. Consideration of the possibility of universal tuberculous infection in infants.

13. **THE UMBILICAL CORD AS A COMPLICATION DURING LABOR**—by J. P. Gardiner, Toledo.

Cord complications during labor. Relation to fetal mortality. Practical obstetrical methods of dealing with some of these complications. Illustrative case reports.

14. **EXPERIENCES WITH ULTRA-VIOLET RAY THERAPY IN PEDIATRICS**—by H. J. Gerstenberger, Cleveland.

The quartz lamp ultra-violet ray as a therapeutic measure in pediatrics only recently has come into prominence. The results obtained with it at the Babies' Dispensary and Lakeside Hospital in the treatment of rickets and tuberculosis will be reported.

**EYE, EAR, NOSE AND THROAT**

WILLIAM MITHOEFER, Cincinnati.....Chairman  
W. W. ALDERDYCE, Toledo.....Secretary

Meeting Place—Parlors 3 and 4, North-east Corner, Mezzanine Floor, Hotel Gibson.

**FIRST SESSION**

Tuesday, May 2, 2:00 P. M.

1. **DISEASE OF THE LACRIMAL SAC**—by Charles S. Means, Columbus.

Recorded methods of treatment, incised wound, syringing, probing (Bowman), slitting canaliculae, metal silets, extirpation of sac. (Meller). Disadvantages of nasal route operations. Epiphoria, extirpation of gland and deforming scar not necessary results of external operation. Technique of operation. Post-operative precautions. Results.

Discussion opened by F. W. Lamb, Cincinnati.

2. **CONCERNING EYE AND NASAL SYMPTOMS IN PITUITARY DISORDERS WITH REPORT OF ACROMEGALY**—by Francis W. Alter, Toledo.

Anatomical basis of visual phenomena; bi-temporal hemi-anopsia, optic atrophy, color defects, muscle imbalance, photophobia, impairment of central vision and nerve blocking of light impulses. Operative and therapeutic measures to restore nerve function and prevent deterioration of vision. Nasal symptoms, anosmia, epilepsy with gustatory and olfactory aura, epistaxis, mucus discharge, and protrusion of tumor. Pituitary headache. Relation of pharyngeal and cerebral hypophysis (Cielli) and adenoids. Case reports. Efficacy of intra-cranial surgery.

Discussion opened by Derrick T. Vail, Cincinnati.

3. **SOME PROBLEMS IN EXTERNAL MUSCLE EYE EXAMINATIONS**—by J. E. Cogan, Cleveland.

Standardization of methods and records for examination of the latent eye muscles. Size of light, shades of color, prism displacement of false projections. Sensitive and non-sensitive tests. Errors in the use of the prism in the presence of cyclophoria. Cumbersome classification of eye deviations, esophoria, and hyperphoria. Chart demonstration.

Discussion opened by Charles F. Clark, Columbus.

4. **METHOD OF DETERMINING LENTICULAR ASTIGMATISM**—by R. C. Heflebower, Cincinnati.

Methods of earlier investigators. Purkinje's images. Keratometry, phakometry, ophthalmometry. Workings and defects of early apparatus. The mathematical problems involved. Tscherning's ophthalmophakometer, its advantages and results. Formulas involved in lenticular investigations. Mathematical and mechanical problems involved in designing an apparatus for measuring the radii of the crystalline lens. Souter's instrument and results. Author's improvements. The ophthalmometer as a phakometer and its practical value. Deductions.

Discussion opened by Charles S. Means, Columbus.

5. **TREATMENT OF CANCER OF THE EYE AND SURROUNDING TISSUE**—by Charles F. Bowen, Columbus.

Importance of an early diagnosis of cancer in the region of the eye. Prevalence of cancer of the lid and inner canthus. Cases seen reasonably early can be successfully treated with little, if any deformity, by a combination of radium, X-ray and electric coagulation. Use of special apparatus to protect the eye. Lantern slide demonstration of different methods employed and the class of cases treated.

Discussion opened by Sidney Lange, Cincinnati.

SECOND SESSION

Wednesday, May 3, 9:00 A. M.

SYMPOSIUM ON NASAL ACCESSORY SINUSES

6. ANNUAL ADDRESS—THE ACCESSORY NASAL SINUSES FROM A PRESENT DAY STANDPOINT—by H. I. Lillie, Rochester, Minnesota.
7. SOME PHYSICAL INTRA-NASAL CONDITIONS FAVORING INFECTIONS OF THE NASAL ACCESSORY SINUSES—by Myron Metzenbaum, Cleveland.  
Physical condition within the nares preventing sinus drainage, or directing nasal secretions toward the sinus openings, or permitting nasal secretions to build up toward the sinuses, favor infections of one or more of the nasal accessory sinuses. A consideration of some of the physical intra-nasal conditions favoring sinus infections, a high-up deviating or bulging septum, a normal middle turbinate close to the sinus wall, or a shelf-like inferior turbinate.
8. THE CHARACTER AND EXTENT OF SURGICAL INTERFERENCE IN ACTIVE SINUS INFECTION—by John Edwin Brown, Columbus.
9. SOME FURTHER OBSERVATIONS ON THE ETIOLOGY AND TREATMENT OF MAXILLARY SINUSITIS—by Howard V. Dutrow, Dayton.  
Relative frequency of ascending as compared with descending infections. No re-infections of maxillary sinus or ethmoid labyrinth after the Caldwell-Luc operation. Prompt return to normal of infected ethmoid labyrinth. Jansen's theory of multiple sinus infection disproved. Results of 40 odd Caldwell-Luc operations. Complications. Points in technique, drainage aeration and irrigation. Striking improvement of general health following radical operation.
10. MALIGNANCY OF THE SINUSES—by Justin M. Waugh, Cleveland.  
Discussion of symposium opened by C. H. Hay, J. M. Ingersoll, Cleveland, and Hugh G. Beatty, Columbus.

DERMATOLOGY, PROCTOLOGY AND GENITO-URINARY SURGERY

AUGUSTUS RAVOGLI, Cincinnati.....Chairman  
HUGH A. BALDWIN, Columbus.....Secretary

Meeting Place—Men's Smoking Room, Northwest Corner of Main Ball Room (Ball Room Floor), Hotel Gibson.

FIRST SESSION

Tuesday, May 2, 2:00 P. M.

1. CHAIRMAN'S ADDRESS—SKIN ERUPTIONS FROM VASOMOTOR DISTURBANCES—by A. Ravogli, Cincinnati.  
Role of anaphylaxis in skin eruptions. Circulatory method of production from toxins or faulty metabolism, with irritation of sensory and trophic nerve filaments, causing itching, hyperemia, and cutaneous exudation. Urticaria, angio-neurotic edema, dermatitis herpetiformis, pruritus, recurrent eczema as types of vasomotor anaphylactic skin eruptions. Value of protein sensitization for diagnosis. Treatment. Calomel and alkalies.

2. DERMATÔSES OF PRESENT DAY INTEREST—by G. W. Miller, Cincinnati.  
Epidermophytosis, which ordinarily is termed dysidrosis or pompholix, a vesicular dermatosis essentially limited to the hands and feet and now recognized as a mycotic affection, is caused by the epidermophyton inguinale of Sabouraud. Dermatitis exfoliativa, following the use of arsphenamine, while fortunately seldom seen, will perhaps in the future be observed oftener from the more general use of this remedy. Brief case reports of both types are outlined with details of the remedial treatment instituted.
3. OCCUPATION DERMATOSES: SOME NEW ETIOLOGICAL FACTORS: PREVENTION AND TREATMENT—by Rudolph Ruedemann, Jr., and C. P. McCord, Cincinnati.  
Alteration of trade processes in many industries during the past half decade. Institution of new processes and practices without consideration of their effect on the health of workers. Resulting occupational skin diseases from these new departures in industry. Discussion of these new dermatoses with particular reference to their specific etiology, prevention and treatment.

4. THE PASSING OF DERMATOLOGY AS A DISTINCT SPECIALTY IN OHIO—by C. J. Broeman, Cincinnati.  
An explanation of why Ohio physicians are ceasing to specialize in dermatology. Abolition of the Section on Dermatology, Proctology and Genito-Urinary Surgery. Introduction of X-ray and radium therapy requires postgraduate study and purchase of expensive equipment, which many physicians cannot afford. For unexplained reasons the clientele at public skin clinics is now so small that little clinical material is available for study. Patients are being alienated from the dermatologist. Syphilis is now being treated by all kinds of practitioners. Free treatments at public venereal disease clinics.
5. PERSONAL EXPERIENCES IN THE TREATMENT OF PELLAGRA—by Louis De M. Blocker, Cincinnati.  
Brief review of prevailing ideas as to etiology. The author's experience in treating pellagra. Difference of opinion on causative factors.
6. GRANULOMA INGUINALE—by H. L. Claassen, Cincinnati.  
Rarity and inadequate treatment of this condition. Six case reports. Granuloma inguinale tropicum a misnomer. The condition is not limited to the tropics nor the inguinal region. More numerous sporadic case reports since MacLeod's first reported case in 1882. Increase in number of cases due to recognition. Characteristic clinical lesions. Early diagnosis. Preventing mutilation from non-recognition. Treatment.

SECOND SESSION

Wednesday, May 3, 9:00 A. M.

7. SPINAL THERAPY IN SYPHILIS—by J. Grant Marthens, Dayton.  
Indications for spinal therapy and results obtained. Description of the present method used. Reasons why fortified salvarsanized and mercurialized serums were discontinued.
8. DIAGNOSIS AND PREPARATION OF PATIENTS FOR PROSTATECTOMY—by G. F. McKim, Cincinnati.  
Prostatic hypertrophy as seen by the urologist. Discussion of the usual history given and symptoms presented by the patient. Majority are far advanced conditions. Detailed examinations necessary before advising patients as to future. Value of blood chemistry, phthalein output and cystoscopy in determining the advisability of surgery and type of operations to be selected. Pre-operative preparation. Necessity of putting patient in excellent physical condition. Favoring elimination. Hygienic measures. Pre-operative catharsis and narcosis. Type of anesthesia to be used.

9. **URETERAL STRICTURE**—by C. A. Coleman, Dayton.

Presentation of 50 case reports. Details regarding cause, location, methods used in making diagnosis, treatment and results. Animal experimentation. Lantern slides.

10. **ABNORMALITIES OF THE KIDNEY AND URETER**—by Charles M. Harpster, Toledo.

Review of literature and abstract of cases reported, tabulated, and citations of publication. Special mention of cases of bifurcated ureters with one ureteral orifice. Double ureters and double kidneys. Case report of double kidney, double bifurcated ureter with one ureteral orifice. Lantern slides and X-ray films. History of the cases reported and theories as to the causation of the condition.

11. **TRAUMATISM OF THE KIDNEY**—by Thomas P. Shupe, Cleveland.

Formerly a rare condition, now becoming quite common and due in most cases to transportation accidents. Injuries due to direct trauma, muscular contractions, puncture and gunshot wounds as well as to diagnostic and treatment procedures. Degrees of injuries, sub-capsular, penetrating and involvement of ureter. Symptoms. Treatment. Prognosis.

sponsibility of medicine in emphasizing the factor of pathology and the importance of individual differences between human beings. The newer criminology and advances in the field of mental science, especially psycho-pathology. The problem of classification and treatment. Maintaining mental health of the community, a concern not only of the specialists but general practitioners as well.

5. **THE AUTONOMIC NERVOUS SYSTEM IN MENTAL DEPRESSION**—by H. D. McIntyre, Cincinnati.

Physiological consideration. Pharmaco-dynamic tests and their clinical application. Neuro-circulatory tests and signs. Clinical methods of investigation. Case reports. Methods of treatment. Conclusions.

## SECOND SESSION

Wednesday, May 3, 9:00 A. M.

---

### NERVOUS AND MENTAL DISEASES

---

C. W. STONE, Cleveland.....Chairman  
G. G. KINEON, Gallipolis.....Secretary

Meeting Place—Rooms D and E, South Side of Main Ball Room (opposite elevators), Hotel Gibson.

### FIRST SESSION

Tuesday, May 2, 2:00 P. M.

1. **MENTAL HYGIENE IN THE COMMUNITY**—by T. A. Ratliff, Cincinnati.

Need of a definite mental hygiene program in each city and community. Cincinnati efforts. The mental hygiene council. Survey of Hamilton County by the National Committee for Mental Hygiene. Program. Mental hygiene in the smaller community. What the community and the state can do. Need of a state policy and program.

2. **THE GENERAL ASPECTS OF A STATE-WIDE MENTAL HYGIENE MOVEMENT**—by E. A. Baber, Dayton.

3. **A DISCUSSION OF THE DIRECT COMMITMENTS TO THE LIMA STATE HOSPITAL, SINCE ITS ORGANIZATION TO JANUARY 1, 1922**—by C. H. Clark, Lima.

The direct commitments include those individuals who would have been committed to a penal institution had they not been found to be insane or feeble-minded. General discussion of the statistical data, with particular stress upon that group of cases coming under psychoses, with or without mental deficiency, and under psychopathic personality, with or without psychoses.

4. **MEDICAL SCIENCE AND CRIMINAL JUSTICE**—by Herman M. Adler, Chicago.

Criminal behavior as an evidence of a pathological condition, associated with physical, mental or social causative factors. Previous emphasis on social, economic and legal relations based on the recognition of the similarities between beings. New rôle and re-

6. **MEDICAL SUPERVISION OF THE PSYCHO-NEUROSES**—by G. T. Harding, Jr., Columbus.

Emphasis on the necessity of the physician's appreciation of the relative value of the physical and psychic factors in mental nervousness; and of the desirability of bringing about such influences as will restore the patient to a normal physiological and psychological condition.

7. **TACHYCARDIA OF NEUROTIC ORIGIN**—by Charles E. Kiely, Cincinnati.

"Soldier's heart" as described by Weir Mitchell soon after the Civil War. Incapacitation of a considerable number of men in the World War by the same syndrome. Many claims for compensation now being presented to the Government. Examination and therapeutic tests fail to confirm endocrinological theories. Cardiologists consistently fail to find organic heart diseases. Mentally these patients are typical neurotics. Suggestive therapy as successful as any other.

8. **PRACTICAL POINTS IN THE TREATMENT OF DRUG HABITS**—by E. E. Gaver, Columbus.

Merits of the methods. An attempt to answer the question—Of what does the treatment of drug addiction really consist? The medical peddler as a handicap to the administration of real treatment. Some details of treatment.

9. **PARKINSON'S DISEASE AS A SEQUELA TO LETHARGIC ENCEPHALITIS**—by H. H. Drysdale, Cleveland.

Parkinson's description of a clinical syndrome designated as shaking palsy, now more commonly termed paralysis agitans, and regarded as a chronic, progressive disease of the central nervous system, rarely developing prior to 40 or after 65 years of age. Typical Parkinson manifestations as a frequent complication of the recent epidemics of lethargic encephalitis. Development of the syndrome in many individuals under the age of 20, and consequent diagnostic confusion. Brief review of the clinical features of 33 cases of post-encephalitic Parkinsonism. Discussion of their diagnostic and prognostic features.

10. **BRAIN INJURIES WITHOUT SKULL FRACTURE**—by D. H. Morgan, Akron.

Observation of these cases by surgeons, neurologists and psychiatrists from different angles and individual viewpoints. The surgeon and the pathological process; the neurologist and the central and focal syndrome; the psychiatrist and the resulting mentality. Treatment based on correlation of data from all sources. Mental deterioration. Treatment of the traumatic condition and secondary complications. Medico-legal considerations. Illustrative case reports.

11. **A STUDY OF THE SPINAL FLUIDS OF ALCOHOLICS**—by A. D. Finlayson, and L. G. Karnosh, Cleveland.

The spinal fluids of patients showing the mental effects incident to the excessive use of alcohol as investigated and studied. Usual routine examination, also tests for urea, sugar, carbon dioxide combining power and the specific gravity. Contemporary condition of the blood and urine as disclosed by these studies. Conclusions.

ceptible persons. Necessity for caution in certain cases. Synopsis of results of tests with Schick material from various laboratories. Value of toxin-antitoxin from various laboratories in immunity production.

6. **ARE STATE HOSPITALS PREFERABLE TO STATE ASYLUMS?**—by Rev. H. S. MacAyeal, Columbus.

---

**HYGIENE AND SANITARY SCIENCE**

---

R. R. RICHISON, Springfield.....Chairman  
 ARLINGTON AILES, Sidney.....Secretary

Meeting Place—Rooms A, B, and C, South-west  
 Corner of Main Ball Room (Ball Room  
 Floor), Hotel Gibson.

---

**FIRST SESSION**

Tuesday, May 2, 2:00 P. M.

1. **ODORS**—by J. J. Sutter, Lima.  
 The olfactory function of the nose. Extreme delicacy of the sense of smell. Value of its higher development. Racial and individual odors. Odors of various diseases. Diagnosis by means of odors. Odors not a cause, a result of disease. Odors of interest to the health commissioner.
2. **THE PHYSICIAN, HEALTH OFFICER AND CO-OPERATION**—by M. F. Hussey, Sidney.  
 Legendary history of medicine and hygiene. Their intimate ties during the mythological periods. Correlation of medicine and hygiene. Service to humanity. Need of the physician's aid to the public health official. Commensurate service to the community, limited wholly, except for the indigent, to impersonal aid. Restriction of his services from the field of immunology. Hands off from all entering wedges to state medicine.
3. **THE CONTAGIUM VIVUM**—by R. H. Grube, Xenia.  
 Historical development of the idea. Biologic, epidemiologic and pathologic characteristics of known disease germs. Epidemiology of the contagious diseases. Unsolved problems. Summary.
4. **THE LOCAL HEALTH DEPARTMENT, THE COUNTY MEDICAL SOCIETY AND THE AMERICAN RED CROSS**—by John R. McDowell, Cleveland.  
 Agencies in the public health field. Official, semi-official and private. Medical and dental societies. Functions of the official department. Limitations because of finances, politics and police power. Community and group initiation of health activities. Red Cross efforts and results. Co-operative programs. Solution of public health problems in relation to the medical profession. Necessity for medical leadership, technical knowledge and service in public health.
5. **MODERN METHODS IN THE PREVENTION OF DIPHTHERIA**—by F. G. Boudreau, Columbus.  
 Value and technique of administering the Schick test. Interpretation of the various reactions. Necessity of using fairly large quantities of toxin in making dilutions to insure accuracy. Fallacy of small packages. Value of toxin-antitoxin mixture in producing permanent antitoxic immunity in sus-

---

**SECOND SESSION**

Wednesday, May 3, 9:00 A. M.

Joint Meeting with the Ohio Association of  
 Industrial Physicians.

7. **MEETING THE INDUSTRIAL MEDICAL NEEDS OF THE SMALL PLANT**—by Carey P. McCord, Cincinnati.  
 Proportionate medical needs of the small plant. Necessity for adequate service. A working plan including an industrial physician, hygienist, safety director and statistician. Daily part time group service. Results at one small plant. Reduction of labor turnover, decreased incidence of sickness, improved sanitary and hygienic conditions as well as greater safety. A service that can be provided for every small plant and which pays for itself.
8. **THE INFLUENCE OF HOSPITAL STANDARDIZATION ON PREVENTIVE MEDICINE**—by C. D. Selby, Toledo.  
 Possible future results of further efforts for hospital betterment on the health of the community, from the viewpoint of results already achieved. Development of more hospitals in the smaller communities. The community asset of hospital service in the prevention and treatment of tuberculosis. Other problems awaiting solution.
9. **INDUSTRY'S PART IN A PUBLIC AND PERSONAL HEALTH PROGRAM**—by Otto P. Geier, Cincinnati.  
 Failure of the medical profession and health officers to recognize the part industry may be made to play in intensifying the program of public and personal preventive medicine. Further reduction of mortality and morbidity through direct appeal for individual personal hygiene and more frequent medical advice for earlier diagnoses. Failure of the practitioner to persuade the patient to this end. Periodical physical examinations a rarity except in industry. Industrial medicine's intensive sale of medical service to the employees. Public health officers as proponents of the extension of industrial medicine.
10. **THE RELATION OF THE LABORATORY TO THE HEALTH DEPARTMENT**—by Roger G. Perkins, Cleveland.
11. **THE PHYSICIAN AND THE TUBERCULOSIS CLINIC**—by J. A. Frank, Columbus.  
 Inception of the program. Early medical advice a necessity. Demonstration of unrecognized cases of tuberculosis. Contacts and exposures, from widely separated parts of the country, examined and referred to their own physicians when found positive or suspected. Diagnostic service only for those who cannot afford it. Follow-up of cases to see that positives and suspects go to physicians or are otherwise treated, and to complete the record of the clinics. Summary of clinic reports and analysis of clinic findings.
12. **OCCUPATIONAL DISEASES AND THEIR PREVENTION**—by A. G. Cranch, Cleveland.

---

 SPECIAL CONVENTION FEATURES
 

---

## TUESDAY, MAY 2

**Legislative Committee Luncheon**, Tuesday, May 2, 12 M., at Scottish Rite Cathedral, Broadway between 4th and 5th Streets. County auxiliary legislative committeeman will be guests of the Committee on Public Policy and Legislation of the State Association at this luncheon. Dr. J. H. J. Upham, chairman of the state committee, will preside and there will be informal talks on legislative matters. Admission by special card.

**Medical Veterans of the World War**, will hold a dinner meeting on Tuesday evening, May 2, at 6:00 P. M. There will be delicious eats, good stories, war songs and reminiscences. Reservations should be made by post card before April 29, with Dr. Frank B. Cross, University of Cincinnati, Cincinnati, at \$2.50 per plate.

**Smoker**, Tuesday evening, May 2, 8:00 P. M. Every member who attends the annual meetings looks forward with anticipation to the relaxation afforded by the smoker. It is a real pleasure session. While details of the entertainment program for this function have not been announced the Cincinnati entertainment committee is certain to do its "darndest". This secrecy will mean some rare surprises. Admission to all members by registration badge.

## WEDNESDAY, MAY 3

**Presidents' and Secretaries' Luncheon**, Wednesday, May 3, 12 M., at Scottish Rite Cathedral, Broadway between 4th and 5th Sts. Presidents and secretaries of the county societies, state officers and district councilors will be guests of the Association at this luncheon. There will be a brief program of short talks on medical organization. Dr. Robert Carothers, president-elect, will preside. Admission by special card.

**Rush Alumni Luncheon**, Wednesday, May 3, 12 M., Hotel Gibson. A representative of the Rush Alumni Association will be stationed at the registration desk in the basement of the Hotel Gibson, where reservations for the luncheon may be made.

**Annual Banquet**, Wednesday evening, May 3, 7:00 P. M., Ball Room, Hotel Gibson. This affair will be informal; ladies are invited; plates will be \$5.00 each. Retiring President Wells Teachner will preside and his speech will be responded to by the incoming president, Dr. Robert Carothers. An unusually attractive program of after-dinner speakers is assured.

## ENTERTAINMENT FOR OUT-OF-TOWN WOMEN

Physicians whose wives will accompany them to the meeting are requested to notify Mrs. Robert Carothers, 409 Broadway, Cincinnati, chairman of the Committee on Entertainment for Out-of-Town Women, of their acceptance of invitations to the following functions. Visiting ladies are also requested to register at the general registration desk in the basement of the Hotel Gibson.

## Tuesday, May 2

- 1:30 P. M.—Luncheon, Business Men's Club.
- 3:30 P. M.—Art gallery view of Mrs. C. P. Taft's Pictures.
- 8:00 P. M.—Entertainment at Hotel Gibson.

## Wednesday, May 3

- 10:00 A. M.—Visit to Rookwood Pottery and other places of interest.
- 12:30 P. M.—Luncheon at Country Club, followed by automobile ride and tea at the residence of Dr. and Mrs. J. Louis Ransohoff.

---

 Program of Group on Clinical and Laboratory Diagnosis

ERNEST SCOTT, Columbus..... Chairman  
N. D. GOODHUE, Dayton..... Secretary

## Wednesday, May 3, 9:00 A. M.

1. BRONCHIAL SPIROCHETOSIS—by Thomas L. Ramsay, Toledo.
2. FRACTIONAL GASTRIC ANALYSIS—by Jonathan Forman, Columbus.
3. PROTEIN SENSITIZATION—By J. J. Coons, Columbus.
4. EXPERIENCE IN BLOOD TYPING—By H. R. Huston, Dayton.
5. SYMPOSIUM ON WASSERMANN REACTIONS
  - a. ANTIGENS—by S. S. Hindman, Toledo.
  - b. FIXATION—by C. E. Roderick, Columbus.
  - c. SYSTEMS—by Albert Faller, Cincinnati.
  - d. STANDARDIZATION—by E. E. Eisenberg, Cleveland.

Discussion opened by Mr. Fred Berry, Chief of Division of Laboratories, State Department of Health.



### Local Committees

J. Louis Ransohoff, Cincinnati

General Chairman for the State Association

**Reception**—B. K. Rachford, chairman; A. Ravogli, Byron Stanton, A. B. Thrasher, C. L. Bonifield, J. E. Griewe, Henry Page, J. C. Oliver, F. Langdon, Robert Sattler, B. M. Ricketts, A. Friedlander, C. C. Agin, A. H. Freiberg.

**Meeting Places**—Gordon McKim, Chairman, Mark Brown, Charles Kiely, Samuel Iglauer, Dudley W. Palmer, Magnus Tate, Carey P. McCord.

**Badges**—Moses Salzer, chairman, P. G. Smith, Samuel Rothenberg.

**Exhibits**—O. P. Geier, chairman; Julian E. Benjamin, Dudley Webb, Ralph Carothers.

**Entertainment**—W. D. Haines, chairman, H. K. Dunham, C. Crisler, F. B. Cross, Louis Schwab, C. T. Souther, F. M. Burns.

**Registration**—E. O. Smith.

**Stereopticon**—Ralph Carothers.

**Entertainment of Women Doctors**—Nora Crotty, chairman; Ruth Bernheim, Elizabeth Campbell, Bertha C. Lietze.

**Entertainment of Out-of-Town Women**—Mesdames Robert Carothers, chairman; J. Louis Ransohoff, C. F. Rockhill, Albert J. Bell, W. D. Haines, Gordon F. McKim, Kennon Dunham, Kenneth Blackfan, Albert H. Freiberg, Henry Page.

### Quack Golfiacs

The members of the Ohio Medical Golfing Association, organized in 1920, will hold their Annual Tournament in Cincinnati, May 1st, at the Maketewah Country Club, (Hamilton County), Reading Road near California Ave. This golf course, one that was laid out by Donald Ross, with a length of 6,456 yards, is one of the best courses in the country and is in wonderful condition. It is said to be an easy bogey for dubs, and a hard par for the professional.

These medical tournaments are not designed for experts, but are known for the good fellowship they engender. If you are not a fellow, send your application with Two Irons as an enrollment fee to Secretary-Treasurer Earl Gaver, 303 Medical Arts Bldg., Columbus, O., who will include your name among the golf-o-maniacs and send you full details of the tournament. This \$2.00 makes you a fellow of the Golfing Association on sight and for life. A playing fee of \$1.00, and fees for the greens and the food must be paid, according to the Constitution, at the first tee. Thus all expenses are paid by those who participate in any year.

#### SOME GOLF AND MUCH FUN

Handicaps will be determined as follows: Eighteen holes of medal play in the morning

will determine the handicaps for the day's events. The maximum handicap allowed will be 24 strokes. Luncheon at noon and the banquet in the evening will furnish opportunity for much fun-making. Breakfast may also be secured at the club on the morning of the play by those who expect to drive their machines to Cincinnati.

#### PRIZES

The prizes will be numerous. More than a score of prizes were carried away by the hundred odd members who played last year at Columbus.

1. The Association Championship Cup for 36 holes gross, one leg of which was won by Dr. W. D. Inglis, Columbus, last year.

2. The Association Trophy for 36 holes handicap, one leg of which was won by Dr. E. W. Hill, Marietta, last year.

3. The Cincinnati Trophy for Choice Score handicap 36 holes.

4. The President's Trophy for the low net in the afternoon play of 18 holes.

5. Handicap Association Trophies (Section canes).

6. Special prizes for an 18 hole "Blind Bogey," for those who can only play in the afternoon. (Wear your goggles).

7. Prizes Ad Libitum—2nd, 3rd and 4th prizes of various types and descriptions, useful, beautiful and otherwise. Tell your wife about this and she will want you to go.

#### HOW TO REACH THE COURSE

Special cars will leave Government Square, (100 yards from the Gibson Hotel, convention headquarters) at 7:30 and 8:30 A. M., Eastern Standard time (Daylight Saving Time in Cincinnati). Automobiles will meet the fellows at Reading Road and Mitchell Avenue to convey them to the Club. Those who miss these two special cars may take the regular Avondale, Winton Place or Bond Hill cars at Sixth and Main Streets (about 300 yard drive from the hotel), alighting also at Reading Road and Mitchell Ave., where they may "hole in" to automobiles and be hauled out to the Club.

#### PLAY EARLY

The local committee begs all the fellows that find it possible, to make the 7:30 car so that play may be started at 8 o'clock, in order that the course may accommodate all desiring to enter.

#### DO THIS TODAY

Notify Secretary-Treasurer Gaver at once of your intention to join the fun. We must know the approximate number so as to provide caddies, food and prizes in abundance. For once be different—be business-like, so that the local

committee of arrangements may make everybody comfortable and happy.

#### THE LOCAL COMMITTEE,

Putter—R. B. Wilkinson  
Driver—Otto P. Geier  
Spoon—Samuel Iglauer  
Mashie—Henry Stanbery  
Brassie—Clarence King  
Niblick—A. B. Thrasher.

### Epidemiology of Golf—A Chronic Incurable Disease

(From Nation's Health)

Golf—O. D. Kolf, a club—is a chronic incurable disease occurring in all climates, at all ages but most often among males in the fourth decade, and characterized by alternate periods of mental elevation and depression. The disease is ushered in by an acute myalgia of the muscles of the trunk extremities and delusions of wealth as evidenced by the miscellaneous purchase of bags, clubs and balls. In the initial states there is a marked change in the vocabulary and apparently meaningless words such as tee, lie, whiff, and dub are used. In the chronic stage there is a settled and prevailing profanity. Physically the disease is characterized by the loss of the equatorial mid-riff, general hardening of the musculature, tanning of the face and the forearms, and general increase in the co-ordination of the brain, eye and muscle. A marked irritability alternated by periods of beatitude is to be noted in cases of long standing. The disease is most violent on Sundays and holidays. Although associated with insect life, golf is spread by intimate contact with persons in the chronic stage. A sub-variant, known as chin golf, is recognized.

Golf appears to have had its birthplace in Holland and numerous paintings depicting its victims putting at a stake set in the ice are still extant. It is believed that these represent merely the hibernating form of the malady. The stake is still used in different forms.

Introduced in Scotland by sailing vessels, it spread rapidly in spite of many legislative acts and formed there an epidemic focus, which has never been eradicated. Thence it spread into England, forming several virulent subfoci, one of the most active still remaining at Blackheath, also famous for its highwaymen. The connection between the two has never been established. Modern transportation has facilitated the distribution of golf round the world, at first gaining entrance to the larger centers whence it has travelled out to the more sparsely settled districts. Thus from an urban disease it has gradually become metamorphosed into an affliction of town and country alike. This spread cannot but be viewed with other than alarm by health workers. A disease which may attack both sexes and all ages, which reduces the morbidity and mortality rates, which promotes

longevity and delays senility, strikes at the tap-roots of the health workers' livelihood.

Worst of all, all repressive measures seem futile. The clergy has preached against it as an enemy of church attendance; business men have realized that they must either give up golf or business and have sacrificed the latter; poets have raved over the fact that nothing will rhyme with it; yet it has crept forward, insidiously attacking all with whom it came in contact. One armed men have succumbed to it; advertisements for artificial limbs now show a central figure just about to smite or dub his drive; and as for the collar and shaving soap ads, what would they be without golf? Women no longer exercise with a crochet needle and a box of chocolates; instead they wield a mashie and abuse the careless caddy. Yes, golf has come to stay and relief can be gained only by submitting to the inevitable infection.

### Cincinnati Hotel Reservations

Those who anticipate attending the annual meeting and have not yet made hotel reservations should do so at the earliest possible moment, as other conventions are scheduled for Cincinnati on the same dates and rooms will be scarce unless engaged in advance. Following is a list of Cincinnati hotels within short walking distance of the Hotel Gibson, the convention headquarters. Assurance is given by the Cincinnati Hotel Men's Association and the Chamber of Commerce that there will be no increase in the regular rates set forth below during the annual meeting, and that requests for reservations made direct to the hotels will be honored, provided acknowledgement and assurance are returned.

#### HOTEL GIBSON

514 Rooms—All rooms with bath

Single room with bath.....	\$3.00—\$6.50
Double room with bath.....	4.25—9.00
Twin Beds if desired.....	5.00—9.00

#### HOTEL SINTON

750 Rooms—All rooms with bath

Single room with bath.....	\$3.50—\$6.00
Double room with bath.....	5.50—10.00
Twin Beds if desired.....	7.00—10.00

#### PALACE HOTEL

200 Rooms

Single room without bath.....	\$1.25—\$1.50
Single room with bath.....	2.00—3.00
Double room without bath.....	2.00—3.00
Double room with bath.....	3.00—4.00

#### HOTEL METROPOLE

Single room without bath.....	\$1.75—\$2.25
Single room with bath.....	2.50—3.50
Double room with bath.....	4.50—7.00
Double room without bath (men only).....	3.50—4.00

#### GRAND HOTEL

255 Rooms

Single room without bath.....	\$1.50—\$2.00
Single room with bath.....	2.50—4.00
Double room without bath.....	2.50—4.00
Double room with bath.....	4.00—6.00

#### HAVLIN HOTEL

192 Rooms

Single rooms with bath.....	\$3.00—\$5.00
Double rooms with bath.....	5.00—8.00

**EMERY HOTEL**  
150 Rooms

Single room without bath.....	\$1.50—\$2.00
Single room with bath.....	2.50
Double room without bath.....	3.00— 4.00
Double room with bath.....	4.50

**DENNISON HOTEL**  
140 Rooms

Single room without bath.....	\$1.00 and up
Single room with bath.....	2.00 and up
Double room without bath.....	3.00 and up
Double room with bath.....	4.00 and up

**HOTEL STAG**  
90 Rooms

Single room .....	\$ .50—\$ .75—\$1.00
Double room .....	.75— 1.25—
Free use of shower and tub baths	

**HOTEL SAVOY (Stag)**  
90 Rooms

Single room without bath.....	\$1.50—\$2.00
Single room with bath.....	2.50
Double room without bath.....	3.00— 4.00
Double room with bath.....	5.00
Use of shower bath	

## Special Railway Rates for Annual Meeting in Cincinnati, May 2, 3 and 4

Contingent on certain definite requirements set forth by the Central Passenger Association as shown below, arrangements have been made for special reduced railway fares from Ohio for members of the Ohio State Medical Association and members of their families who attend the seventy-sixth annual meeting in Cincinnati, May 2, 3 and 4.

Upon payment of the full fare to Cincinnati, securing a "certificate" and its validation, there will be a reduction of one-half of the regular one-way fare applying from Cincinnati to original starting point via the same route traveled on the going trip as shown on the "certificate." The special round trip fare will thus be three-fourths of the regular round trip rate.

The going trip to Cincinnati may be started as early as April 28, and the return trip as late at May 8.

For your guidance, the following directions are given by Chairman C. A. Fox, of the Central Passenger Association:

1. Tickets at the regular one-way tariff fare for the going journey may be obtained on any of the following dates (but not before or after) April 28 to May 4 inclusive. Be sure that, when purchasing your ticket, you request a "CERTIFICATE." *Do not make the mistake of asking for a "receipt."*

2. Present yourself at the railroad station for ticket and certificate at least thirty minutes before departure of train on which you will begin your journey.

3. *Certificates are not kept at all stations.* If you inquire at your home station (or ticket office) you can ascertain whether certificates and through tickets can be obtained to Cincinnati. If not obtainable at your home station, the agent will inform you at what nearest station they can be obtained. You can in such case purchase a local ticket to the station which has certificates in stock, where you can purchase a

through ticket and at the same time ask for and obtain a "certificate" to the place of meeting.

4. As soon as possible after your arrival in Cincinnati, register for the meeting (at the registration headquarters, basement, Gibson Hotel)

at which place you must present your "certificate" to the endorsing officer. Dr. E. O. Smith, chairman of the registration committee, has been authorized to visé your certificate. Reduced fare for the return journey will not apply unless you comply with these directions. Your membership card and badge (secured at registration) will serve as your identification for this purpose.

5. Arrangements have been made for validation of certificates by a Special Agent of the carriers, *provided the required minimum of 350 certificates is presented.*

6. *No refund of fare will be made on account of failure to either obtain a proper "certificate" nor on account of failure to have the certificate validated.*

7. So as to prevent disappointment, it must be understood that the reduction on the return journey is not guaranteed, but is contingent on not less than 350 members and dependent members of their families holding regularly issued "certificates" obtained from the ticket agents at starting points, showing payment of regular one-way tariff fare of not less than 67 cents on going journey.

8. If the necessary minimum of 350 certificates is presented to the Special Agent as explained above, and your certificate is duly validated, you will be entitled up to and including May 8, to a return ticket via same route over which you made the going journey, at one-half of the regular one-way tariff fare from Cincinnati to the point at which your certificate was issued.

9. Return ticket issued at the reduced fare will not be good on any limited train on which such reduced fare transportation is not honored.

## Acute Appendicitis\*

CARL DACOSTA HOY, M.D., F. A. C. S., Columbus

(Continued from the March Issue)

*Editor's Note.*—In dealing with acute appendicitis it is very important to thoroughly understand its differential diagnosis from a host of confusing conditions, and Dr. Hoy goes into this matter in considerable detail. Similarly appendicitis, even when handled by operative interference may be accompanied by many complications and sequelae involving a great deal of surgical care and judgment. It is of passing interest that some observers have noted what they consider to be an influenzal form of appendicitis. The prognosis and results depend in great measure on early diagnosis, early operation and surgical experience and despite the fact that appendicitis has been about as thoroughly discussed as any problem in the practice of medicine, the mortality rate is still too high.

### FINAL RESULTS

THE FINAL RESULTS in appendicitis, as a whole, are very gratifying. When a patient has had the appendix removed, the rule is that he recovers from operation, with as good if not better health than before, and is free from pain and inconvenience in the right hypochondriac region or disturbance of his digestive tract as a result of the disease or the operation. It is surprising how completely extensive inflammatory processes disappear soon after the focus of infection is removed and the source of irritation eradicated. Prolonged packing and drainage tend to the formation of firmer adhesions than usually result from the inflammatory processes with their adhesions in limiting the infective process. With the exception of the adhesions following tuberculosis in the peritoneum, there is no other lesion in which adhesions so rapidly and completely disappear as those that exist around an inflamed appendix.

If the appendix has perforated and a secondary perforation has taken place into the intestine, a firm and organic adhesion of the appendix may remain, uniting it to the intestine, the caput coli, or the ileum, as the case may be. It seems to me, even these rapidly absorb, so that in an abdomen where six weeks previous an operation had been performed for the drainage of a large peri-appendical abscess, with extensive suppuration and adhesions, almost every evidence of the disease, except a fluffy, velvety condition of the peritoneum, had disappeared. This is an every day observation. The regenerative power of the endothelium over the intestines is vast in the average case. Occasionally we find a tendency to keloid formations in the peritoneum, or to the formation of cord-like adhesions which develop into strong, firm bands of sufficient power to lift the patient from the table. Fortunately these are rare. If the appendix remains and becomes a chronic source of irritation after an attack of appendicitis, the adhesions often continue and remain there as a protection against a subsequent attack, rendering the danger in a subsequent attack less in these cases. If we could only tell

from the symptoms that they existed, what a comfort it would be in recurrences.

### HERNIA

Much has been written on the subject of hernia following the operation for appendicitis, and many suggestions have been made concerning the original incision. It seemed that one of two incisions should be adopted; either the gridiron incision of McBurney and McArthur, or the incision through the rectus muscle. The gridiron incision has the advantage of retaining the muscle fibers without injury while it divides the muscular sheath, which is often strong, at the point of separation of the fibers. It has the disadvantage of confining the operator to a comparatively small field after the abdomen is opened, unless he is willing to sacrifice the muscle division. This is not such a serious matter as we formerly believed. Muscle fibers may be divided into a direct transverse line if they are again brought into apposition and the full strength of the muscle retained. This is seen in division of the biceps, triceps and the abdominal rectus. It leaves a depression and a deformity, but no deficiency in support. The other incision is one to the central side of the linea semilunaris, going through the rectus muscle. It has the advantage of permitting the incision to be elongated from the symphysis to the costal arch without the division of muscle fibers. It has the further advantage of permitting the peritoneal and the muscular aponeurosis to be sutured without including the muscle fibers and, at the same time, produces approximation of the slit muscular fibers side by side in their long axis, the sutures being applied in layers. The accurate apposition of the aponeurosis of the rectus with a cat-gut or figure eight suture practically guarantees against hernia. In this class of cases, in which drainage is necessary, there is a defect in the approximation of the aponeurosis of the rectus or of the muscle fibers if the gridiron incision be made, which leaves a weakness in the wall; this in a considerable percentage of cases, results in hernia. Prolonged drainage is not so frequently necessary as was formerly supposed. A figure of eight suture, to be tied later, can be used for the approximation of the cut edges of the aponeurosis.

\*Read before the Surgical Section of the Ohio State Medical Association, during the Diamond Jubilee Meeting, at Columbus, May 3-5 1921.

eurosis at this point. It should be allowed to remain loose until the drainage is removed, and then it may be drawn taut and good apposition secured, which will lessen the likelihood of hernia, though it will not prevent occasional occurrences. If the post-operative hernia is tending to increase, it should be closed with an edge to edge union of the aponeurosis, or a flap operation of the aponeurosis, after the method of Mayo for umbilical hernia. Hernia bears close relation to drainage in all locations of incision in the abdominal wall."

#### DIFFERENTIAL DIAGNOSIS

In the ordinary case of acute infective appendicitis it is very easy to make a diagnosis. It is in the atypical cases that it is very hard at times to make a diagnosis.

*Pus Tubes.*—The infections of the fallopian tubes, where they are due to a Neisserian infection or infections following child birth or miscarriage, or other types of infection, as far as pain is concerned at times offer some difficulty in diagnosis. A most careful attention to the details of the history should be investigated. The vaginal examination usually gives a great deal of information. The clinical history as a rule is different from that of the clinical history of appendicitis. A strangulated hydrops of the tubes or a strangulated ovarian cyst, high up on the right side, at times offer some difficulty in diagnosis, but there should be no primary elevation of temperature in a strangulated hydrops, or a strangulated ovarian cyst.

*Ectopic Pregnancy.*—Ectopic pregnancy usually gives some of the signs of pregnancy. The clinical history is most important in determining some irregularity in the last menstrual period with unilateral cramps and at times dysmenorrhea and even hemorrhage. The vaginal examination, unless the case is exceedingly early usually differentiates it from appendicitis.

*Pneumonia.*—In many cases of pneumonia we have a referred pain over the appendix. The same is found at times in pleurisy, so that in no case should the appendix ever be operated upon without a *complete examination of the chest*. The history of a pneumonia with a cough, increased respiration, dullness in the right lower lobe and bronchial breathing should differentiate it from appendicitis.

*Typhoid Fever.*—The prodromal symptoms of headache, malaise anorexia, and fever followed by a high temperature and slow pulse with an enlarged spleen, diarrhea, rose spots, leucopenia (Widal), will serve to differentiate this condition from appendicitis.

*Kidney and Ureter.*—The location and radiation of the pain in renal and ureteral conditions, and the relation of this pain to urination, with a careful genito-urinary examination will serve to differentiate these conditions from appendicitis. The pain of post-caecal appendix is at times hard to differentiate from pain in lesions of the kidney

which, outside of infection, of neoplasm, and stone, have no primary elevation of temperature.

*Gall Bladder.*—Gall bladder lesions have their pain, as a rule, located higher, at the 9th costal cartilage. It may be located lower with ptosis of the liver, so that the pain is practically over the site of the appendix, but the pain of appendicitis radiates to the epigastric and to the umbilical regions, while the pain in the gall bladder radiates to the infra-scapular region. The man who sees the patient during the acute attack is better able to make a diagnosis than the man who sees the patient at a later period, and has only the clinical history to go upon. The bed-side examination is of great importance. Hooking your fingers under the costal margins on each side; have the patient bend over and take a deep breath; as inspiration increases it pushes the diaphragm downward with the liver the gall bladder which meets the fingers causing a severe pain. The other test is to have the patient lying flat on the bed or table and to bend the middle finger of the left hand to the right angle, placing the middle finger over the gall bladder with the hand flat upon the gall bladder, asking the patient to inspire to the height of inspiration, strike the hand and middle finger with the right hand; this illicit a severe pain over the gall bladder.

There is a very sudden cessation of pain both in kidney stone and gall stone and the patient gets up and goes about his business. In severe attacks of acute appendicitis the patient has an inflammatory process and does not get up at once to go on about his business.

*Stomach.*—Ulcer of the stomach should have a different location, for the pain as a rule bears a definite relation to the intake of food. There may be vomiting of blood, or blood in the stools. The location and radiation of the pain should serve to differentiate this condition from appendicitis, although at times it is hard to differentiate a slow perforation of the gastric ulcer from an acute appendicitis. Recently a patient was referred to me with a ruptured gastric ulcer in which all of his pain was over the appendix. He was nauseated and vomited, and had no primary elevation of temperature. He had considerable rigidity over the right rectus, especially marked over the lower half. The appendix was removed, the ulcer closed, re-enforced by an omental suture and the patient made an uneventful recovery.

*Duodenal Ulcer.*—There is a certain period of pain in this condition with an entire freedom from any symptoms for weeks, or months, or even years. The pain is located higher up and the pain is relieved always by the intake of food: When there is an acute exacerbation within two and one-half to three and one-half hours after the intake of food, the history, physical examination, laboratory findings and the fluoroscope, serve to differentiate this condition. The diagnosis can be made from the clinical history.

*Gastric Crisis Tabes.*—In lesions of the cord due to syphilis many patients complain of sudden severe pain in the abdomen, nausea and vomiting. At times this pain seems to be located in the region of the appendix. A careful history of the primary lesion with its period of incubation, the enlarged lymph glands, the other clinical manifestations, the positive Wassermann, or spinal fluid analysis, at times the Argyll-Robertson pupil, the marked Rhomberg, the loss of patella reflexes, all serve to differentiate this condition from acute appendicitis and various acute abdominal lesions.

*Spine.*—One should never forget to examine the spine before operating for any abdominal lesion, as there are such things as referred pains around the abdomen, due to a spondylitis, either from an acute or chronic infection, or injury. Acute pancreatitis is one of the hardest things in acute abdominal lesions to differentiate. It should almost be in a class with thrombosis of the mesentery artery.

*Obstruction.*—This condition presents in three types (a) dynamic, (b) adynamic, and (c) paralytic.

We neither have the time or space to go into the differentiation in these conditions, but in none of them is there a primary elevation of temperature, as there always is in acute infective appendicitis. There are a great number of other lesions that could be readily taken up, such as peritonitis, tuberculosis, neoplasms, intussusception and hernia. A complete examination of all the hernial openings should be made as a matter of routine in acute abdominal conditions.

I have made no mention of fecal impaction, because that would be included under ileus.

#### COMPLICATIONS AND SEQUELAE OF APPENDICECTOMY

The frequency of occurrence of complications after the operation of appendicectomy varies in accordance with the stage of the disease in which it has been undertaken. Thus, complications are rare after operations performed during the first forty-eight hours, and in those undertaken during a quiescent interval. They are numerous and serious in operations performed in the intermediate period, in consequence of the more serious conditions induced by the progress of the disease.

The operation may fail to give relief from the symptoms of general infection. This is usually the result of too late interference and offers little scope for further measures. The special want of resistance exhibited by some patients must also be credited to the operation in some cases.

If the abdomen has been closed, the wound must be re-opened and free drainage established. Other measures to be considered are continuous rectal injections of saline; or when collapse occurs, intravenous infusion, as much as 2 or 3 pints being introduced.

Subcutaneous injection in the flanks of anti-colon bacillus serum may be tried; 30 cc. should be given as a first dose, followed by 20 c.c. at the end of the first twenty-four hours. The writer believes that great benefit results from this method of treatment. In any case the injections are followed by fall in temperature, decrease in pulse rate, easier respiration, greater ease, and frequently sleep. Injections of 10 to 20 c.c. of the serum may be given every other day. Observation has shown that the use of the serum appears to further the process of localization in addition to its effect on the general condition, and even in cases which do not recover it definitely retards the progress of the disease.

#### SPREADING SUPPURATION

The operation may fail to arrest the tendency of the process to extend. In some instances the extension may lead to a rapidly fatal issue; in others the patient may only succumb at the end of weeks, more rarely even in months, after the operation. The treatment of this condition is identical with that of the last, the provision of secondary outlets for the suppuration being the main distinctive feature.

Infection and progressive suppuration and sloughing of the muscles of the abdominal wall. This distressing complication of operation in the acute stages is fortunately rare, but it may necessitate numerous incisions and only terminate favorably after the destruction of large areas, even nearly half of the entire muscular element of the abdominal wall.

The formation of secondary abscesses after operations in the acute stages, vary in degree of contiguity, the most common being, in relative order of frequency, pelvic, left iliac, right lumbar, sub-diaphragmatic, sub-hepatic, and peri-splenic. The position in each case is likely to be dependent on the original localization of the appendix. Early incision is indicated in either position.

More rarely, suppurations may be more distant; thus in the pleura or lung. Such may occur independently of sub-diaphragmatic abscesses, and may be remote complications occurring weeks or months after the original operation.

In operations performed during quiescent intervals secondary suppuration is rare, the most important forms being the stitch abscess and suppuration of blood-clot in the abdominal wall.

In a small proportion of interval operations abscesses may form at the end of the first week in connection with the appendix stump, the area of operation, or in connection with a small residual abscess cavity which was disturbed during the operation. Such abscesses require the provision of a free outlet and the maintenance of a short period of drainage. Many so-called stitch suppurations are really of this nature.

#### PHLEBITIS AND PYAEMIA

*Fecal Fistula.*—This sequela may result from

various causes. (a) Insufficient closure of the appendix stump, often unavoidable where the latter is much thickened and inflamed, and the caecum fixed. (b) Spread of gangrenous cellulitis to the bowel-wall after the removal of the appendix. (c) Damage to the bowel during the performance of the operation, either in the separation of the adhesions, or from the softened condition of the bowel-wall. In either of the latter circumstances the ileum may be the seat of the fistula. The strong tendency to rapid spontaneous closure of these fistulae, even when a very large proportion of the contents of the small intestine escapes, must be borne in mind, and as a rule many weeks or even months should be allowed to elapse before any operation for their closure is undertaken.

Fistulous communications between the abscess cavity and the bladder, sloughing of the right ureter, or openings into the rectum or vagina, may all occur, but all, except the ureteral complications, are unlikely to need special treatment, since they heal spontaneously. The unimportance of the bladder complication is very striking, the amount of cystitis produced being slight, in some cases *nil*; and spontaneous closure is the rule. Injury to the ureter may demand a plastic operation, or possibly the removal of the kidney.

#### INTESTINAL OBSTRUCTION

This complication is most common in connection with localized appendiceal abscesses, but may occur after appendectomy operations where suppuration has occurred. It is most frequently due to kinking of adherent small bowel, and is readily relieved by operation. Rarely, large inflammatory masses may form in the pelvis, and give rise to obstruction of the large intestine. In such a case a temporary colostomy have even been needed.

Permanent adhesions may give rise to incomplete obstruction as a remote sequela, such obstruction occasionally needing relief by abdominal section and freeing of the implicated bowel.

*Pulmonary Complications.*—These form a considerable proportion of those observed after either operations in the acute, intermediate, or quiescent periods. The part played by the anesthetic in their production is difficult to determine, but there is no doubt that a considerable proportion of the cases of bronchitis and pneumonia are to be ascribed to this cause. Pleurisy is more commonly the result of direct extension of the inflammation, while pulmonary embolism must be directly connected with thrombosis of the veins of the area of the operation itself.

*Femoral Thrombosis,* more commonly of the left limb, has been observed with some frequency, and has been explained as due to an extension from the branches of the deep epigastric vein (Witzel), or to a too prolonged period of absolute rest in bed.

Contraction of the right psoas muscle, producing flexion of the corresponding hip, only occurs in the comparatively rare instances of extension of serious inflammation to the muscle.

*Catarrhal Jaundice.*—As in cases untreated by operation, this complication is sometimes observed, more frequently after operations in the acuter stages.

*Ventral Hernia.*—This should never occur in cases in which either of the incisions recommended are employed, except when drainage has had to be maintained for a considerable period. When muscle is divided, however small the incision, ventral hernia occurs in a much larger proportion as a post-operative sequela.

#### INFLUENZAL APPENDICITIS. (HALL AND DYAS)

At an army camp, Hall and Dyas, estimated the average incidence of acute appendicitis per year at 10.4 per 1,000. From Sept. 13 to Dec. 31, 1918, there were 92 operations. Of these 25 patients had had previous well-defined attacks of appendicitis; 20 had had influenza during the epidemic, and 4 had had pneumonia. One might well consider the latter under the influenza heading, as presumably every patient with pneumonia in this epidemic had influenza first; 5 had had a *bad cold* during the epidemic presumably mild influenza. Thus 29 patients had had influenza, pneumonia or a notably bad cold since September 13, 1918. This number would not at all account for the great increase in the cases of operative appendicitis, and they constitute almost a trivial percentage of the total number affected by the epidemic. The diagnosis of the pathologist was acute catarrhal appendicitis in 54 cases; acute suppurative in 15 and chronic catarrhal with subacute exacerbation in 23. There was but one death, a patient with previous cardiac murmur.

The data are insufficient to justify any exact conclusions as to the influence of the epidemic on the morbidity from appendicitis. Nevertheless, there is a firm basis for the opinion that some close relationship exists. It is extremely suggestive that on the first day of the influenza attack so many patients showed such definite signs in the region of the appendix as to lead to a diagnosis that proved to be incorrect, assuming their opinion on this point to have been well-founded. If this symptomatology was dependent, as they believe, on involvement of the lymphoid tissues of the appendix, one may readily conceive that in many other instances a definite inflammation resulted which eventually demanded operation.

M. Behrend has seen in all 8 cases of acute appendicitis complicating influenza. Three were operated on and found to be pus cases. Not any of these gave a previous history of appendicitis. In one the appendix ruptured; while in 2 pus was contained in the appendix. All recovered. Five were not operated upon because it

was feared that the prevalence of râles would eventually result in pneumonia. The wide diffusion of moist râles reminded one more of an extensive oedema than a characteristic pneumonia. On account of the *wet* lung an anesthetic was feared. Six were adults and 2 children. All were taken sick during the height of the epidemic and had been in bed on an average of 4 days before the symptoms of appendicitis developed. In those not operated on the symptoms gradually subsided. L. M. Warfield asks, "is there a syndrome in epidemic influenza which simulates very closely acute appendicitis?" The answer certainly is, "yes". It is not so easily differentiated as might appear from the accompanying table of symptoms:—

#### *Influenza with Abdominal Onset*

Onset sudden.  
Pain not so severe.  
Occurrence during epidemic.  
Pain, nausea (usually not vomiting), fever, may or may not be leukocytosis.  
Rigidity and spasm not so marked.  
Tenderness not so acute.  
Conjunctivitis.  
Face flushed.  
Faint cyanosis of lips.

#### *Acute Appendicitis*

Onset sudden.  
Pain severe.  
Occurrence at any time.  
Triad of pain, vomiting, fever with leukocytosis.  
Rigidity and spasm.  
Tenderness acute.  
No conjunctivitis.  
Face not flushed.  
No cyanosis of lips.

#### END-RESULTS OF OPERATION

Some of the post-operative sequelae of acute appendicitis are enumerated by J. B. Deaver. In 1,700 recent operations there were 66 deaths (3.7 per cent.) The series included all cases with and without pre-operative complications directly due to the condition of the appendix or of the viscera. The more frequent sequelae requiring subsequent operations were fecal fistula, secondary abscess and obstruction.

#### FECAL FISTULA

In addition to 42 cases there were 6 operations, with the original operations done elsewhere; one death falls in this group. There were also 28 additional fecal fistulae, 22 of which closed spontaneously, 4 were still open when patient left hospital and 2 remained with sinus still open at death. Altogether, there were 76 fistulae and 10 deaths. Of the 48 operated on, 27 developed the fistulae during convalescence from the appendix operation; the secondary intervention taking place as early as the third and as late as the sixty-third post-operative day. In the majority

of instances, however, the first signs appeared during the second week.

#### SECONDARY ABSCESS

This complication was recorded 33 times with 7 deaths, making an incidence of plus 2 and a death rate of 21.2 per cent. The secondary collection was:—Pelvic, 5 times (1 with fecal fistula); sub-hepatic and pelvic, 1; sub-phrenic, 10 (3 with fecal fistula, 4 deaths); sub-hepatic and pulmonary, 1 (also with fecal fistula, 1 death); peritoneal, 4; abdominal wall, 3; intestinal, 2 (2 deaths); inguinal, 1; rectal, 1; vesical, 1; pulmonary, 1; mesenteric, 1; parotid, 1 (several months after sub-phrenic abscesses following acute appendicitis). A favorite theory that more secondary abscesses develop in the pelvic region and are due to the Fowler position after operation is not borne out by the present series. The secondary collection was found in the sub-phrenic space more often than in the pelvic region, the incidence of sub-hepatic and sub-diaphragmatic collections being about equal. The prognosis in the sub-phrenic space cases, however, is not so good as in the pelvic cavity; five of the fatal cases belonged to the former group. A study of the pelvic secondary collections indicates the fault to be due, not to the Fowler position but to late operation, incomplete operation, and insufficient drainage.

#### INTESTINAL OBSTRUCTION

This complication occurred in about 1.5 per cent. cases of the series and presented the high mortality of 40.8 per cent. (The original operation in 4 instances, was done elsewhere.) Many patients were doing apparently well when the symptoms of obstruction suddenly developed. About 30 per cent. made a more or less eventful recovery and developed the obstruction from a month to 4 years later. They usually gave a history of comparative freedom from symptoms until the attack of ileus appeared, *i. e.* until the adhesions formed a band, or the contraction of the adhesions caused a kink or volvulus and produced the classic symptoms of progressively severe pain, vomiting, visible peristalsis, distension and complete constipation.

G. P. La Roque contributes the end-results in 600 cases of appendicitis: Of these 180 were pure appendicitis; 253 appendicitis with local peritonitis; 142 with regional peritonitis; and 25 with diffuse spreading peritonitis. There were 101 cases of abscess.

As to age and sex, 42 cases were in children, and 12 in persons over 50. Only 40 per cent. were in males. Of approximately 250 women between puberty and the menopause, 6 were operated upon while pregnant. All were clean cases, performed through muscle splitting incisions, and all went through normal pregnancy labor and puerperium without complications.

In the entire series there have been 2 instances



of post-operative acidosis recognizable by stupor and unmistakable urinary findings. Both occurred in large abscess cases of many days duration before operation in children. There have been 2 cases of femoral phlebitis, both of the right thigh, in men, and following operation in abscess cases. Three cases developed fecal fistula after operation. All were large abscess cases, 2 in patients with obvious tuberculosis of the bowel and advanced disease of the lungs; one in a boy with large abscess of 2 weeks duration complicated by gangrene of cecum. The last healed in 3 weeks. The tuberculous bowel cases never healed, both patients dying of tuberculosis, 6 and 18 months respectively after operation. One large abscess case was followed by annoying sinuses attributed to infection of a clot beneath the aponeurosis of the ext. oblique.

Of the 600 patients operated upon, there were 4 deaths. A woman 7 days following operation for appendicitis and peritonitis of esrysiploid appearance; a man with gangrene and large hole rupture of the appendix and diffuse cathartic peritonitis 7 days following operation; and two boys almost moribund with diffuse cathartic peritonitis, one dying in three and the other in 36 hours following operation.

The stay in bed depends upon the incision and on whether or not drainage is employed. After the muscle-splitting incision closes completely, patients are out in 3 to 7 days, 50 per cent. in 5 days. Median and groin incisions necessitate confinement for 10 to 16 days; 90 per cent. are out in 12 days. Cases requiring drainage stay in bed 12 to 16 days. After careful observations of several hundreds of healthy patients who sat up on the third to fifth day following an easy appendectomy through a small muscle-splitting incision, La Roque's judgment convinces him that long confinement is not necessary for wound healing. He seriously challenges the belief that any post-operative hernia has ever occurred as a result of sitting up, that would not have occurred as a result of vomiting, coughing, or sneezing while in bed.

Concerning post-operative hernia, he considers every case which has to be drained as having a rupture so soon as operation is performed. He has always instructed every patient to report if a hernia should occur, but since only one has so reported, he is satisfied that patients are a little timid about reporting unpleasant sequelae. The opportunity to re-examine, in 3 to 6 months, a large proportion of the cases which had to be drained, and failure to find but one hernia, leads him to believe post-operative hernia is exceedingly rare following the muscle-splitting incision, even if drainage has to be employed, provided we use small instead of large tubes and carefully place sutures between the tubes when more than one is employed. Two or three small holes would seem less apt to be followed by hernia than one large one.

#### PROGNOSIS AND RESULTS. (KANAVEL)

"The general mortality after operations for diseases of the appendix may be said to vary from 2 to 15 per cent. if the results of a large number of operators under varying conditions are reviewed. The mortality rises and falls with the relative number of acute and complicated and quiescent cases included in any given set of statistics; it depends, in fact, upon whether the primary disease or its secondary consequences assume the place of first importance in the cases operated upon.

To obtain a fair view of the actual operative mortality it is necessary to divide the operations into two classes: (1) those performed during quiescent intervals of the disease, and (2) those performed in the presence of acute conditions.

#### MORTALITY AFTER INTERVAL OPERATIONS

Little requires to be said with regard to appendectomy during a quiescent period. It has been fully proved that the mortality attending this procedure is under 1 per cent., in spite of the fact that many of the operations are of considerable severity. The main factor in insuring success lies in the choice of a moment for the operation in which not only all acute or slighter symptoms have subsided, but also when it may be assumed that all traces of infective material in the neighborhood of the appendix have disappeared. Such accidents as occur, apart from those attributable to actual faults in operative technique, are usually due, either to the disturbance of small localized infective areas which escape notice during the operation, or to the diffusion of infective material from the interior of the appendix during the process of its sequestration and removal.

Many individual operators have published series of 100 to 200 operations without the occurrence of a single fatality, while such large numbers as 2,000 with one death (0.005 per cent., Murphy), 702 with two deaths (0.28 per cent., Roux), or 695 with 4 deaths (0.51 per cent., Kummell) have been reported.

#### MORTALITY AFTER OPERATIONS FOR ACUTE APPENDICITIS

More detailed consideration becomes necessary in dealing with the results of removal of the appendix in the presence of acute conditions, in consequence of the frequency with which serious complications have already developed when the patient comes into the hands of the surgeon.

It may be said that this contingency should not have to be taken into account, but unless the conclusion that all cases of appendicitis are to be dealt with by immediate operation is generally arrived at, which opinion is far from universally held in this country, the treatment of complicated cases will remain one of the serious problems of surgery. Under existing conditions of professional opinion, the hospital

surgeon or the consultant frequently sees cases of appendicitis under one of two conditions, either to confirm a diagnosis in view of the ulterior procedure of an *interval* operation, or because the attack is of unusual severity and has developed serious peritoneal complications. Hence the surgeon first comes into contact with patients at the termination of the second or the commencement of the fatal third day, far more commonly than on the first or second days, when a really *early* operation can be taken into consideration.

For a satisfactory estimation of the results of operations during the acute stages, the classification adopted by Sprengel is the most convenient. Thus, *early* operations, those undertaken during the first 48 hours, *intermediate* operations, those performed on from the second to the sixth day inclusive, and *late* operations, those performed from the sixth day onwards.

#### MORTALITY AFTER EARLY OPERATIONS

In this category are included two very different sets of cases from a prognostic point of view; (1) those in which the inflammation of the appendix is accompanied by no more than simple reactionary changes in the peritoneum, and (2) those in which definite peritoneal infection has already occurred.

The former class includes cases of simple catarrhal appendicitis, and also a considerable number of instances of acute general gangrene of the appendix. The results of appendectomy for either of these conditions are almost as good as those of the interval operation, and their inclusion in the general results of early operations is the main factor in the attainment of the low mortality experienced by surgeons, who most strongly support an active attitude in the treatment of appendicitis in its acute stage.

In the early operation, peritoneal infection does not acquire the enormous importance it possesses for operations in the intermediate stage. If, however, nearly the whole of the first 48 hours have been allowed to elapse, the area of peritoneum infected may be considerable and the consequent systemic infection severe, especially in children, with a corresponding grave prognosis.

#### MORTALITY AFTER INTERMEDIATE OPERATIONS

Appendectomies performed between the second and seventh days of the disease afford the worst results. When peritoneal infection is diffuse, the prognosis is affected both by duration of the condition and the area of the peritoneal cavity implicated.

Duration is of importance as denoting the degree of systemic infection reached, and it should be borne in mind that the general appearance of patients in whom infection has been in existence for some days by no means always corresponds with the actual gravity of their condition. The

subjects may be bright-eyed and cheerful and yet prove quite unequal to resist the sudden increase in toxæmia which results from absorption by the freshly cut surface of the operation wound, and rapidly succumb after an appendectomy.

The extent of the peritoneal cavity implicated is of little less prognostic significance than the duration of the infection. Among my own cases I have separated those in which the proceeds had not extended beyond the right half of the abdominal cavity, from those in which the affection had spread to the left half, and the mortality for the former is 22 per cent. against 77 per cent. for the latter.

The mortality in such cases necessarily varies with the ability of the surgeon, some records being as low as 2-3 per cent. and others running as high as 12-15 per cent. of course much higher in the hands of inexperienced surgeons.

#### MORTALITY AFTER LATE OPERATIONS

Appendectomies performed after the sixth day have a relatively favorable prognosis. This is dependent on the facts either that a localized infection has to be dealt with, or that if diffuse infection is present, it is commonly the result of extension from a previously localized center, and is attacked clearly as far as the general infection is concerned. With regard to the latter point, however, the local condition may severely compromise the possibility of dealing satisfactorily with the recent diffuse infection, and, moreover, it is in cases of this class that subsequent creeping extensions of the infection is particularly to be feared.

#### MORTALITY AFTER OPERATIONS FOR LOCAL ABSCESS

The prognosis of well localized suppurations acquire especial interest from the claim which has been made of their occurrence terminating the liability to further attacks of appendicitis, even when treated by simple incision and drainage.

The condition is liable to be accompanied by many of the complications of the disease in general; thus of 59 cases serious complications were met with in 22: intestinal obstruction 5, faecal fistula 6, spontaneous opening into the bladder 2, and into ureter 1, sub-diaphragmatic abscess 3, empyema 3, cerebral abscess 1, pulmonary abscess 1, and 7 of the patients (13.4 per cent.) died.

Of the cases in which the future course has been able to be followed, 23, or 39.9 per cent., are known to have suffered from recurrence, and in 17 of these the recurrence was accompanied by suppuration. All the patients were recommended to undergo an *interval* operation, with the single exception of one case, in which the gangrenous appendix was found floating free in the cavity of the abscess. In 18 a subsequent interval operation was actually performed, and in all an ap-

pendix was found capable of giving rise to further attacks; all recovered.

Finally, it may be stated that a general review of the published results of appendicectomy appears to show clearly that the *early* operation, if performed as a routine procedure, would lead to the disappearance of practically the whole series

of complications, which, at the present time, account for the fatalities that occur; further, that the *early* operation may be fairly placed in almost the same category as regards mortality with that performed during a quiescent interval."

668 NORTH PARK ST.

DEATHS FROM APPENDICITIS FOR OHIO

		Total	White	Black	Other			Total	White	Black	Other
1919	Male .....	360	340	19	1	1916	Male .....	384	372	12	
	Female .....	279	264	15	0		Female .....	287	278	9	
	Total .....	639	604	34	1		Total .....	671	650	21	
1918	Male .....	359	346	13		1915	Male .....	289	278	11	
	Female .....	282	268	14			Female .....	238	231	7	
	Total .....	641	614	27			Total .....	527	509	18	
1917	Male .....	364	352	12							
	Female .....	262	255	7							
	Total .....	626	607	19							

AGE PERIODS

Year	Under																	
	5	5-9	10-14	15-19	20-4	25-9	30-4	35-9	40-4	45-9	50-4	55-9	60-4	65-9	70-4	75-9	80-4	85-9
1919 .....	21	49	55	68	71	62	59	53	46	42	29	24	18	16	13	9	4	0
1918 .....	27	45	61	66	72	63	56	50	49	35	27	29	20	12	16	6	5	2
1917 .....	26	50	54	63	69	67	51	57	32	46	32	27	17	14	10	4	2	5
1916 .....	37	39	70	62	68	67	62	51	60	42	30	24	22	15	14	9	7	2
1915 .....	24	46	52	48	58	52	47	49	36	25	24	23	12	15	3	8	4	1

DEATHS FROM APPENDICITIS FOR COLUMBUS, OHIO

		White	Black	Total			White	Black	Total	
1920	Male .....	28	3	31	1917	Male .....	18	2	20	
	Female .....	23	1	24		Female .....	8	1	9	
	Total .....	51	4	55		Total .....	26	3	29	
1919	Male .....	16	3	19	1916	Male .....	36	2	38	
	Female .....	22	1	23		Female .....	27	1	28	
	Total .....	38	4	42		Total .....	63	3	66	
1918	Male .....	31	1	32						
	Female .....	17	3	20						
	Total .....	48	4	52						

AGE PERIODS

Year	Under														
	5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74
1920 .....	2	0	7	9	4	4	8	3	6	5	3	2	0	2	0
1919 .....	1	2	5	3	5	4	4	6	3	1	4	2	2	0	0
1918 .....	2	2	3	4	8	4	5	3	2	6	5	1	2	1	2
1917 .....	0	1	1	5	2	5	2	2	4	1	3	1	0	0	1
1916 .....	5	2	3	10	8	3	4	8	6	5	6	0	3	0	0

BABIES' DISPENSARY BENEFITS

Contracts were signed in January which will mean an income of \$10,000 a year for at least three years for the Babies' Dispensary and Hospital of Cleveland. Dr. H. J. Gerstenberger, medical director of the Dispensary and professor of pediatrics at Western Reserve Medical School, has made this possible through the development of the food for babies known as S. M. A. The product is being manufactured and sold by The Laboratory Products Company which pays to the Dispensary, besides the \$10,000 a year, a royalty

on every quart of liquid S. M. A. and on every can of powdered S. M. A. The proceeds will be used by the Dispensary for further laboratory experiments and research.

S. M. A. was developed by Dr. Gerstenberger in the laboratories of the Babies' Dispensary in 1913 and Dr. Gerstenberger began feeding it to the Dispensary babies in 1915. A few months ago S. M. A., which had heretofore been available exclusively to physicians in Cleveland, was offered to the physicians of the entire country. S. M. A. is primarily a food for healthy babies designed to keep them well.

## Lethargic Encephalitis\*

F. C. WAGENHALS, M.D., Columbus

Instructor in Medicine (Neurology) Ohio State University College of Medicine. Visiting Neurologist to St. Francis and Protestant Hospitals

*Editor's Note.*—Lethargic encephalitis is still prevalent and its variable mortality of 10 to 40 per cent., is plainly indicative of the attention it deserves. While a great deal of progress has been made in studying the findings of lethargic encephalitis and in detailing the course of the disease, very little is known of the real cause or the method of transmission. Apparently it is a nasal born infection. The treatment according to Dr. Wagenhals is purely symptomatic. Netter has found urotropin and the production of a sterile abscess by subcutaneous injection of turpentine of some value, while sialogogues, such as jaborandi or pilocarpin are also indicated. Serotherapy with immuned serum as well as various arsenicals have not been found of very much value.

THE PRESENT epidemic of lethargic encephalitis, through which we are passing, seems to be another link in a long chain. Similar epidemics have been reported during the last four hundred and fifty years, and even Hippocrates described an epidemic of paraplegia, which has been considered similar. More recently Thomas Willis, in 1661, described an "epidemic feavour chiefly Infestous to the Brain and Nervous Stock". In 1712, an epidemic in Switzerland was known as sleeping sickness. In 1890, a similar epidemic was called Nona. In 1917, v. Economo introduced the term *lethurgic encephalitis* based on cases seen in the Psychiatric Clinic of Vienna, the chief symptoms being sleepiness, various eye palsies, weakness of the arms or legs, paralyzes, tremors, or ataxias.

### ETIOLOGY

The etiology of lethargic encephalitis is unknown. The results of experimental inoculation have been somewhat contradictory in the hands of various workers, but for the most part have been clearly negative. Loewe and Strauss, of Mount Sinai Hospital, New York, isolated a filterable organism from nasal washings. This, when injected into animals, produced the disease. Cultures of this organism were carried to the twelfth generation. Other workers report a non-motile coccus, similar in staining reaction and morphologically to the staphylococcus, which, when injected into rabbits, produced a lethargic state, and post mortem findings which were similar to those found in man. However, in the hands of many other workers, notably, Harvier and Levaditi, experimental results excepting a slight rise in temperature, were generally negative.

### SYMPTOMS

As has been stated, the three cardinal symptoms are (1) somnolence, (2) ocular disturbance and (3) fever. These vary greatly in the different cases, and are accompanied by hosts of other symptoms of varying intensity. In the vast majority of cases, probably somnolence is the most characteristic symptom, and it ranges from a slight drowsiness to a deep coma, or, it

may be completely absent from the symptom-complex. All authorities, as a general rule, agree that the lethargy appears gradually, and that it is a peculiar condition in that no matter how deep it appears to be, the patient can be roused, will give perfectly clear answers, showing knowledge of what is going on in the environment, and when left alone slips rapidly back into the lethargy. A satisfactory explanation for the lethargy has not been advanced, but it is supposed that this condition is not so much due to the virus as to the peculiar localization of the pathological process in the peri-aqueductal region and mid-brain.

### COURSE OF THE DISEASE

As a general rule, the onset is gradual with a prodromal stage of from one to ten days. However, several cases have been observed with an apoplectic onset and the development of convulsions. During this period, we are likely to find a simple catarrhal conjunctivitis and sometimes tonsillitis, sore throat, or bronchial catarrh. There is almost always a headache, which may become very severe, but which does not generally run a long course. Here also, the patient is likely to complain of blurred vision or diplopia, pains in the back muscles, or in the ligaments of the neck. Along with these there may be disturbances in the gastro-intestinal sphere, nausea, vomiting, and general abdominal pains.

In the developed stage, the symptomatology advances, the somnolence increases. Involuntary movements, which may have been twitchings in the prodromal stage, may now become non-rhythmic spontaneous movements of the face, trunk, or limbs. There is generally fever somewhere during the course of the disease. It may be slight during the onset, showing a rise of 1° or 2°, or it may appear only a week after the onset. There is occasionally marked pyrexia with excited and psychotic syndromes and frequently a rise of temperature during the terminal stages. The cranial nerves are variously effected, but the sign which is most frequently found, is a disturbance of the oculomotor nerve. Ptosis is a very early and most prominent sign, appearing suddenly, and is generally accompanied by some degree of unilateral or bilateral

\*Read before the Licking County Medical Society, Newark, May 26, 1921.

transitory strabismus, which causes a double vision. We also find disturbances of accommodation, nystagmus, and pupils which are usually sluggish in their reaction to light, and may show difference in size. Other cranial nerves occasionally may be involved, namely, the IV, VI, VII, VIII, X and XII. It is supposed that the proximity of the motor nerves of the eyes to those of the tongue, face and pharynx explains the frequent association of paralysis in these various organs when the eye is involved.

As the patient lies in bed, there may be observed a remarkably mask-like expression. In many, this is probably due to a lack of emotional tone, but in others, it is due to bilateral weakness of the facial muscles. The mask-like facies may persist. The patient aroused, the speech is slow, nasal, often hesitant, but as the stupor increases the patient lies expressionless and is frequently catatonic. On physical examination, the tongue is apt to be dry, coated, and fetid, in the somnolent stage. The pulse is frequently slightly accelerated and usually disproportionately rapid in comparison with the rise in temperature, but brady-cardia may occur. The blood pressure is not seriously involved; except that cases in which there is marked adrenal exhaustion show low blood pressure. The respiratory rhythm is rarely involved, except when Cheyne-Stokes breathing develops from central implications. There is generally obstinate constipation. Incontinence of the bladder and rectum may occur, but when it does, it has always been, in my experience, of bad prognosis. The reflexes may be present or absent. There may be a Babinski reaction or clonus, due to pyramidal disturbance through the internal capsule and mid-brain. Pareses and paralyzes occur, as monoplegias, in the form of paraplegias, or hemi-plegias, but sensory disturbances are not characteristic, although there may be burning pains in the fingers, hand, and forearm, lasting from one to two days, but without signs of inflammation, or pain on movement or pressure. The patients are generally free from signs of meningeal irritation; Kernig's sign being usually absent.

As has been said, although the patients are lethargic yet their intellect seems to remain remarkably clear. It seems to be a disturbance in the emotional sphere, not in that of ideation, and has, therefore, been compared to dementia praecox. Later, however, both spheres are involved. Some cases have shown manic and depressive states, paranoid ideas and memory defects, necessitating commitment to an institution. The impairment of intellect apparently may remain.

Hiccough is frequently an important symptom. Cases of this kind in epidemic form have been reported from all over the world. Over fifty cases occurred in Winnipeg and while there may be no connection between the two epidemics

Boyd noted two of the cases of encephalitis displaying this symptom at the beginning of the illness. The patients hiccupped at intervals of a minute or less, for five days; in most cases, however, the attack lasted twenty-four hours.

#### LABORATORY FINDINGS

The laboratory tests for the most part, have been rather disappointing, as there is very little characteristic in their findings. The urine is always practically negative, except for an occasional trace of albumin. The blood may be entirely normal. However, there is frequently a slight leucocytosis, but some cases have shown as high as twenty-two to twenty-four thousand polymorphonuclears and occasionally an eosinophilia. The cerebrospinal fluid in many cases is normal. However, there is generally a slight increase in pressure, and a slight increase in the number of mononuclears with a positive globulin, negative Wassermann, negative smears and negative bacteriological findings. An interesting fact is that the globulin is often found to be normal in cases with a high cell count. The gold solution test ranges somewhere between a luetic and a meningitic curve. Dopter and others have found an almost constant increase in the sugar contents in the cerebro-spinal fluid. Throughout the literature, cases have frequently been reported as showing a positive Wassermann reaction, but these have always later been proved to be luetic.

#### DIFFERENTIAL DIAGNOSIS

In the differential diagnosis, it seems to me we have to keep several conditions in mind, mainly meningitis and poliomyelitis. In fact, this disease may so closely simulate the two latter that an autopsy is necessary to differentiate. One of the most common diagnostic errors is to attribute the condition to tuberculous meningitis. In tuberculous meningitis, the meningeal irritation phenomena, and Kernig sign are present, which is usually not true of encephalitis. Again, here we have a very definite clinical syndrome characterized by progressive stupor or coma, alternating delirium, headache, giddiness, asthma, mental and emotional changes, and paralysis of the third nerve. Also, in the cerebro-spinal fluid, the cell count gradually decreases in marked contrast with tuberculous meningitis, in which there is a tendency for an increase.

As Neal and others have shown, there are a number of points which seem to differentiate and to show that encephalitis is not a form of poliomyelitis. In the first place, epidemics of poliomyelitis occur with remarkable constancy in summer, those of encephalitis during the winter. Poliomyelitis is predominantly a disease of childhood, whereas encephalitis is much more common in adults. In poliomyelitis, the paralysis sets in suddenly, it is of the lower motor neurone type, the effects are lasting and there is usually

muscular atrophy, whereas in encephalitis the paralysis comes on gradually, it is of the upper motor neurone type, predominantly in the cranial distribution, it is transitory and muscular atrophy is exceptional. The spinal fluid findings in neither are specific. The evidence as to a relationship between influenza and encephalitis is as yet circumstantial. Those who believe in a relationship here, point out that on several occasions epidemics of disease resembling the two have occurred together, and furthermore, if there were no relationship that there has been time since their last appearance in 1889 and 1890 for either to appear separately. Furthermore, in a large number, the onset has been preceded by influenza, that influenza has a marked effect on the central nervous system, as shown by the fact that convalescence is marked by profound mental depression and nervous exhaustion out of proportion to the severity of the disease; and again, influenza is far more likely than any other acute infection to be followed by disturbances of the nervous system, either psychic or organic.

#### PROGNOSIS

The prognosis is not especially good, either from the standpoint of life or the development of complications. However, it is often better than the alarming appearance of the patient at the height of the disease would seem to indicate. The mortality probably varies between 10 and 40 per cent., death being due to a final extension of the disintegrative processes in the medulla, or occasionally to an aspiration pneumonia.

The duration of the disease is generally from a minimum of six weeks to three or more months and this is frequently followed by a much longer tedious period of convalescence.

As to the course, some are fulminating, the patient dying after forty-eight hours. However, the ordinary fatal case extends somewhat over a week. In recoverable cases, the course is variable, the stupor clearing up in a few days, although a certain amount of languor and disinclination for work persists for a considerable period. The cranial nerve paralyzes often clear up after two or three months.

Most reports and findings from our own cases, agree that macroscopically there is a hyperemia with almost constantly a limited area of meningitis in the region of the interpeduncular space. The nuclei of the peduncles, pons and medulla, show numerous punctate hemorrhages chiefly of venous origin. There is a mixed hyperaemia of the vessels and lymphocytic perivascular infiltration, especially in the region of the peduncles and floor of the fourth ventricle.

Encephalitis lethargica is only mildly contagious. In the Canadian epidemic, a connection between the various cases could not be traced and never did more than a single case occur in any household. Several cases occurred on

isolated farms. The condition seems to be constantly increasing over the entire world.

#### TREATMENT

The treatment of encephalitis lethargica is purely symptomatic. Netter, in summarizing the matter, speaks of urotropin as valuable. Serotherapy with serum from patients cured of the disease and the various forms of salvarsan are of no value. Sialogogues, such as jabcrandi or pilocarpin, are of some value, and in severe cases Netter advocates the production of a sterile abscess by subcutaneous injection of turpentine. Reasons for the beneficial effects are not clear, but it has been empirically found to be of value.

#### REFERENCES

- Boyd, W.: Canadian Medical Association Journal, February, 1920, Vol. x, p. 117.  
 Dopter: Proceedings of the Academy of Medicine of Paris, February 24, 1920.  
 Fairbanks, A. W.: Boston Medical and Surgical Journal November 13, 1919, Vol. clxxxii, No. 20, p. 578.  
 Harvier and Levaditi: Bullétin et mémoires de la Société Médicale des Hôpitaux de Paris, February 6, 1920, Vol. xxxvi, Nos. 5, 6, 7, pp. 179-190.  
 Jelliffe, S. E.: International Medical Digest, 1920.  
 Morse, P. F. and Crump, E. J.: Journal of Laboratory and Clinical Medicine, February, 1920, Vol. v, No. 5, p. 275.  
 Neal, J. B.: Archives of Neurology and Psychiatry, 1919, Vol. 2, No. 3, p. 271.  
 Netter, A.: Bullétin et mémoires de la Société Médicale des Hôpitaux de Paris, April 1, 1920, Vol. xxxvi, No. 12, pp. 441-446.  
 Netter, A.: La Presse Médicale, April 7, 1920, Vol. xxviii, No. 20, pp. 193-195.

#### NEW AND NON-OFFICIAL REMEDIES

During February the following articles were accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies: Persson Laboratories.—Bacillus Coli Antigen (No. 50)—Persson; Furunculosis Vaccine Mixed (No. 37)—Persson; Gonococcus Antigen (No. 47)—Persson; Staphylococcus Aureus Antigen (No. 49)—Persson; Streptococcus Antigen (No. 48)—Persson; Pneumonia Vaccine (No. 36)—Persson. Powers-Weightman-Rosengarten Co.—Novarsenobenzol—Billon. G. H. Sherman.—Whooping Cough Vaccine—Sherman; Mixed Typhoid Vaccine—Sherman; Acne Staphylococcus Vaccine—Sherman. Winthrop Chemical Co.—Alypin.

Neocinchophen-Abbott.—A brand of neocinchophen—N. N. R. For action, uses and dosage, see New and Nonofficial Remedies 1921, p. 86. The Abbott Laboratories, Chicago (Jour. A. M. A., Jan. 21, 1922, p. 192).

Liquid Petrolatum-Squibb, Heavy (California).—A brand of liquid petrolatum—U. S. P., made from California petroleum and claimed to be composed essentially of hydrocarbons of the naphthene series. For a description of liquid petrolatum, see the U. S. Pharmacopeia and Useful Drugs. E. R. Squibb and Sons, New York.

# Bronchial Asthma: A Study of Forty Cases by Cutaneous Protein Tests: Associated Skin Conditions and Results of Treatment\*

GEORGE L. LAMBRIGHT, M.D., Cleveland

*Editor's Note.*—Cutaneous protein tests, in the opinion of Dr. Lambright, have opened a wide field of study in the anaphylactic phenomena of bronchial asthma. True asthma can be more definitely defined and curative treatment developed. Sometime these tests have corroborated clinical opinion and on other occasions have controverted it. Treatment based on the protein tests has probably been more successfully palliative than former methods of therapy.

**T**HE STUDY of the anaphylactic phenomena in bronchial asthma by means of cutaneous proteins tests has had definite effect on opinion as to the causative factors in the production of bronchial spasm. It has more clearly defined true asthma, and awakened interest in the numerous types and avenues of protein hypersensitization not only in this disease, but in others as well. Much that is rational, and often curative, has been added in the way of treatment, enabling long continued sufferers to obtain more than palliative medical treatment.

During the past one year and a half forty asthma patients seen in private medical practice have been tested for protein hypersensitization by the cutaneous method, which has already been described. Clinical opinion was often corroborated, sometimes controverted. Treatment, when other than medicinal, was based on the information obtained by this method of study in the majority of the cases. One cannot fail to appreciate the help that comes by this procedure, and cannot fail to be impressed with the accuracy and clearness with which this disease has been studied, and presented, by others within the past five years.

## PATIENTS STUDIED

The results of the study of the cases which have come under our observation will be presented.

Twenty-seven were males and thirteen females. The ages varied from two years to eighty. Dividing the years into decades gives the following: Zero to ten years, six cases; ten to twenty years, two cases; twenty to thirty years, twenty cases; thirty to forty years, ten cases; forty to fifty years, one case, and from seventy to eighty years of age, one case.

In determining the age of the patients at the time of the first asthmatic symptoms we had to naturally accept the patients' statements. The figures for this are only compiled in twenty-six instances. Again dividing it in decades, four cases began between zero and ten years; nine cases between ten and twenty years, nine cases between twenty and thirty years, three cases between thirty and forty, and one case between fifty and sixty years of age.

The proteins used in testing our patients were of the usual four types. The extent of the tests was determined somewhat by the clinical history. When we felt it expedient the number of scratch tests made would run as high as fifty on one patient. In others, as for instance hay fever, the number would be smaller, and perhaps one each of the various classes of protein applied. In this work satisfactory reactions to protein of either animal, pollen, food, or bacteria occurred in twenty-six patients. Negative reactions occurred in fourteen. This proportion will probably seem high, but when considered with the age of onset, and that there were some hay fever asthmatics in the group, will be in accord with the views of others on the relative number of individuals who are sensitive.

Dividing the twenty-six sensitive cases into types we found that we had sixteen that were sensitive to pollens, either spring or autumnal, two that were sensitive to bacterial proteins, five to food proteins, and two to animal proteins. Cases of simple hay fever to animal or pollen proteins were not included among the asthmatic number reviewed in this paper unless they had had definite attacks of asthma, and not merely asthmatic.

The causative factors in the fourteen nonsensitive cases will not be tabulated. In general we were impressed with the fact that these cases had more or less bronchitis with various organisms in the sputum with local changes in the tubules and air sacs which interfered with passive expiration. Frequent attacks of bronchitis, with climatic variations, were noted, and pneumonia and influenza seemed to be the origin in some of them. The results of treatment in some of the cases will be presented when treatment of the sensitive group is considered.

## ASSOCIATED DISORDERS

As a result of the inherited or acquired hypersensitivity in asthmatic patients the opinion prevails that they are liable to disorders with other manifestations but similar causes. The studies in eczema and urticaria are perhaps the largest. In childhood the group of associated disorders with common cause is called exudative diathesis. In going over these forty cases I was strikingly impressed with two of the five skin disorders which arose during the time

\*Read by request before a meeting of the Staff of the Glenville Hospital, Cleveland, 1921.

that they were under observation. For interest I will abstract the histories of the two cases:

CASE 1. Patient, 38 years of age and married. Since ten years of age has had asthma when around horses. Hostlers, persons who have recently ridden or even horse blankets, will bring on an attack. A few years ago while in Yellowstone Park had a most serious time with asthma, on account of horses which were used for transportation. The cutaneous tests showed a very definite reaction to horse dander. Treatment was begun with the usual 1:100,000 solution, using one minnum injection. She seemed unusually sensitive, and care was used in increasing the strength. After eight or ten injections were made she complained of the eyes itching without local symptoms. This continued, and always increased after injections, until finally the latter part of January a fine papular, dry, spreading eczema made its appearance on the left side of the neck, extending slightly towards the sternum. Later a less persistent contact area appeared on left elbow. Treatments were discontinued, and itching of the eyelids stopped as promptly. At first the usual lotions and ointments were prescribed for the eczema with no effect. Two months have elapsed since last treatment, and the skin condition is doing better now than with the local remedies.

I feel reasonably certain that there must have been some relationship between the injections of horse dander, eye itching, and later skin eruption. I had the patient go without her neck fur, which was not a new article of neck wear, as I thought this might be a factor, but it seemed not in this case.

In the second instance urticaria was associated with a fall hay fever and asthma. In this instance it had been noted by the patient to appear about two weeks after the onset of hay fever, and quite often when the hypersensitivity seemed to be at its height, culminating in asthma. An abstract of her case is as follows:

CASE 2. Patient aged 14 years. Female. Mother extremely sensitive to ivy and oak. Hay fever and asthma began at nine years of age. Some relief two years at Muskoka Lakes. Symptoms of hay fever and asthma begin from the 8th to 15th of August. Urticaria noted to follow about two weeks later. Two years ago was first seen. Cutaneous tests showed marked reaction to ragweed, slight to corn, and daisy. Two years ago was given pre-seasonal inoculations to ragweed with considerable improvement, but a slight amount of urticaria occurred as before noted. Last year was again treated with about the same relief of symptoms, but with more marked effect on urticaria, there being only a few hives on one day throughout the season.

Three other cases gave a definite history of having had eczema during their life. All were of the sensitive type. To summarize then there were two acute skin conditions which arose during the course of treatment of the group. In one instance probably produced by injection of a foreign protein, and in the other case relief was obtained. In the three other cases a more chronic condition had been present. Altogether in a total of forty cases there was found five associated skin disorders in the sensitive types of

asthma, which I believe is more than the usual coincidence.

#### RESULTS OF TREATMENT

Twenty-nine of the cases were under our direct care for treatment, or satisfactory reports were received from them to enable us to draw conclusions as to results of our attempts to make them more comfortable. Of the twenty-nine treated, nineteen were in the sensitive group, and ten in the nonsensitive. It would appear, therefore, that of the total of twenty-six sensitive cases studied all but six remained under our care for direct desensitization or eliminative treatment of the offending proteins.

The three of the five patients who were sensitive to food were very co-operative. Two of them were from out of the city, and they reported to us by mail, while the third case was a child two and one-half years of age, and was seen without any difficulty. All three of the cases were relieved, and two of them may safely be considered as entirely so. Miss O. was sensitive to glutenin, and withdrawal of wheat from her diet had entirely relieved her when report was received from her two months later. Miss F. was sensitive to wheat globulin, oats, beans, and peas, and was relieved to a great extent. The child O. K. began to have asthma when bread was added to the diet, and was sensitive to wheat, egg and oats. He was slow to show results, but after three weeks he was entirely relieved, and his mother returned the egg and oats to the diet with no return of the asthma. Wheat was not returned to the diet. Over six months have passed since these procedures were effective, and I am told by the child's father that the child has had on a few occasions a very slight amount of asthma that they have paid no attention to, and that once and awhile the child gets a little bread and cream of wheat, which accounts for it.

The two patients sensitive to animal proteins should be classified as both relieved. Both cases were sensitive to horse hair proteins. In one case the desensitization treatment, as has been noted earlier in the paper, had to be discontinued, account of a skin disorder which arose, but in the other case it was completely carried out. Weekly injections were made with increasing strengths of horse hair proteins beginning with one minnum injections of a one to one-hundred thousand solution. In the first case the treatment was about half completed, but improvement was noted. This patient had always been uncomfortable when at cottillions at the Hunt Club, due to hay fever symptoms and tightness in chest. Report was made to me that such was not the case in her last two visits there, and I think it can be attributed to no other cause than the partial treatment received. In the other case the boy could not ride behind horses when at his summer home. Last summer the treatment was started while he was here in Cleveland and continued by his physician at the



summer home. This was carried on while he was in direct contact with the horse proteins, and he reported that he was free from symptoms last summer. He has had no treatment since then, and it will be interesting to observe the results this year. The length of immunity varies after once desensitized. It averages two to three years.

Eleven of the hay fever asthmatics were treated. Two were of the spring type, eight of the fall, and one late summer. Eight of them had satisfactory pre-seasonal inoculations of gradually increasing strengths of one of the most sensitive groups of pollens to which they were sensitive. Five were treated co-seasonal in the same manner. Of the two spring types, one was treated pre-seasonal, and one co-seasonal. The pre-seasonal treatment was entirely effective in relief of asthma, and the hay fever was also greatly relieved. The co-seasonal treated case was not relieved. Care was used to keep under a re-active dose. Of the fall type, four had pre-seasonal treatment, and four co-seasonal. Three of the pre-seasonal treated cases were relieved of their asthma, and one reported no improvement. Two of the co-seasonal treated case came in late in the season with attacks of asthma. They required some adrenalin while in the office in order to be comfortable enough to do the skin tests. These two cases were given ten injections of ragweed solutions of gradually increasing strengths. One case had four injections at five day intervals, while the other had six. Both were greatly relieved. One other case may have been slightly relieved, and the other was definitely not improved.

The early fall type seemed to be very sensitive to daisy in addition to ragweed, and was given pre-seasonal treatment with daisy solutions, and was relieved. In tabulating the results in this type of asthma I am fully aware of the fluctuations of the intensity of the symptoms, due to seasonal variations, and that also there is some psychology in connection with these sensitive nervous systems. I feel, however, that I have been as careful as possible in drawing conclusions in order not to place the treatment of this type of asthma on an unsound basis.

The two patients who were sensitive to bacteria when applied to the skin were both treated with stock solutions of the bacteria to which they were sensitive. In one of the cases the boy was much undernourished, and had been asthmatic for most of the ten years of his life. He was sensitive to staphylococcus albus and areas, streptococcus hemolyticus, and pneumococcus, type No. 1. A combined vaccine relieved him of his asthmatic attacks, but the moisture in the bronchial tubes remained for three months while he was under my care. Some advice as to nourishment, and rest, and later terpene, helped this moisture. I feel that the asthma in this boy was relieved by vaccines. The other case was a

young lady who lived in the south on account of asthma. She was miserable as soon as she reached this climate, and was sensitive to a great many of the bacteria, and not clearly so to one of the compositae, and doghair. Her clinical history could not be made to fit into the cutaneous information. On account of the degree of reaction to bacterial proteins several injections were made of the reactive types. Her condition grew worse while under treatment, and she was compelled to return to the south. Within twenty-four hours after reaching there she entirely cleared up.

Seven of the fourteen patients who reacted in a negative manner to various cutaneous tests were under our care, and a brief reference to the results of their treatment seems necessary. Four were sent to a warm climate, and all were helped. Two of these cases were entirely relieved. One who obtained such great relief in a warm climate had sputum examinations made, and vaccines were given over a period of time with some relief at first, but later with no improvement. A fifth patient obtained temporary relief for two winters by vaccines. Fatigue and vagotonia were determined to be the factors in the production of the bronchial spasm, and associated bronchitis, in the sixth case. The injection of one twentieth grain of pilocarpine hydrochloride was helpful in recognizing this type, and atrophine relieved attacks when taken by mouth in one-one hundredth grain doses. The history of rhinitis preceding the attacks in the seventh case led to an operation for deflected septum with great relief. This reduced his number of head colds to the number that an average person might acquire, and then only light and temporary asthma occurred.

#### CONCLUSIONS

The results of the study of forty cases of asthma by cutaneous tests are presented. Twenty-six (sixty-five per cent.) were found to be sensitive to animal, bacterial, food or pollen proteins. Nineteen of these cases were treated by desensitization, or elimination of the proteins found to be responsible. Relief was obtained by the elimination of susceptible foods in three of the cases. Both cases treated by animal proteins were relieved. Five hay fever asthmatics were treated by pre-seasonal inoculations, and four (eighty per cent.) were relieved. Five received co-seasonal treatment, and two (forty per cent.) were relieved. Two (forty per cent.) were slightly improved, and one (twenty per cent.) was definitely not relieved. One late summer asthmatic was relieved. One of the bacterial sensitive patients was relieved, and one was definitely not relieved. A brief statement is made to the course of seven of the nonsensitive patients. Reference is made to the production, and association, of urticaria and eczema in asthmatic patients.

## Conservation of the Mother and Child\*

BLANCHE HOPKINS, M.D., Columbus  
Inspector of Maternity Hospitals, Ohio State Department of Health

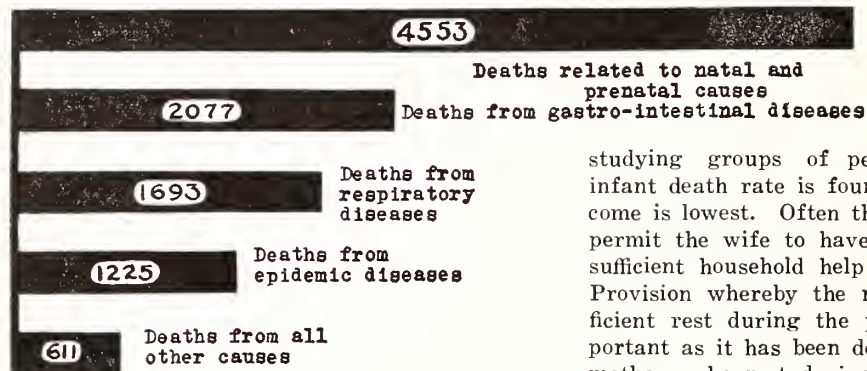
*Editor's Note.*—The deaths of 4,553 babies and more than 820 mothers in Ohio during 1919, from causes incident to childbirth constitutes a situation which demands corrective action on the part of the profession. Dr. Hopkins, from her experience with the maternity problem, recommends measures to improve conditions. Results cannot be secured, however, except through the combined work of physicians, public health nurses and the community. Dr. Hopkins also refers to the Sheppard-Towner law as it will affect Ohio. The fact that even more babies die from causes other than those incident to childhood also invites the attention of the general practitioner. In fact the conservation of baby life is one of the most pressing of economic problems, and depends in great measure on the medical profession.

**A**LACK OF proper care during pregnancy is perhaps the greatest factor in the loss of life of children under one year of age. Almost one-half of this number died during the first month of life, and deaths in the first month are known to be due almost entirely to improper care of mothers during pregnancy.

The chart below, made for 1919 statistics, shows that of the deaths under one year, the greatest number is listed under *deaths related to natal and pre-natal causes*. Poor conditions surrounding the mother caused more infant deaths than did improper feeding, poor care or infectious diseases.

physician is not consulted until an emergency arises, when it is often too late to save either the mother or child. In thinly populated districts, hospitals and physicians are not always available and mothers have to depend on the help of neighbors. Occasionally ignorant foreign or untrained colored women have served in the capacity of midwives. Our present law does not provide for supervision and education of midwives consequently more poor work is done than is generally realized. Pre-natal work is largely neglected. Many infants are artificially fed from birth, thus greatly increasing the infant mortality rate.

### BABY DEATHS FROM VARIOUS CAUSES IN OHIO IN 1919



In addition to these many unnecessary deaths, many children are born crippled in mind or body, and many mothers are permanently injured during childbirth. The United States Children's Bureau reports that sixteen thousand women die each year in the United States as a result of poor maternal care. The Ohio Division of Vital Statistics has reported that childbirth cost the lives of 8,237 mothers in this state during the ten year period which ended with 1919, and that 820 of these perished in 1919.

The general public has not fully realized its responsibility in the production of healthy children. Childbirth has long been considered a normal process and its perils the normal lot of woman. If a mother dies it is considered unfortunate but not preventable. Frequently a

#### POVERTY AS A FACTOR

Perhaps few realize that economic conditions are to blame for a large per cent. of the infant death rate. The Children's Bureau has proved by studying groups of people that our highest infant death rate is found where the family income is lowest. Often the father's wages do not permit the wife to have medical attention and sufficient household help during her pregnancy. Provision whereby the mother may obtain sufficient rest during the pre-natal period is important as it has been definitely established that mothers who rest during the three months preceding confinement, have more robust babies than equally healthy women who work during that period.

#### INFECTIOUS DISEASES

Infectious diseases are responsible for many deaths of mothers and infants, the pregnant woman being particularly susceptible to pneumonia and tuberculosis. Many deaths in early infancy and a large number of miscarriages are directly the result of syphilis and gonorrhoea. Although statistics show that one mother out of every ten has syphilis, still many physicians do not make a Wassermann test unless they obtain a definite history of this infection.

In 1920, Ohio reported 1,742 cases of inflamed eyes of the newborn. Without doubt many more cases have never been reported. This

indicates that many women, infected with gonorrhoea, have not been properly treated, and that a large number of infants have not received adequate treatment of the eyes at birth.

Too much cannot be said in regard to the importance of early diagnosis and adequate treatment of the syphilitic prospective mother. Dr. P. C. Jeans, of St. Louis, in his publication, "Syphilis and Its Relation to Infant Mortality," makes this summary: *About ten per cent. of married women are syphilitic. In a syphilitic family, thirty per cent. of the pregnancies terminate in the death of the fetus at or before term. Thirty per cent. of all living births in a syphilitic family die in infancy. But seventeen per cent. of all the pregnancies in syphilitic families result in living non-syphilitic children who survive the period of infancy. According to St. Louis vital statistics three and one-half per cent. of all infant deaths are ascribed to syphilis. This shows that the waste in infant and child life in a syphilitic family is over sixty per cent. as compared to less than twenty-five per cent. in a non-syphilitic family of the same social plane. To this high percentage should be added the suffering of the mother, the mental stress and many months of medication necessary for the treatment of the children who survive. Through a pre-natal clinic, a large per cent. of such cases may be treated. It is a known fact that adequate treatment of the mother throughout the period of her pregnancy or even through the last five months will usually result in the birth of a healthy, non-syphilitic child. Even short periods of treatment are not without benefit.*

Dr. W. H. Watters, (*The Commonwealth*, Nov.-Dec., 1920, p. 371), concludes in his publication "Syphilis and Pregnancy":

1. Routine Wassermann tests should be instituted in all maternity cases.
2. From five to ten per cent. of all cases will prove to be syphilitic. When a definite diagnosis is made intensive treatment should be instituted. The danger to the patient is no greater than in non-pregnant persons.
3. Statistics collected from public and private wards go to show that about one prospective mother in every ten or fifteen has a syphilitic infection.

Dr. J. Whitridge Williams, ("Standard Requirements for Obstetrical Care," *Children's Bureau Publication*, No. 69), contends that while he fully appreciates the serious rôle played by syphilis he believes the Wassermann test should be obligatory only for patients who present a suggestive history. He further states that examinations are feasible only in institutions with well equipped laboratory facilities.

Since it is not always possible to obtain a positive history of infection many cases will be left untreated if a routine blood examination is not made. During the last year a number of Ohio hospitals have improved their laboratory facilities. State aid for many localities has been

furnished, the state laboratory in 1920 making 19,000 blood examinations for private physicians. In addition 16,000 were made for clinics. The State Department of Health also makes provision for free treatment for indigent cases having a history of syphilis.

The All-American Conference on Venereal Diseases held at Washington, D. C., December 8, 1920, made the following recommendations: "A blood Wassermann test, subject to the interpretations given below, should be a part of a medical examination given expectant mothers. No distinction should be made between patients in private practice and in maternity clinics. \* \*

*Interpretations:*—That the negative Wassermann reaction should be interpreted in terms of the following limitations and conditions: (a) In differential diagnosis of syphilis, a negative blood Wassermann test cannot be regarded as evidence of the absence of the disease. (b) In the early primary stage of syphilis, the blood Wassermann test is expected to be negative. (c) In the active, secondary stage, a repeated negative blood Wassermann is a rare occurrence and should be accepted only after a very careful examination of the case. (d) In all forms of late syphilis, especially in those which have been treated, and in women in whom the disease may be otherwise symptomless, it is not uncommon to meet with a negative Wassermann reaction, and too much importance should not be attached to such a finding in suspected cases. (e) For purposes of diagnosis, attention should be drawn to the importance of recognizing by repeated tests, the transmission from the negative to the positive blood Wassermann in primary stages of the disease."

#### THE VALUE OF THE HOSPITAL CLINIC

A number of Ohio hospitals, realizing the importance of pre-natal care in the saving of life, have established free clinics for expectant mothers. All cases registered at the hospital, whether free or pay, may come to this clinic to receive free advice along the lines of diet, rest and exercise. In many instances, physicians meet their patients at the hospital clinic by appointment. Here all pre-natal examinations are made. Each physician has the assistance of a nurse in taking blood pressure, history, making urinalysis or other examinations. This plan is beneficial in many ways: (a) It educates the mother for she realizes how much is being done for her safety. (b) It promotes confidence in the hospital because the woman learns to look upon the hospital as a friend rather than to dread the time when she shall come in for delivery. (c) If the hospital has a training school, the clinic is of educational value to the undergraduate nurse. She learns the value of proper pre-natal care in its relation to safe childbirth. (d) The hospital laboratory may examine vaginal and urethral smears, and all positive cases

may be referred to their physicians or receive clinic treatment. If the clinic and laboratory tests prove a history of syphilis, the infected woman may often be treated at the hospital. Many Ohio hospitals have V. D. clinics. Local physicians should co-operate with the clinic in securing adequate pre-natal treatment for all infected cases. The hospital and laboratory records should be held in sacred trust and the information should be used as an aid in diagnosis and securing proper treatment.

Convenient hospital accommodations are a necessary feature of a complete maternity program, especially for the care of abnormal cases, which in the absence of a hospital receive inadequate attention at home. There is an actual need for general hospitals in all counties, many rural communities being without any hospital service.

#### VALUE OF THE PRE-NATAL NURSE

The ignorance of fathers and mothers is responsible for many deaths. The value of education and instruction of the expectant mother cannot be over-estimated, and this can best be provided for by public health nursing service. Women are taught by the nurse that headache, hemorrhage and disturbed vision are not normal. They are informed in regard to proper work, exercise, diet and dress. The expectant mother is taught how to care for herself, that her baby may be properly developed. Perhaps one great advantage of the nurse is her ability to judge the surroundings of the mother. She learns whether the woman is over-worked and makes suggestions for her rest. She studies the economic conditions of the home. She has opportunity to adjust conditions between the home and the community so that the mother may have adequate financial support. The nurse can readily bring about the establishment of proper medical supervision, will know the necessity for immediate calling of a physician upon the appearance of danger signs, which the woman herself might not recognize.

#### WHAT OTHER COUNTRIES DO

Our country has been slow to realize the need of federal aid for this work. In England, government grants have been made to provide proper care. Small hospitals have been maintained, nurses and physicians supplied for extreme rural and indigent cases. Canada has for some time had rural nurses doing pre-natal work, yet the districts are large and poorly settled. Nursing and hospital care are supported by the provinces. France passed a law which provided a daily allowance for the mother four weeks before and four weeks after delivery, and permitted an additional allowance if the mother nursed her child. The military government of Paris furnished medical service for the pregnant woman during the late war, with the result that though the nation was devastated it had a lower maternal and infant death rate than the United States.

New Zealand stands first in her care of mothers and loses fewer babies than any other country.

#### WHAT THIS COUNTRY HAS DONE

Boston conducted experiments in pre-natal work through the Woman's Municipal League. Through the efforts of the league the infant death rate was reduced one-third to one-half as compared with cases not having this care. The mothers were visited by a nurse every ten days before delivery, a doctor and a nurse were present at the delivery of each child and the customary number of after-care visits were made by both a doctor and a nurse. The nurse taught the mother about the proper care of infants and continued to visit the mother until she was properly restored to health.

In Brattleboro, Vermont, a small town, a central agency cooperating with the doctors directs the nursing and household care of expectant mothers according to the need. In this way, expert nursing is used only when needed and less skilled workers are used when less care is needed.

That the care of the expectant woman is well worth while may be seen from the report of the New York Milk Committee. A two year experiment was conducted in which 1,375 women were supervised throughout pregnancy and for one month after their babies were born. These women were living under average conditions with low incomes. Through the assistance of qualified physicians and public health nurses the mothers were able in a large number of cases to bring healthy babies to birth. The proportion of babies dying before the end of the first month was nearly one-third less than in the city as a whole. The proportion of stillbirths was greatly reduced, and at the end of the first month ninety-two per cent. of the babies were still breastfed. Only two of the 1,375 mothers died. It might be practical to try out in small towns a plan used in Manchester, New Hampshire. Here the Medical Society assigned certain physicians to care for poor women. The needy cases applied to the city for aid. The result was that more infants were breastfed and better fitted to meet conditions which arose in the first year of life; the death rate of mothers was greatly reduced, the health of mothers was improved instead of impaired; fewer children were born prematurely, and the home conditions were improved.

#### RECENT LAWS TO AID EXPECTANT MOTHERS

The Hughes-Griswold Act, of 1919, made it possible for any general health district to employ public health nurses, to provide infant welfare stations, pre-natal clinics and other measures for the protection of children. Each district budget should be sufficient to permit this important work to be done.

The Sheppard-Towner Act, of 1921, will make it possible to render greater services to women and children. Ohio has been one of the first

states to recognize the value of this law and submit to the Children's Bureau detailed plans for carrying out the provisions of their act. The appropriation obtained through this Act will be spent for the welfare of maternity and infancy.

The economy of maternal welfare is so to care

for the pregnant woman that she may be able to bring forth and raise the greatest number of normal children with the least risk to herself. For this purpose, the combined interest of physicians, public health nurses and the community are necessary.

## Constitutional Nervous Symptoms\*

JOHN D. O'BRIEN, M.D., Canton

*Editor's Note.*—The general practitioner as well as the specialist encounters patients who show constitutional nervous symptoms that cannot be traced to any definite cause and are seldom relieved by routine methods of therapy. The late war relegated a large group of young men to the classification of psycho-neurotics and there was a tendency to pay too much attention to the physical side of these patients and neglect their mental inability to adjust themselves to their environment. It is of interest to know that practically all the cardio-neurotics dated their symptoms back into childhood or first became aware of them following a serious illness from which they never properly recuperated. The mental clinic and mental hygiene would seem to be necessities for dealing with psycho-neurotics in the future. While the endocrinologists are coming forward with help in solving some of the intricate problems of psychiatric therapy, in all cases moral uplift and attention to the detailed physical and mental life of the patient are absolutely essential to any successful treatment.

**D**URING THE last few years the attitude of the Neurologist has undergone a subtle change, not only toward disease, but also toward its general effect upon the patient. At one time everyone was seeking for a sign or syndrome. Happy the man who could discover a new reflex; it did not matter that he left it unexplained and failed to correlate it with other functions—it was a fact, and his name was attached to it.

But the discovery of such a phenomenon is nothing more than the statement of the terms of the problem awaiting solution. To find its explanation we must look to the behavior of the nervous system as a whole and observe how its reactions are changed. As for example the importance attached to the patient's account of his own sensations. It is well known, because of the better diagnostic methods, that the number of cases coming at an early period under the Neurologist's observation, is decidedly on the increase. We also know that the therapeutic armamentarium of the Neurologist is greatly circumscribed; and I believe that nowhere, in the entire field of medicine, is there greater need for experimental, scientific, carefully, interpreted investigation of constitutional nervous symptoms.

### MEANING OF THE TERM

By the expression *constitutional nervous symptoms*, I refer to those complaints usually made by the so-called neurotic individual, headache of long duration, states of insomnia, irritability, pains, generalized and of a vague nature and type, easy fatigue, compulsions, fears, maladjustments, depression, and indigestion.

These patients demand relief, they are incapacitated from carrying on their occupation and their families suffer; the situation commands the interest of the physician and realizing the inadequacy of the old time therapy he is quite ready to adopt new suggestions.

For years the doctor neglected his psychotherapy, and it was only after remarkable enlightenment by the sects which dealt only with the psyche of an individual or by suggestive methods, which reached the mental state indirectly, that he awoke to the newer possibilities. Frequently psychotherapy fails, consequently he returns to the newer ideas in an effort to reach the patient, and to accomplish a maximum amount of relief; hence the temptation is great to find a localized process which may account for the generalized symptoms. The chronic patient frequently goes the rounds today, and sooner or later returns to the neurologist with fundamentally the same complaint—the paramount point.

The individual lack of nervous stability may be overlooked, as well as the strain under which he is laboring, the anxiety which may surround his whole life and his disregard of proper hygienic laws.

### SYMPTOMS AND CONDITIONS

I maintain that local pathological processes may serve as coincidental or even exciting factors in producing the psycho-neurotic manifestations, but the physician, who allows his enthusiasm to promise a cure by giving attention only to the local process, is bound to be sadly disappointed. There never was a time probably in the history of medicine, when there was a greater demand for a more thorough explanation of disease processes, on the patient's part than today, whether the explanation be right or wrong; the chronic sufferer begs for a tangible

\*Read before the Stark County Medical Society, Canton, 1921.

reason for his illness, and the surprising relief given after the reassurance of the physician, is sometimes very great, even a reassurance arising from total ignorance, being often times acceptable to some, more particularly the neurotic individual.

Headaches of long duration, are very common, and invite attention to refractive errors, sinus disease, nasal obstruction, toxæmia, intestinal or otherwise, syphilis, arterio-sclerosis, and last but not least the *convenient headache*. Take for example, refractive error, I have never known its correction to relieve the neurotic patient. Four or five skillful men, will vary entirely in their interpretation of the amount and kind of error. The daily life of the patient, physical and mental, enters here into consideration. For toxæmic headache, he has his diet, course of irrigations, and what not, but returns to the Neurologist complaining of headache. The patient is sent to a resort for a few weeks, his responsibilities and anxieties are reduced and he progressively improves.

Indigestion, as a prominent symptom, requires, first investigation for ulcer, cholecystitis, appendicitis or adhesions. In a patient presenting constitutional nervous symptoms, can we confidently expect the eradication of a gastric ulcer to relieve all the symptoms? Do adhesions cause functional neuroses? How often do we read of the close association between hyperchlorhydria and gastric ulcer? How often is hyperchlorhydria dependent entirely upon a neurotic tendency?

The surgeon finds adhesions, and is surprised to find that they are not nearly so extensive or multiple, as they are in many individuals upon whom he has had occasion to operate for some other urgent indication, who had no symptoms of indigestion. In neurotic individuals hypersensitiveness, gives rise to symptoms which in normal individuals are unnoticed.

Visceroptosis, discovered during examination of a psychoneurotic, is exceedingly common, and may be regarded as of functional origin. Rest, abdominal supports and massage, often produce remarkable improvement. This condition, I believe, is due entirely to lack of nervous tone.

Mucous colitis is met very frequently, but I am of the opinion that most gastro-enterologists, admit the intimate relationship between this most distressful condition and the neuroses.

Pelvic displacements and pelvic diseases in women have for a long time furnished material for investigation along the lines already suggested. But I am sure that the gynecologist is now regarding them with more conservatism. I am sure he finds retro-version, for example, in many healthy rugged women, who are unconscious of any defect. Note the temperamental difference between the wash woman who goes about her daily work, happy though prolapsed, and the dragged out, headachy neurasthenic in-

dividual who may have back ache as the symptom of a simple retro-version.

#### NEURASTHENICS

The late war brought forcibly before us a group of young men who suffered from an inability to adjust themselves to their environment. When first seen by neurologists, and classed as psychoneurotics, some patients, who complained more particularly of their hearts, fell into the hands of general practitioners or heart specialists. The lack of any somatic lesion caused them to be relegated into a group composing neurasthenia. Here the error of swinging the pendulum too far on the physical side and neglecting too much the mental side of the patient was again in evidence.

The great variability of persons in their emotional spheres and in their subconscious reactions to varieties of stimuli certainly was not appreciated by the men who came in contact with these cases.

The syndrome, which is found in the cases called cardiovascular defectives, has only received attention since the War, when Lewis and his associates termed it, irritable heart, neurocirculatory asthenia, effort syndrome or D. A. H.

Certain characteristic symptoms are found in all cases of the cardio-vascular defectives. They are symptoms from which many men suffer when put through violent exertion. The differentiation between defectives and normal men, is largely one of degree. The lightest character of exercise serves to bring out in the defective an exaggeration of all the symptoms of exhaustion, breathlessness, faintness, giddiness, precordial pain, palpitation and a feeling of utter exhaustion; headache, sleepless never rested sensation, nights of dreaming, clammy, cyanosed hands and feet, profuse axillary sweating, a mottled skin and unstable vasomotor reaction.

This train of symptoms frequently follows a serious illness, and lasts for a long or short time, depending upon the recuperative properties of the individual. It is the persistency of such a condition which leads us to realize the damage to the cardio-vascular system. Their rapid heart action has been attributed by some to slight nervousness during the examination, rather than the inherent defect in the man.

These men are really not ill. The knowledge that such a condition could exist in an apparently robust man, was first viewed with some skepticism and many men were thought, unjustly, "to be slackers." Gradually it was borne in upon the examiners that these men were really, physically unable to stand any severe exertion. Practically all of the men dated their symptoms into childhood; while others had no knowledge that it existed prior to the examination, the disposition of this class of cases in civilian practice calls for great care, considering their neuropathic basis and a poor quality of tissue. The

knowledge gained in handling these cases during the war should be of great assistance in observing others in civil practice in which hitherto they have been poorly classified and insufficiently studied.

As students in medical colleges, we were taught to distinguish between organic and functional disorders of the nervous system. Their etiology and diagnosis was left comparatively blank. Such a plan would be unsatisfactory to a present day student. This, the age of preventative, rather than curative medicine, alone, has its co-workers in Neuro-Psychiatry, who are joining in the general pursuit of knowledge concerning the proper care, observance and management of many of the hitherto mysterious workings of the mind. We must educate our people to understand that we have a mental as well as a physical exhaustion, and that an individual endurance is a variable quantity, determined by more than one factor. To accomplish much of this we must look to the training of the public in the doctrines of mental hygiene, the value of

rest and thought. The time is ripe for a peaceful revolution of this kind. Both the public and profession are today more interested in psychological problems than ever before, and it only requires concerted and carefully considered action, to direct this interest along healthy and beneficial lines. We must have mental clinics. The aspect of mental hygiene and its relation to schools and education is of vast importance, too great to be considered in any brief manner.

In a sense much of the foregoing may seem to consist chiefly of destructive criticism. My endeavor, however futile, was intended to put a check upon our unbounded enthusiasm which has lead us quite apart from fundamental therapy. With the many advances in the treatment of neuro-psychiatric problems, new hopes are entertained. The endocrinologists are coming forward with help in solving some of the intricate problems of therapy, but in all cases, moral uplift and attention to the detailed physical and mental life of the patient are absolutely essential to any successful treatment.

## The Relationship of the Health Department to the Medical Profession\*

DONALD D. SHIRA, A. B., M. D., Akron

Director, Department of Public Health, Akron; Commissioner of Health, Summit County General Health District

*Editor's Note.*—Dr. Shira is quite correct in maintaining that it is highly probable that an ideal system for solving the public health problem and for delivering the maximum of service to any community can only be protected by the closest kind of co-operation between the medical profession and public health agencies. The consummation of this union can only be accomplished by a health commissioner whose relationship to the physicians is determined, not by mandate spread upon the statute books, but by broad sympathies with the aspirations and ideals of the medical profession.

**A**S A GENERAL postulate no health department can operate successfully without the cooperation of those agencies which are most deeply interested in the policies pursued and the results obtained. In nearly every line of endeavor the degree of efficiency obtained is largely determined by the extent to which directly and indirectly interested organizations are utilized. The recognition of this principle is no less important in official public health work and the health officer who ignores it is almost certain, sooner or later, to find his efforts embarrassed at every turn by conflicting cross-currents over which he has no control.

Of the many agencies vitally interested in the development of a public health program, the medical profession is by far the most conspicuous. For when it comes to the last analysis, public health work is nothing more nor less than a specialized phase of medical science, to which it is inseparably united, and it can no more operate in an independent capacity, without jeopardizing

the success of the entire movement, than a regiment can execute its maneuvers independently of the army as a whole without risking betrayal into the enemy's hands. The enemies against which the hosts of physicians and public health workers are arrayed are disease and death with their attending train of want and pain and sorrow. They are mighty in their strength, myriads in their number and subtle and cunning in their tactics, and in order to vanquish them the medical profession and the health agencies must stand shoulder to shoulder, prepared for a long and bitter warfare in the front line trenches.

### CURATIVE AND PREVENTIVE MEDICINE

We have come in recent years to divide the broad term medicine into two component parts—curative and preventive; but it must be kept clearly in mind that such a classification is purely and simply arbitrary. The two extremes can be readily recognized but it is indeed difficult to tell where the one begins and the other ends and no one has yet been able to draw a sharp line of demarcation between them. The physician is primarily interested in the curative end; the

\*Read before the Section on Public Health and Sanitary Science of the Ohio State Medical Association, during the Diamond Jubilee Meeting, at Columbus, May 3-5, 1921.

health official in the preventive, but without the curative methods and the support of the medical profession the most strenuous efforts of any health department would be almost completely nullified. And the very fact that these two phases of medicine are so closely interdependent makes it not only logical but imperative that the two form an intimate relationship, which will enable them to get on common ground and to harmonize their activities.

The writer once heard Dr. A. W. Freeman, former State Health Commissioner, present to a group of medical men his conception of the status of a health department, in reference to both the medical profession and the general public. Dr. Freeman's idea, because it is so characteristic of the vision of the man who put Ohio on the public health map and because it beautifully combines practice with theory, should be indelibly impressed upon the mind of every health commissioner: "One should think of a health department as a bridge spanning the natural gulf which separates on the one hand, the public in need of medical service, and on the other hand, the medical profession prepared to minister to its needs. For, as the traditions and high ideals of the medical profession prevent the physician from taking the initiative, so does the ignorance of the general public prevent its seeking that service, often sadly needed, which is waiting." To digress a trifle by way of illustration, how many of you, in the course of your physical examination of school children have informed Johnny Jones, whose customary seat in the school room is probably in the darkest corner in the last row,—informed him, much to his utter consternation, that he is almost totally blind in one eye? How many scores of times have you discovered children handicapped for life by partial or total deafness due to tonsil-adenoid disease with the chances about fifty-fifty that the tonsils are still there. The family physician knows they are there, knows the destruction they have wrought and has more than once recommended removal, but he cannot gag and bind the child and drag it to the operating table. But the health department can—almost. Because it has no axe to grind save the restoration of the child to health, it can use such persistent follow-up methods, can present so many convincing and incontrovertible arguments that the parents can be forced oftentimes to see the light apparently against their wills. How many hundreds of other children do you find with incapacitating remediable defects—children whom a doctor hasn't seen since they had measles or mumps or chickenpox back in 1915."

#### KEEPING IN WITH THE PROFESSION

The large field of usefulness of the health department consists in bringing, not only to these children but to all others in need of medical service, the best that the medical profession has to offer.

How can this be accomplished? By inspiring confidence in the public and by being open and above-board with the medical fraternity, of which, by the way, each of you is a member. As our subject deals primarily with the medical profession the question of how to secure public confidence will be passed over briefly with the reminder—"By your work shall ye be known."

What are some of the things which the health commissioner should do in order to establish his department in the good graces of the physicians in his district?

In the first place he should be a member of the county medical society. Failure to so affiliate is almost evidence *per se* that he is not progressive in his thought and methods. He should utilize his membership to present and to explain, from time to time, the policies and aspirations of the health department. The society should be given the opportunity to discuss any new or revolutionary measures which may have a vital significance to the practicing physician, and preferably before such activity is put into actual practice. To adopt a dictatorial and an autocratic attitude toward the profession is a fatal mistake.

The health commissioner should, so far as possible, form a personal acquaintanceship with every doctor in his district. The personal equation means a great deal. Transactions of every nature are then much more satisfactory and more readily understood. The doctor feels that he is doing business with a real human being, albeit a health officer, instead of with some remote and inhuman abstraction. Assure each doctor that the health department is there to help him, to make his practice more pleasant by assisting in handling particularly trying or difficult cases and by relieving him of little details none the less important if odious to the average practitioner. Impress upon him the fact that the health department welcomes at all times constructive criticism or reports of any apparent irregularities in the conduct of its business.

Every possible precaution should be taken to prevent any overt word or act which will tend in any way to discredit the physician attending a case. The absolute importance of this cannot be too strongly impressed upon the nursing personnel. A nurse should never under any circumstances venture an opinion as to a diagnosis. That is distinctly out of her line. Most physicians are jealous of their prerogatives, and rightly so, and I distinctly remember one instance in which the attending physician took exception to the fact that a nurse presumed to concur in the diagnosis made by him. A nurse should use extreme caution in venturing any suggestions as to the management of a case. Most people are very solicitous concerning the welfare of their ill and will avidly seek advice from whatever source. In such an event it is good diplomacy for the nurse to parry with—"What does your



doctor say" or "Follow your doctor's instructions," unless there is manifestly some violation of the board of health regulations. A certain amount of misunderstanding and confliction will creep in in spite of every safeguard and it is certainly folly to court it by failing to anticipate it.

#### SERVICE THE HEALTH DEPARTMENT OWES THE PROFESSION

Every health department owes a distinct service to the medical profession. A physician appreciates it when you provide transportation for his tuberculosis patients to the X-ray laboratory; when you notify him of laboratory reports on his patients; when you collect samples of water from a well which he suspects of disseminating typhoid; when he finds his patient supplied from the loan closet with badly needed but otherwise unavoidable articles; when your nurse leaves for him notations of nursing care given including her findings as to the patient's condition at the time of her visit with a record of respirations, pulse and temperature; when your nurse occasionally goes out of her beaten path as a public health nurse to render nursing service in a particularly difficult medical or surgical case. It really is quite surprising to what extent a physician will sometimes respond to these apparently inconsequential details, and one little, undemanded courtesy will sometimes make a staunch friend and champion.

#### THE PROBLEM OF CLINICS

Every progressive health department, if it has not already done so, certainly expects to establish clinics of one kind or another, for it is only by the route of the clinic that the acme of usefulness can be attained. And it is something which should be handled with consummate diplomacy. The good intentions of many a health department have been discredited if not actually maligned and its power for good emasculated by the use, or rather the abuse, of the clinic. It is a wise procedure, before establishing any kind of clinic in a community, to call a conference of the physicians for the purpose of discussing it and of familiarizing them with the proposed plan of operation and with the thing which you hope to accomplish. It should be made clear to them that it will operate for their convenience as well as for that of the public. A clinic otherwise established will probably start off handicapped by resentment, if not by open antagonism, the overcoming of which may require a long time.

It would seem unwise to place any one in charge of a diagnostic clinic, such as a tuberculosis clinic for example, who is not recognized by the medical men as pre-eminently qualified for the work. This method has been adopted in the tuberculosis clinics in Summit county and

the results have exceeded all expectations. The doctors wishing a diagnosis or a corroboration of a diagnosis, utilize the clinics freely, frequently appearing in person in order to go over the case with the doctor in charge. We have made it a rule, in order to eliminate all semblance or chance of appearing to supercede the attending physician, to refuse the patient any information concerning the result of the examination. He is instructed to return to his physician who will be notified as to the findings. Here again extreme caution is used to prevent placing the practitioner in an undesirable light.

The wholesale application of gratuitous curative methods by a health department cannot be too severely condemned. While temporarily it may seem to hasten progress toward a desired goal, ultimately it will result in failure because instead of strengthening the position of the medical profession it tends to breed an indifference toward that group which is, after all, the keystone in the arch of public health work. The physician is an indispensable unit in that complex called society but his very existence depends upon his ability to reap a fair reward for the time and money expended for his training and in his practice. To deliberately divert, by injudiciously operated free clinics, that remuneration, which the physician should receive from financially able patients, is a prostitution of the powers of the health department. At any rate it is an injustice under existing conditions and will remain so until some more Utopian plan for ministering to ailing humanity can be evolved. Nothing should be left undone, by strictest investigation if necessary, to establish each patient's ability or inability to pay for curative services rendered. Also the physicians providing, under the auspices of the health department, services for the improvident and unfortunate poor, should receive from the health department compensation commensurate with their ability and the time expended. There is no more logical reason for asking physicians to donate their services to the health department, except under dire necessity, than there is of asking the health department employes to refund a portion of their salaries each year. The laborer is worthy of his hire, without hire the laborer must stop and without labor the wheels of progress stop.

It is highly probable that an ideal system for solving the public health problem and for delivering the maximum of service to any community can only be perfected by the closest kind of cooperation between the medical profession and public health agencies. The consummation of this union can only be accomplished by a health commissioner whose relationship to the physicians is determined, not by mandates spread upon the statute books, but by broad sympathies with the aspirations and ideals of the medical profession.

# Actinotherapy in General Practice: Case Histories

F. J. KERN, M.D., Cleveland

*Editor's Note.*—In view of the almost startling results achieved by Rollier and his followers in the use of natural sunlight in the treatment of surgical tuberculosis, it is not at all surprising that artificial actinotherapy should be attracting the attention of the profession and it is rather a pity that the method is not being more extensively tried out so that an evaluation of its possibilities could be more rapidly and more readily made. Dr. Kern has used actinotherapy not only in conditions in which data from medical literature would indicate its use, but has gone afield and has found that it gives gratifying results in other conditions, of which he presents case histories. If actinotherapy will enable the general practitioner to duplicate the salvation of sanitarium surroundings for tuberculous patients it will indeed prove a tremendous economic asset for all concerned.

**M**UCH HAS BEEN written during the past few years, both in American and foreign medical journals, upon the subject of Actinic Rays (Artificial Sun Light, Ultraviolet Rays), and their therapeutic application for the relief and cure of various diseases, local and systemic.

I shall not try to review the vast literature on this subject, which is becoming more and more recognized as being of extreme importance and interest to the physician and surgeon. A few case histories in which this modality was used successfully will interest the general practitioner more than all theoretical or scientific discussions of it.

As a *doubting Thomas* I began sometime ago to use Actinic Rays in connection with my general practice. At present, case records show that I have given several thousand treatments in diseases in which actinic therapy was indicated by reason of reports made by other medical authorities having had years of experience in the use of Quartz Mercury Vapor Lamps. The results obtained by me have been an agreeable surprise, and in my opinion this method of procedure is one of the most valuable and useful therapeutic aids extant. In numerous cases lacking previous data from medical literature, *e. g.*, mumps, chorea and scabies I also secured gratifying results.

Dr. Edgar Mayer, of Saranac Lake, N. Y., has covered the subject of natural and artificial sunlight very thoroughly both from an historical and scientific standpoint, in the *American Review of Tuberculosis*, Vol. 5, No. 2, 1921. Armamentarium consists of three Alpine and two Kromayer lamp outfits.

## SCIATIC NEURITIS

*Case 1. Sciatic Neuritis.*—Mrs. V., 27 years, married. Suffering from left sciatic neuritis past two months. Stayed in bed one month. Treated by several physicians with routine treatment: hot applications, salicylates, liniments, etc. She was brought to my office in an automobile and helped up the stairway by her husband. The left sciatic nerve was tender along its whole course, especially under the knee and the sides of the calf muscles, and at the internal malleolus. Seven Alpine Sun Lamp treatments were given,

beginning with 3 minute exposures, and increasing gradually to 20 minutes. In three weeks she reported herself well to the lodge to which she belonged. She could sleep well and walk without pain, although her leg was still weak from partial atrophy of the thigh muscles. A sacroiliac belt was applied to support the pelvic bones, and an elastic stocking to left leg.

With the necessary mechanical supports (ilio-sacral belt) where indicated, the Actinic Rays have helped all cases of sciatic neuritis that have come under my care and remained for a reasonable number of treatments.

## PRURITUS

*Case 2. Pruritus Ani.*—Mr. S., 38 years. Suffered from severe itching around the anus for past three months. Says he has not had a good night's rest during all that time. The skin is thickened and excoriated from scratching. Six treatments with the Alpine Sun Lamp, the rays directed against the affected region, at a distance of one and one-half feet, gave complete relief. Severe reactions necessary. I saw the patient in October, 1921, one year following treatment and there had been no return of the pruritus. A moist pruritic eczema of the scrotum was cleared up with three exposures.

*Case 3. Pruritus.*—Mrs. G., 34 years, married, three healthy children. She shows a reddish patch, slightly elevated over the skin surface of the mons veneris, which is causing severe itching, preventing sleep at night. Five bi-weekly treatments with the Kromayer Lamp, distance 2 inches, five to ten minutes' duration, gave her complete relief and disappearance of the lesion except for slight pigmentation over the burned area.

## TONSILLITIS AND MUMPS

*Case 4. Acute Tonsillitis.*—Miss S., age 14. Acute tonsillitis of one day duration. The pillars and the soft palate above the right tonsil are reddened and edematous. I opened a peritonsillar abscess one year ago, on the same side. The throat and tonsils were rayed through a small Sharpe localizer, attached to the Kromayer lamp, two minutes on each side. The relief was immediate. She came back two days later and stated that her throat felt fine. She could eat

and swallow without much discomfort the same evening after the treatment.

*Case 5. Mumps.*—Frank B., age 17, was seen by me in the apartment adjoining my office. Both parotid glands were swollen and painful. Painful orchitis on left side. The patient had not eaten for 48 hours and could open his mouth only with difficulty. He was conducted to my office, put under the Alpine Sun lamp; his cheeks rayed two minutes, distance foot and a half. The scrotum was rayed the same length of time. The patient got up from the couch smiling, his pain relieved, and he had his lunch the same evening. Next morning I found him sleeping; ten hours of sound sleep! The temperature hovered around 101° for the next few days, the patient had slight headache, which was relieved by aspirin, but the severe pain never returned.

#### SCABIES

*Case 6. Scabies.*—Mr. P., age 27, has had severe itching and multiple skin lesions which were diagnosed as a result of scabies. He shared his bed with a man just arrived from Europe, who undoubtedly was the carrier of *sarcoptes scabiei*. The itch was intense, and the lesions were scattered over the whole body, especially around the waist line. A six minute exposure, front and back, with the Alpine Sun Lamp, distance 2 feet, was given. I also prescribed Ung. Sulphuris to be rubbed into parts that would show no reactions (redness). He later reported that he slept the first night, and only used the ointment around the armpits and the groins, where the rays did not reach the skin.

In four other cases of scabies I used shorter exposures and repeated them at a few days' intervals. The relief from itching was immediate. Some cases experienced slight itching when the reaction from the burn began to subside and the top layer of the skin peeled off.

#### EPIDIDYMITIS

*Case 7. Gonorrhoeal Epididymitis.*—Mr. M., age 34, married. Contracted gonorrhoea several years ago. He developed severe epididymitis. I saw him at his home, ordered hot applications and prescribed opiates for severe pain. Two days later he came to my office. The parts were very tender and painful. Treatment: Kromayer lamp, distance 3 inches, exposure 5 minutes. The patient slept the same night without morphine, notwithstanding the burn from the rays. Three more treatments were given, the prostate massaged and rayed through a Wagner applicator (made of quartz glass). The pain was completely relieved, the prostate reduced in size and urine much improved. Urotropin was given as a routine measure. The hot applications were not needed after the first treatment. In October, 1921, the patient came to me from the army hospital for tuberculous ex-service men in Indian-

apolis. Since my last treatment he had no further attack of epididymitis or prostatitis. The urine contains a few shreds, the prostate is not excessively tender to pressure, the epididymes are only slightly endurated. The lung symptoms are improving under the sanitarium treatment.

*Case 8. Tuberculous Epididymitis.*—Mr. M., age 38, from Lorain, O. Noticed a swelling about the right testicle six weeks before he came to me for treatment. Two other doctors had him previously and tried sinusoidal and high frequency treatment. The patient's right epididymis was enlarged to the size of a small walnut; it was nodular and only slightly sensitive to touch or manipulation. A hydrocele was forming on the same side. The case was diagnosed tuberculous epididymitis with hydrocele. Dr. Neary, of Charity Hospital, operated upon the man for hydrocele and excised part of the tunica vaginalis, which was covered with small granular reddish lesions resembling tubercles. The epididymis was found as a hard semilunar lobular body. No caseous areas were found. Laboratory report on the excised tissue (tunica vaginalis) was: "Giant cells. Probably tuberculous." After leaving the hospital the patient received 14 bi-weekly local and general actinic ray treatments causing severe reactions a few times. The prostate was massaged and rayed at the same time. In August, 1921 the epididymis was half its former size, softer in consistency, the patient had no pain or discomfort, his general physical health was much improved. He was allowed to return to work and ordered to take one treatment a week the next two or three months to prevent the further development of tuberculous lesions.

#### ACUTE NEPHRITIS

*Case 9. Acute Nephritis.*—Mr. G., age 39, was seen by me at his home for severe pain in both flanks and in the left inguinal region. Marked tenderness over McBurney's point, which suggested an attack of appendicitis. A specimen of urine showed marked trace of albumen. He gave a history of sitting two days previously on the sill of an open window, his body perspiring. The patient was told to stay in bed, hot applications were applied to both kidney regions. Nephritin tablets were prescribed and given, 3 tablets every 2 hours. The third day he came to my office with difficulty; urine still showed marked trace of albumen, the lumbar regions were tender on pressure. Treatment: Alpine Sun Lamp, distance 2 feet, exposure 4 minutes, repeated at two day intervals. Seven days after the first treatment, the patient went to work, his urine was free from albumen and the pain gone. (The outcome of this case was a surprise to me. What effect the Nephritin tablets and hot applications had, I am unable to say. From my other experiences with the actinic rays in nephritic cases, there is no doubt in my mind that these

rays often have a very beneficial influence on the diminution of albumen in the urine).

#### PULMONARY TUBERCULOSIS

*Case 10. Pulmonary Tuberculosis.*—Mr. V., age 37, laborer, married, 4 children. He came to my office in June, 1920, complaining of loss in weight, weakness, cough, and shortness of breath. Temperature  $101^{\circ}$ , pulse 120, coarse râles over the left apex and left lower lobe; a few moist râles in the right apex posteriorly. No cavities were detected. His weight a year ago was 150 pounds, now he weighs 126. Examination of sputum showed tubercle bacilli. I gave the man the alternative of going to the City Tuberculosis Dispensary, where he might apply for a place in the City Sanitarium (because he was a poor man with a large family); or of taking the Sun lamp treatments for a period of six months. He preferred the latter course. I started him with 2 minute exposures under the Alpine Sun Lamp, distance 3 feet. The time was increased gradually to 20 minutes, back and front. The treatments were given twice weekly for eight months. Occasionally there would be an intermission for a fortnight to give the skin a chance to throw off the tan. The beneficial effects of the rays were noticed from the beginning. Cough was lessened after a few treatments, night sweats were relieved, temperature came to normal level in four months, his appetite increased, he began to gain in weight after the initial loss of a few pounds. In March, 1921, his weight was 146 pounds. He reported himself well to the lodge, and thought he was able to return to work. Only routine hygienic treatment beside actinotherapy and occasional prescription of digital for myocarditis were given. The last time I saw him, October, 1921, he was working steadily six nights a week. (He was the first tuberculous patient among the hard working class of people, out of a number of about 30 similar cases, for whom I had the pleasure of writing the final report of recovery to a lodge or insurance company, instead of the death certificate for the Health Department.)

*Case 11. Pulmonary Tuberculosis.*—Miss W., age 17, high school girl. Her uncle, two sisters and one brother, died of tuberculosis.

She came to me in April, 1920, complaining of weakness, chills and fever. She had pleurisy with effusion three years ago and stayed in bed six weeks. Since that time up to a few weeks ago she has enjoyed good health. Her weight one month ago was 118 pounds, now she weighs 107. The afternoon temperature  $100^{\circ}$ . Physical examination during the first visit showed no lesions in the lungs. She was examined in consultation by Dr. Updegraff of Cleveland; he found a few faint moist râles on deep inspiration at the left apex. A fluoroscopic examination showed enlarged bronchial glands and a few pathological areas in left apex. The next two months, while in bed, her afternoon temperature ranged be-

tween  $99^{\circ}$  and  $103^{\circ}$ . She was getting weaker, cough increased and also the night sweats. She came to me for actinic ray treatment June 1, 1920, her weight being 102 pounds. She began to gain in strength, the fever came down steadily until in October, 1920, it only occasionally rose to  $100^{\circ}$ ; the expectorations, chills and night sweats were relieved, and she was able to visit her uncle in Colorado, where she stayed three months with her sister, a registered nurse. The nurse reports that in a few weeks of her stay in the West she was free from fever, was able to return to her home in Michigan and help with the work about the house. In June, 1921, her weight was 117 pounds. (She took actinic ray treatments only four and a half months, and was not regular in attendance. I believe that phthisical patients should be kept under treatment a year or longer, and be rayed once a week on their return to work). In June, 1921, she had a relapse and lost six pounds in weight; her temperature would reach  $100^{\circ}$  and she felt weak and tired. Returned to Cleveland. August 9th her weight was 111 pounds and afternoon temperature up to  $99.4^{\circ}$ . Treatments were given three times a week. November 29 her weight is 118 pounds. She has had practically normal 4 p. m. temperature for a month. The physical signs, a few dry râles, are limited to the original focus of infection, the left apex.

#### RHEUMATISM AND COMPLICATIONS

*Case 12. Rheumatism and Pyorrhea.*—Mr. V., age 32, had an attack of rheumatism, beginning March 26, 1921. He was treated by another physician before coming to my office, on June 1, 1921. Physical examination: tender lumbar vertebra, both hip joints involved, sciatic neuritis on both sides, worse on the left. He was hardly able to get off and on the street car on his way to the office. Five Alpine Sun Lamp treatments gave him considerable relief. Salicylates in 20 grain doses and later Atophan were used in conjunction with the lamp treatments. June 18th, I noticed that he had pyorrhea alveolaris. All upper and lower front teeth were affected. Dr. Klausner scaled the teeth and gave his opinion that the pyorrhea was of at least two years standing (2nd stage). Local treatments to gums were given with Kromayer lamp, June 18, 20, 22, 25, 27, 29; July 1, 5, 9, 16. The body was rayed with the Alpine Lamp. He was able to return to work on July 5th. His gums showed marked improvement with five treatments, and on July 16th (one month after beginning Kromayer lamp treatments) the gums appeared healthy and firm around the teeth. The patient was advised to report once a week for local treatments to the gums to prevent the recurrence of pyorrhea and rheumatism. August 7th, his gums look healthy, no trouble in his legs, he has been working since July 5th, although his back is still *weak* and feels *stiff* on

arising in the morning. He failed to take weekly treatments as suggested, still on December 10 his gums look healthy, except around the two lower middle incisors, where the edges are slightly reddened and inflamed (gingivitis). No pus can be expressed from the gums. His joints and sciatic nerves show no signs of disease.

*Case 13. Rheumatism, Chorea.*—Mrs. K., age 18, married. Attack of rheumatic fever 2 months ago; was in bed 1 month. Now she complains of involuntary jerky movements in her arms and legs, preventing her from doing household duties. Troublesome cough, which made me suspect tuberculosis; rheumatic pains in joints; losing weight; temperature 100.5°. Eight Alpine Sun Lamp treatments relieved her cough; she was free from rheumatic pains and chorea. Gained in weight 5 pounds. Bimanual examination showed her to be 3 months pregnant.

*Case 14. Acute Chorea.*—Girl Anna J., age 11. Tonsillitis 2 weeks ago, followed by myocarditis and cough. One week ago her mother noticed that she began to act *queer*. The neighbors said it must be St. Vitus Dance. The patient is not able to stand on her feet without support; she is unable to feed herself; her speech is defective. She was brought to my office in an automobile from her home four blocks away. Treated with the Alpine Sun Lamp, distance 3 feet, duration 3 minutes back and front; exposure increased 3 minutes each treatment. Three treatments were given every other day the first week, subsequently two treatments a week, eight exposures in all. For the fourth treatment she could come to my office without support. Choreic movements completely disappeared in four weeks. Salicylates and digitol were given for rheumatism and myocarditis.

In another patient, with mild chorea of two weeks' duration, one treatment with the actinic rays and heavy doses of salicylates, the physical symptoms disappeared in five days, but mentally the child showed certain peculiarities several months after recovery as is often the case in patients with chorea.

Another girl, 13 years old, with acute chorea of 3 weeks' duration was given 10 exposures within four weeks. The improvement was noticed after the second treatment, in four weeks the choreic movements have practically all disappeared; even her speech was greatly improved.

In a case of chronic chorea of 2 months' standing three treatments did not have much effect, and the patient discontinued the treatment. Further exposures might have improved the condition.

#### OTHER CONDITIONS

*Case 15. Cellulitis.*—Mrs. M., age 52. Cellulitis of right leg and ankle. Skin reddened and

tense above the external malleolus. Oedema of the ankle; severe pain, preventing sleep. First treatment: Alpine Sun Lamp, distance 2 feet, duration three minutes. Relief of pain almost immediate, leg feels much lighter. Oedema diminished 50 per cent in 24 hours, leg cured in five days. Vaseline applied to burned areas, later talcum powder.

*Case 16. Carbuncle.*—Mr. K., age 30. Beginning carbuncle near the tip of the right mastoid process. Kromayer lamp with medium Sharpe localizer applied 5 minutes. Pain greatly relieved after treatment. At the second visit, two days later, the *core* came away with the dressing *en masse*. The wound was dressed with antiseptic solution, and healed within a week.

*Case 17. Leucorrhoea and Erosion of Cervix.*—Mrs. G., age 34. Pain in pelvis and leucorrhoea for 2 months. Cervix eroded, bleeds readily. Slight retroversion. Antiseptic vaginal douches ordered. Two Kromayer Lamp treatments, using Wagner applicator, ten minutes exposure. Pessary for retroversion after last treatment. Two weeks later, the patient reported that she has no more pain, leucorrhoea relieved, cervix mucosa looked healthy. Pessary was removed in four weeks. August 8, 1921, two months since her discharge, the patient is still in good health except for some stomach distress, which was undoubtedly due to gastropnoia. A belt was ordered for her pendulous abdomen.

*Case 18. Chronic Eczema.*—Baby B., 3 years. Moist, discrete, eczematous patches, about a dozen in number, ranging from the size of a split pea; to that of a dime, on the inner sides of both thighs and under both knees. Duration two years. Severe itching, preventing sleep at night. Mother had taken the baby to the dispensary clinic a number of times, and was given various ointments which relieved the itching, but had little effect on the lesions. Eleven Kromayer lamp treatments, producing severe reaction, were given. July 29, 1921, two weeks since the last treatment, the skin is clear, except for slight brownish pigmentation at the sites of former lesions. General body radiations were also given with the Alpine Sun Lamp. No other local applications were used except olive oil to relieve the temporary pain from the actinic ray burns.

#### CONCLUSIONS

1. Actinotherapy is an effective mode of treating many chronic and obscure cases which the general practitioner, heretofore, had to refer to the specialist.

2. Ultraviolet rays are antiseptic, bactericidal, markedly analgesic, nerve sedative, and greatly assist in promoting general metabolism.

3. Actinotherapy is one of the best treatments in early stages of tuberculosis wherever found, and far superior to natural sunlight on account of its applicability at all places and in all

climates. It is of special merit to patients who are unable to go to sanatoria and who wish to be with their families during the treatment.

4. In simple neuralgia and neuritis the actinic rays are almost specific, giving in many cases immediate relief.

5. Severe reactions and prolonged treatment are often necessary to obtain satisfactory results in some chronic cases.

6. Only the men who use this modality persistently and conscientiously know its real value.  
6202 ST. CLAIR AVE.

## A New Tonsil Instrument and Method of Use

THOMAS E. WALKER, M.D., Cleveland

*Editor's Note.*—The advantages of the method of tonsil enucleation and the new instrument as described by Dr. Walker, are the clean removal of the tonsil within its capsule, without damage to pillars, uvula or the muscles of the floor of the sinus; the gentleness to the throat of the patient, the freedom from trauma, there being no crushing of tissues; the short duration of the operation and of the anesthesia; the absence of hemorrhage and the consequent conservation of the patient's energy, as well as the short convalescent period.

**D**URING THE PAST quarter of a century the operation of choice upon the faucial tonsil has become the *intracapsular enucleation*. Various instruments, such as scissors, dissectors, tenaculæ, guillotines and snares have been used to accomplish it. A number of years ago Dr. Sluder of St. Louis presented the method in which it is done by means of the guillotine. The guillotine, an old instrument invented by Dr. Martin, in 1827, was designed to remove a portion of the tonsil by cutting through it. Dr. Sluder's addition was a new technique, in using the guillotine, so that enucleation was effected. This method is extensively used and the operation is known as the *Sluder operation*. The objection to it, is that it is followed by a more or less profuse hemorrhage.

### THE NEW INSTRUMENT

Within the past few years attempts have been made to devise instruments to eliminate hemorrhage. These are generally of the guillotine type, and several are on the markets. Prior to the Fall of 1919, I tried to use the various instruments available. They all were successful in a measure, but were clumsy, heavy or mechanically inadequate. Something seemed to be lacking in each, which precluded its universal use. It occurred to me that an instrument of the haemostatic type could be made which would be light, gentle in action and mechanically perfect; or at least it could be made on more perfect mechanical lines. Accordingly I began work on the problem and have evolved an instrument which approaches these qualities. In describing my instrument it is necessary to use the accompanying illustrations and to describe its parts separately.

*Fig. I* shows the instrument complete. It weighs but eight ounces and consists of two parts:—

- (1) a dissecting cutting haemostat, and
- (2) a detachable handle.

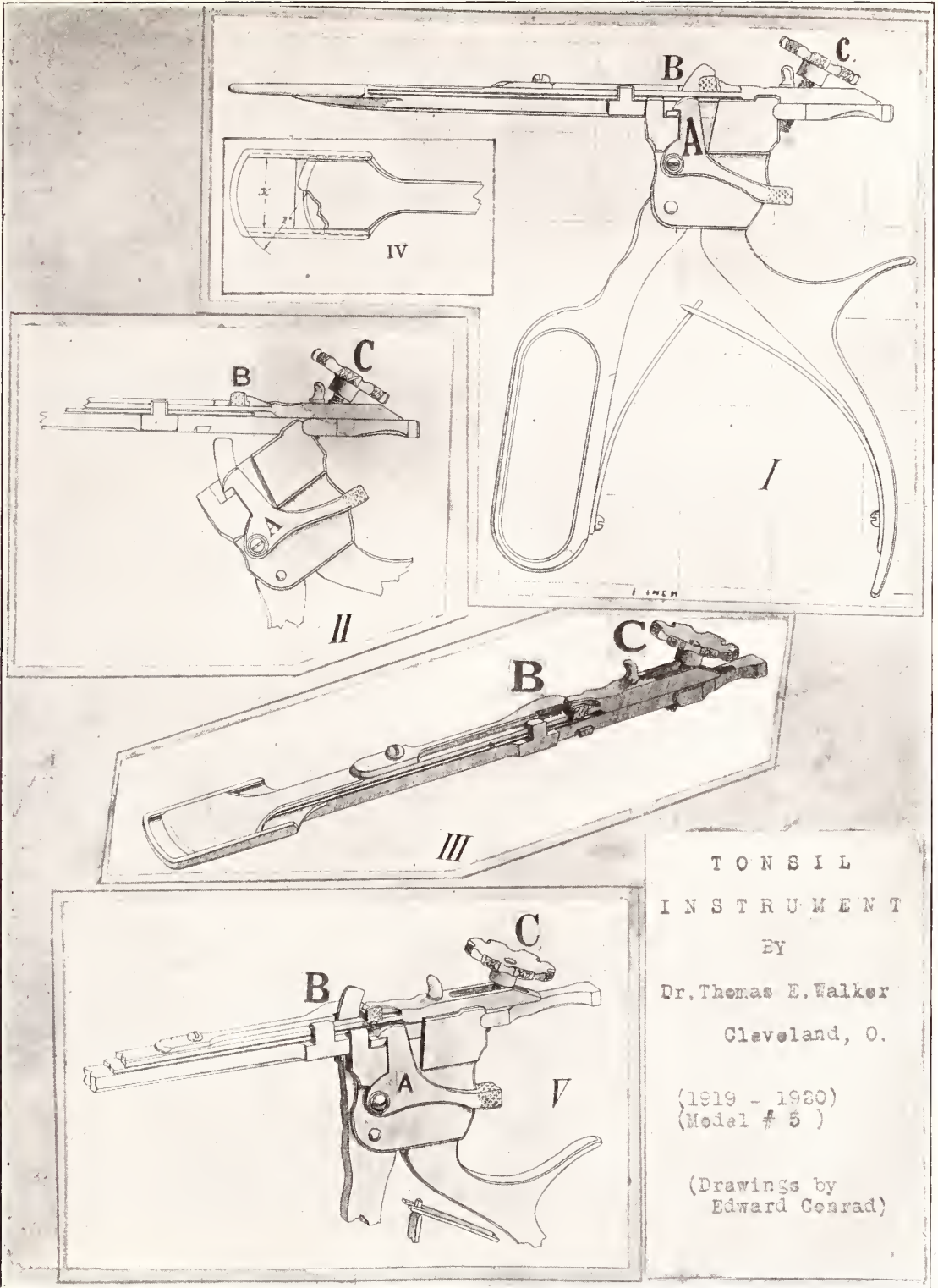
*Figs. II and V* show the lock by means of which the handle is attached and detached. This

is simple and effective, allowing the removal of the handle with the least possible manipulation and with no jarring or pulling of the haemostat when that is in place. It is only necessary to press with the thumb the projecting end of the dog *A*.

*Fig. III* shows the dissecting haemostat. This consists of a dissecting holding blade working proximal (nearest the patient) to a cutting blade. Both of these blades are actuated by the handle, the force being transferred from the dissecting to the cutting blade by means of a mechanical device attached to the dissecting blade, shown at *B* *Figs. III and V*. This part of the instrument weighs but three ounces, the weight of an ordinary large haemostat.

There is no crushing blade. After the dissecting blade has separated the encapsulated tonsil from the sinus, the window through which the tonsil had passed is closed, holding closed also the sinus where the tonsil had been. This prevents hemorrhage and it is not necessary to use crushing force to do it. The dissecting blade is held in the closed window by means of a screw acting against an inclined plane. This allows for different thicknesses of tissues in different cases, as illustrated in *C* *Figs. II, III and V*. The engaging edge of the dissecting blade is similar in contour to the edge of a wire such as is used in a snare. The dissection is done as the blade is made to close the window. After the window is closed and held so, the cutting blade is forced to cut against a soft copper plate on the distal side of the window, by pressing *B* and using the handle. This cuts the edge of the capsule from the pillars both anterior and posterior. The handle is detached and the tonsil removed from the throat with a tenaculum.

The window through which the tonsil passes is of a peculiar shape, being rectangular with the distal side curved. This curve is the arc of a circle whose radius is equal to the diameter of the window. Illustrated in *Fig. IV*  $r$  equals  $x$ . The reason for this shape is to make nearly perfect apposition, when tissues interpose, of the



TONSIL  
INSTRUMENT  
BY  
Dr. Thomas E. Walker  
Cleveland, O.

(1919 - 1920)  
(Model # 5)

(Drawings by  
Edward Conrad)

dissecting blade and the distal side of the window. Mechanically perfect apposition here can only be made when the blade is straight and fitting against a straight side. The window then would be rectangular and that type of window does not fit the tonsil and so does not facilitate the opera-

tion as well as a round or oval window. Hence we use the mechanical equivalent of approximation of the two.

METHOD OF USING THE INSTRUMENT

The manner of using the instrument is as fol-

lows:—With the patient anesthetized, in the dorsal position, with the mouth opened, using a Whitehead type of mouthgag, the window of the instrument is held horizontally and the distal side placed against the posterior pillar of the opposite tonsil after which the instrument is moved as if it were used to throw or scoop the tonsil out of the mouth, this causes the tonsil to bulge upward. Then with the thumb of the opposite hand the tonsil is pushed through the window and the dissecting blade made to push back the anterior pillar and is forced back over the tonsil, as the window is closed. Now the screw *C* is turned down until it is tight. The cutting blade is brought into action and the operation is completed. The handle is now removed and the haemostat raised to a vertical position. The tonsil is removed with a tenaculum. After the haemostat has been left in place for a period of from one to three minutes, it is removed and the same procedure followed on the other side. The operation may be started under primary anesthesia and the anesthetic continued while the haemostat is in place on the first tonsil, as there is no hemorrhage.

In the cases of most children the blood-clotting time is about four or five minutes. Where this is true the application of the haemostat, to produce a bloodless operation, is one to two minutes. The operation is particularly applicable to cases of children. The short anesthetic and the absence of blood make it very desirable. The fact that adenoïdectomy is usually done at the same time in nowise complicates the procedure.

#### DISCUSSION

It will be seen that in the use of this in-

strument the tonsil within its capsule is dissected away from the sinus, and the sinus held closed, before any cut is made through the mucus membrane at the edge of the pillars. No part of the instrument comes in contact with the denuded floor of the sinus, nor is there any sponging of the sinus. The operation then is an aseptic one until after the haemostat is removed. There is no bleeding following. While the haemostat is applied there is poured out a serum, such as exudes from any denuded surface, which is not bleeding. This serum acts as a protection against subsequent invasion by bacteria and this together with the fact that there has been but little trauma, as the tissues were handled very gently, explains why the throats are not sore and why the period of convalescence is shortened. Many cases show almost completely healed sinuses at the end of the third day after the operation.

#### ADVANTAGES

The advantages of the method using the instrument described are:—

- (1) The clean removal of the tonsil within its capsule, without damage to pillars, uvula or the muscles of the floor of the sinus.
- (2) The gentleness to the throat of the patient, the freedom from trauma, there being no crushing of tissues.
- (3) The short duration of the operation and of the anesthesia.
- (4) The absence of hemorrhage and the consequent conservation of the patient's energy.
- (5) The short convalescent period.

1596 WARREN RD., LAKEWOOD.

### Small Advertisements

*Wanted*—A doctor in village of 250, good farming country, good roads, pay 100 per cent., all good people. On trunk line R. R., good schools, seven, eight, nine miles to opposition. A good live man could realize from \$3,000 to \$5,000 a year. All you have to buy would not exceed \$200. Address A. C. S., care *The Journal*.

*Wanted*—Doctor in small town on main market road, about forty miles from Cleveland. Good community, pleasant surroundings. Apply at once to The Mother's Club, Parkman, Ohio.

*Doctor Wanted*—Good territory and living conditions. Former doctor has retired. For further information inquire W. C. Butler, Box 6, Gilmore, Ohio.

*Wanted*—Young, unmarried physician wishing to do eye, ear, nose and throat work. Practice established 16 years in city of 26,000. No cash needed. Address Specialist, 27 East Earle Ave., Youngstown.

*Registered Nurse*—With 11 years' experience as superintendent and general manager of hospital, desires location for a new hospital in city or town now without hospital facilities. Indus-

trial community preferred. Suggestions may be submitted to R. N., care *The Journal*.

*For Sale*—Combination mahogany Thompson Plaster electrical and nose and throat cabinet. Fully equipped. Address M., care *The Journal*.

*Wanted*—Physician specializing in Rectal Diseases. Half interest in established practice. Instruction. A. M., care *Journal*.

*Wanted*—Ohio location, with or without real estate. Address 204, care *The Journal*.

*Wanted Location*—Unopposed in rich agricultural section, small farms, good roads, etc. Will consider small amount of real estate (preferably none). Address K. H., 1217 Fair Ave., Columbus, Ohio.

#### NEW OFFICERS OF SIXTH DISTRICT

Dr. J. P. DeWitt, Canton, was elected president of the Sixth Councilor District of the Union Medical Association at its annual meeting in Canton, in February. Dr. J. H. Seiler of Akron was reelected secretary-treasurer. Dr. D. W. Stevenson, Akron, is councilor of the district.



## Salvaging the Handicapped for Lives of Service --- How You May Help Others to "the Better 'Ole"

The State Board of Vocational Education is asking The Ohio State Medical Association to help in securing a census of disabled men and women in Ohio who may be eligible for vocational training to overcome an economic handicap resultant from injury or disease. This opportunity for humanitarian service is expected to appeal to all. The week of May eighth will be set aside for the purpose. Not much will be asked of any one physician, but the combined effort "will go far toward helping friends and neighbors bridge the gap between the disabling-stroke and a return to self-respecting employment," say those in charge of the movement; the purpose being to return to gainful occupation and to civil usefulness those who through accident have become unfitted for their previous occupation, trade or vocation.

The Civilian Rehabilitation Service, with headquarters in the State Department of Education, State House Annex, Columbus, wish the people to give to their local doctors the name, address and age, of any one over sixteen years of age whom it is desired to bring to the attention of W. F. Shaw, State Supervisor of the Rehabilitation Service.

Each doctor will be asked to compile the list so secured during the week of May eighth and forward it to the State Supervisor's office. Complete directions, accompanied by the necessary blanks and postage will be mailed to each member of the Ohio State Medical Association in ample time to enable him to make the report.

"Let's do this and do it well. There is now no reason for consigning our handicapped men and women to a future dependence upon the charity which can only mean an endless succession of idle days. It is good business and good common sense to train what is left so that an injured man may do an honest day's work, look his neighbor squarely in the eye, and draw a man's wage because he does a man's work," says the appeal directed to the medical profession of Ohio.

### FUNDS AVAILABLE

For the current fiscal year ending June 30, 1922, there is available \$109,429 for retraining through vocational education men and women disabled in industry or in public accident and making possible the training of those who are born blind, deaf, or with impairment which constitute vocational handicaps. The test of eligibility is one of handicap and then feasibility for training.

### GENERAL CONDITIONS

In each instance training must be *feasible* and so planned as to enable one to return to remunerative employment in normal competition with others. Children under 16 years of age are not

eligible but, later on, will receive consideration. For the present they should be encouraged to enter the schools for crippled children now being established in the state. The costs of tuition, tools, books, and supplies can be paid from these federal and state funds. No maintenance monies are provided under this law, but in necessary cases are secured through cooperation with social service agencies.

### KIND OF TRAINING GIVEN, WHERE AND HOW

Training courses are always planned to be given in the home communities if possible, and courses are so planned as to use one of five different types of training:

1. The recognized educational institutions.
2. Shops and Factories.
3. Part-time Instruction.
4. Tutorial—sending the teacher to the home.
5. Correspondence School Courses.

In determining what training shall be given at least five considerations must have careful attention:

1. The man's previous education.
2. The previous industrial experience.
3. The disability itself.
4. The man's desire.
5. The probability of after-employment.

The effort is not made to give trade training but rather to fit a man for a special process suitable to his particular disability.

So far attention had been given to more than 700 Ohio men and women residing in 178 different communities. More than 250 are now in training in courses given in colleges, commercial schools, city shops, and in village and farm homes, scattered throughout Ohio. This work is just in its infancy. The future is full of promise for such a humanitarian effort when already it is a well established fact that where mental powers are present a respectable remnant of the human frame can overcome most of the handicaps of mutilation.

In the next issue of *The Journal* more will be said about this opportunity to carry to many disabled men and women the message that life still holds its chance to come back strong in spite of a present handicap. During the week of May eighth the way is open to help others to "the better 'ole."

### PHYSICIAN CABINET MEMBER

The medical profession now has a representative on President Harding's cabinet in the person of Dr. Hubert Work, who has succeeded Will H. Hays as Postmaster-General of the United States. Dr. Work is president of the American Medical Association and an ex-president of the Colorado State Medical Society. During the war he served on the staff of Provost General Crowder and supervised the medical features of the draft. He is 62 years old and has resided in Pueblo, Colorado.

**Restrictions—Plus**

(Continued from page 251)

"alcohol" is undoubtedly recognized as a necessary scientific product as a precipitating agent, as the "vehicle" for innumerable liquid drugs. And yet the organized and united anti-medical cults are finding substance for their specious arguments by claiming that the proportion of physicians who hold narcotic and intoxicant permits, indicates the fallacy of *any medication*.

Moreover these self-interested contentions are given credence by rabid prohibitionists and even by law enforcement officials.

While no attempt can or should be made to defend or justify the use of intoxicating *beverages*, much less drug addiction, public welfare and public safety demand proper, judicious, scientific medical judgment and practice, sufficiently unhampered by bigotry, ignorance or governmental dictation.

On these and many other pressing problems the medical profession through its organization requires and should have, in a national way, stronger and more representative "medical viewpoint" in the guidance of federal legislation, regulation and administrative policies.

**Ohio's Workmen's Compensation**

Hardly a week passes but what there appears in magazines and newspapers complimentary articles on Ohio's model Workmen's Compensation Act, after which similar laws in other states have been copied. Undoubtedly the Ohio law on this subject undertakes to equitably distribute the burden of industrial accidents as well as to provide for proper medical and surgical treatment of accidents occasioned from industrial hazards, with the result that cash benefits to injured workmen are minimized and economic loss reduced. However, a suggestion is now under consideration by the Ohio Director of Industrial Relations for a reorganization of the medical department of the State Industrial Commission through which physicians and surgeons employed on full time by the state would render medical and surgical service on a fixed salary to those injured in industrial accidents or to those who contract occupational diseases in the course of employment.

A communication received at the executive offices of the State Association states that "It is the director's plan to organize medical units in each of the larger cities, where doctors and nurses with complete hospital equipment would be on duty at all times. All medical attention necessary to care for an injured workman, after the first aid service would be rendered by these medical department branches. If the injured man is unable to call at the commission's hospital, a doctor or nurse will care for him at his home or the hospital to which he is taken following his injury. . . . Branch offices of the commission are now located at Cleveland, Cincinnati, Toledo, Dayton, Akron and Youngstown, and it is expected that the plan will be first tried at

these places with the possible addition of Canton. However it will be several months before the plan will be inaugurated as a number of details are yet to be worked out."

The far reaching effect of an innovation of this nature is readily apparent. In the first place, how could the state afford to establish complete hospital units including physical equipment? and in the second place, how could the very best medical service be insured under such a system of salary or contract practice with the state?

One of the principles under which the Ohio Workmen's Compensation Law has developed has been the inherent right of the injured employe to select his own physician. First class medical and surgical care has been insured in many cases in the past which might have been excluded had medical employes of the state handled the cases directly. The question arises as to whether or not there could be an economic saving to the workmen's compensation fund under the contemplated system, for while the amount paid out for medical services might be reduced the amount of claims for time lost following industrial accidents might be increased.

With an average of ten thousand industrial cases referred to the Industrial Commission each month, the number ranging in fact from seven to fourteen thousand in such a period, with almost a million men and women possible beneficiaries under the Workmen's Compensation Act during favorable industrial times, it is not surprising that the medical fees under the present system through the Workmen's Compensation Law aggregate three million dollars annually, and this sum, of course, includes medical service for many thousands of industrial injuries of brief duration in which there is no claim for award for loss of work on the part of the injured employe.

As a matter of fact the kind of medical and surgical service available to injured employes is of most vital consideration in the success of the operation of the law and the administration of industrial justice. To jeopardize such service would create much injustice not alone to members of the medical profession but more particularly to the injured employes themselves. After all, the funds expended for medical service under the Workmen's Compensation Act in the course of a year total less than one-fourth the funds disbursed to injured employes for loss of time and wage.

The headquarters of your Association has the promise from Director of Industrial Relations Tetlow that no radical innovation in the administration of the law will be undertaken until after conference and consultation, and while there is no imminent danger of any such change in the system, the fact that it has been suggested or considered is a striking indication of the possible trend toward state practice of medicine, with fearful results which must be guarded against and consistently opposed through organized medicine.

**Medical Regulation Gone Mad**

Repeated allusions have been made to the absurd restrictions advocated in legislative bodies tending to hamper the physician in his professional judgment and interfere with his professional privileges.

It is unnecessary to recount the various types of legislation proposed and already enacted which are so well known that they may be classed as a common scourge, but some of the newer attacks on the medical profession are so ridiculous that the final result will react in favor of the profession itself.

As an example a bill now pending in the New York state legislature to require the presence of a female attendant whenever a female patient is examined by a male physician, calls forth the following picturesque characterization by a lay editorial writer:

"Adopting with approval the doctrine of the ultra feminists that man is a 'monster of frightful mien,' and accepting the hysterical defense of a neurasthenic murderess who probably was under the influence of a drug when she struck and slew, a member of the New York Legislature has leveled an insult at the entire medical profession by introducing a bill containing vile innuendo and proposing vicious regulation of practice.

"There is a familiar flavor to the author's argument that the measure is intended not as an attack upon a great and noble profession, but to protect women against a few immoral members of it. This principle appears in every sumptuary law that has been enacted, and is the heart and soul of the vexatious and harassing ordinances foisted upon the American people by the existing religio-political menaces to society.

"If there can be conceived a greater invasion of privacy, especially the modest privacy of a chaste woman, than to require her exposure to the eyes of one not sworn to defend her secrets and to compel the disclosure of conditions sacred to herself, then the author has failed in his purpose. Again, if there can be designed a more deliberate and dastardly assault upon a calling that represents a divine dispensation to the sufferers of the world, then his work again is lacking."

Other ill-concealed and jealous attempts against the medical profession are illustrated in pending proposals which would place propaganda against vivisection in the public schools; a representative in the South Carolina legislature having introduced "a bill to provide for humane education in the schools" with the mandatory provision that "a certain minimum of time shall be given each week during the whole term of school to the teaching of kind and just treatment of horses, dogs, cats, birds and other animals."

Even this is not as absurd as the proposal in Kentucky which would eliminate from the public schools any text books on evolution and the Darwinian theory under the guise of "religious privilege" and which, if carried to its logical conclusion, would prevent instruction to the youth of that state in such fundamental sciences as biology and physiology. On first vote in the House of Representatives this bill was rejected by one vote.

**Infant Mortality**

With the general interest in maternity and infancy at this time and particularly with the proposed educational program under the Sheppard-Towner act, the latest data on infant mortality just compiled by the Department of Commerce, through the Bureau of Census, is significant.

The first report on the provisional infant mortality rate in 51 cities scattered throughout the nation and based on estimated births for 1921 shows a record low death rate of children under one year of age; or a reduction from 90 deaths per thousand births in that many cities in 1920 to an average of 74 deaths in 1921.

The data for seven Ohio cities in this list is of particular interest, indicating as it does a probable record decrease in infant deaths in this state. The number of deaths in these cities, together with the death rate, under one year of age per thousand of births, both in 1921 and 1920 are given.

	1921		1920	
	Number	Rate	Number	Rate
Akron .....	336	66	452	84
Cincinnati .....	602	77	644	82
Cleveland .....	1,463	73	1,692	87
Columbus .....	360	73	453	96
Dayton .....	237	77	275	85
Toledo .....	406	76	473	89
Youngstown ...	365	93	375	95

The United States Public Health Service in recent literature again pointed out that each year nearly a quarter of a million babies die in the United States; of which a large number could have been saved; that one hundred thousand of these babies die in the first month of life, most of them because of conditions affecting the mother before the baby was born; and that proper care and attention to mothers before the baby is born would save thousands of lives.

It is further pointed out that in this country at least 15,000 mothers die in childbirth each year; that is, one mother to every 150 cases of childbirth.

The literature of the United States Public Health Service indicates that educational efforts should cause expectant mothers to seek better care through frequent consultations with competent physicians. It further points out the dreadful danger of advertising quacks and frauds, particularly patent medicines which are widely advertised. The Public Health Service properly says in speaking of these: "They are all frauds. Instead of wasting money on them, expectant mothers should seek a doctor's advice."

The necessity for professional guidance and medical leadership in approaching all these problems, which indeed are basically medical and scientific is expressed by Dr. J. H. Mason Knox, of Baltimore, who says:

"The large amount of public, professional and governmental interest in child welfare work which has developed in recent years has been manifest more in philanthropic than in the medical aspects of the problem; propaganda and or-

ganization rather than medical service have been stressed. Doubtless, in pioneer work these were logical methods of attacking this public health problem; but infant welfare work is not only a

philanthropy. It is also preventive medicine in diseases of children, *and only as it is medically effective should it command encouragement and support as a social benevolence.*"

## DEATHS IN OHIO

*George M. Allen, M. D.*, Miami Medical College, 1881; aged 73; member of the Ohio State Medical Association and Fellow of the American Medical Association; died in Cincinnati, March 3.

*W. E. Atwell, M. D.*, Cleveland University of Medicine and Surgery, 1869; aged 82; died in Zanesville, January 19, from senility. Dr. Atwell was a veteran of the Civil War.

*John A. Burgoyne, M. D.*, Starling Medical College, Columbus, 1893; aged 50; member of the Ohio State Medical Association; died at his home in Columbus, February 23, following a short illness from bronchial pneumonia. Dr. Burgoyne was a resident of Columbus for 30 years. He leaves his wife, one son, parents and two sisters.

*George E. Calhoun, M. D.*, Kentucky School of Medicine, Louisville, 1894; aged 52; member of the Ohio State Medical Association and Fellow of the American Medical Association; died in Canton, February 22, from a complication of diseases. Dr. Calhoun's home was in Uhrichsville. He served during the World War in the medical department of the Army, being attached to the 332d regiment of infantry. Surviving are his wife and five brothers.

*J. O. Clark*, Licensed to practice in Ohio, 1896; aged 83; died at his home in Downington, Meigs County, February 4. Dr. Clark was twice a member of the Ohio legislature.

*Alexander A. Crump, Jr., M. D.*, University of Wooster, Medical Department, Cleveland, 1872; aged 71; member of the Ohio State Medical Association; died at his home in Millersburg, January 26, after a 36 hour illness from pulmonary edema. Dr. Crump had practiced in Millersburg for 49 years. He is survived by his widow.

*Clifford Summer Hiddleston, M. D.*, Medical College of Ohio, Cincinnati, 1883; aged 61; member of the Ohio State Medical Association and Fellow of the American Medical Association; died at his home in Akron, February 15, from arteriosclerosis and chronic nephritis. Dr. Hiddleston practiced in Akron for 20 years, limiting his practice to internal medicine. His widow, one son and one daughter survive.

*Joseph V. Longfellow, M. D.*, Miami Medical College, Cincinnati, 1886; aged 64; died at his home in Urbana, February 12.

*Eleazur King Nash, M. D.*, Cleveland Medical College (Western Reserve University School of Medicine), Cleveland, 1861; aged 93; life member of the Ohio State Medical Association; died at his home in Akron, February 10. Dr. Nash was the oldest physician in Summit County and left a record of 40 years of practice as a physician and surgeon, in addition to four years' service in the Civil War as surgeon-major of the 14th Ohio Volunteer Infantry, taking part in many important battles and accompanying Sherman on his famous march to the sea. At the close of the war Dr. Nash located in Montrose, where he practiced until 1906, when he retired and moved to Akron. In spite of his age Dr. Nash was mentally and physically alert and in the past eight years is said to have missed only seven meetings of his county medical society. Surviving are one son and one daughter.

*Vance T. Reynolds, M. D.*, Eclectic Medical College, Cincinnati, 1904; aged 44; died at his home in South Lebanon, recently, from diabetes. Dr. Reynolds practiced in South Lebanon for 18 years.

*Francis R. Sparling, M. D.*, Starling Medical College, Columbus, 1880; aged 68; former member of the Ohio State Medical Association; died at his home at Devol's Dam, Washington County, February 3. He leaves a widow, one daughter and four sons, one of whom is Dr. Harry Sparling of London.

*James H. West, M. D.*, University of Louisville, 1873; aged 83; died at his home in Springfield, January 2, from cerebral hemorrhage.

*George M. Sweptson, M. D.*, Eclectic Medical College, Cincinnati, 1890; aged 60; died at his home in McArthur, February 23, following a long illness which for more than a year had rendered him unable to engage in active practice.

*Burnett C. Vorhes, M. D.*, Medical College of Ohio, Cincinnati, 1881; aged 67; former member of the Ohio State Medical Association, died March 5, at Punta Gorda, Florida, where he was spending the winter. Dr. Vorhes' home was in Columbus. He leaves his wife and one son, Dr. J. H. Vorhes, Columbus.

*Andrew D. Welker, M. D.*, Louisville Medical College, 1872; aged 74; former member of the Ohio State Medical Association; died at his home in Gambier, February 7, following a long illness. Dr. Welker spent his entire professional career in Gambier. He served as a member of the Gambier board of education and the town council, and at one time was city health officer. His wife, one daughter and one son survive.

## Nostrums a Health Menace, to be Met by Uniform Laws and Closer Cooperation of Federal, State and Local Authorities

Analyzing as it does the various health problems in connection with the nostrum evil, with recommendations for correction of present conditions, the report submitted to the American Public Health Association by its Committee on Drugs and Nostrums, of which Dr. Harold J. Knapp, Cleveland city chemist is chairman, is of general interest.

"The importance of drug administration as a health matter has been, in the past, largely unheeded, and health laws pertinent to this subject have not been vigorously enforced. The explanation of this seeming indifference on the part of the health agencies is difficult to find. Up-to-date health administrations provide visiting nurses, district physicians, tuberculosis, venereal and child hygiene clinics, laboratory diagnosis and milk inspection and at the same time make possible the defeat of their main object—the conservation of health—which is vitally attacked so long as the public countenance the advertising and sale of the nostrum," says the report which follows:

### PUBLIC HEALTH QUESTION

The question may be naturally asked: In what manner does drug and nostrum advertising and sale effect the public health? In our opinion the answer may be made in a few words. The proprietary concern encourages self-diagnosis, inspires fear, and having accomplished these things, it does encourage self-medication and places a responsibility of treatment, whether necessary or not, in the hands of the individual.

The medical profession is partly responsible for the nostrum evil since it has never taken an effective stand against self-medication, and ignores the drug department of the cross-roads store with its proprietor or clerk, often incompetent to distinguish between general merchandise of good or inferior quality, but, at the same time, is regarded by customers as one qualified to prescribe the proper tonics, pills or treatments for an unlimited variety of ills, real or fancied.

As pertinent to the human welfare aspect the economic features of the nostrum evil should be emphasized. It is self-evident that the retailer who, in a large proportion of cases, is a member of the pharmaceutical profession, is an institution which should be protected, nevertheless the manufacturer to whom the major profits accrue has no legitimate claim for such protection or perpetuation.

### LOSS OF MONEY AND HEALTH

A vast sum of money is spent in worthless nostrums. So long ago as 1905 it was estimated

that seventy-five million dollars was expended by the American public annually for the nostrum. It is manifest that a still greater potential sum is squandered in idleness consequent to the interminable waiting for cures. Finally, many valuable lives are shortened because of ill-advised dependence on nostrums instead of scientific treatment.

Every health administrator has undoubtedly had instances of fatal self-medication brought to his attention. First knowledge of the situation is frequently obtained from appeals for the aid of physician or nurse. On arrival, these agents find lethal exit at hand and their services consequently futile, whereas, timely supervision might have saved the patient from such a termination.

In any consideration of this subject, mention should be made of our present defective health educational program relative to the nostrum. No sane individual will deny that there is a demand on the part of the public for the nostrum. This demand has been created and kept alive by the proprietary manufacturer. The creation of this demand has been and will remain an educative effort on the part of nostrum promoters. In order to combat this policy it will be necessary to health agencies to educate the public concerning the nostrum and its attendant evils.

### LEGISLATION WEAK

The health menace in worthless and criminally adulterated and misbranded drugs and nostrums has been dimly appreciated for a number of years and has been partially met by legislation, both state and national in scope. Unfortunately, however, the effect of this legislation is not all that could be hoped for or expected.

The present federal food and drug act is adequate as to adulteration and misbranding and the Department of Agriculture cannot be praised too highly for its excellent law enforcement work in the past few years. However, the Federal Government can control only interstate commerce. Vital weaknesses still exist. There is no control over newspaper and magazine advertising and Federal law cannot regulate inter-state commerce. The present Federal system of law enforcement consists in the forced correction of any adulteration or misbranding. In our opinion, infringements of drug laws have been regarded as merely technical violations. Violators have been only nominally fined and have been permitted to withdraw interstate shipments which have been seized, by consenting to relabel their goods, furnishing a bond for the execution of the same.

## LOCAL LAWS INADEQUATE

By all odds the greatest defects in drug and nostrum law enforcement lie in intra-state inadequacy. The fundamental reasons for this inadequacy are:

(1) A lack of proper appreciation of the problem as a health matter.

(2) State appropriations, for drug enforcement, already undertaken, have been entirely inadequate for coping with such a problem.

(3) In any enforcement program undertaken, drug and nostrum control has been entirely subsidiary to food and animal feed problems. The vital human welfare aspect has been entirely unappreciated.

(4) Even at best, intra-state control has had inadequate laboratory and inspection facilities. It is a well known fact that a half dozen inspectors cannot properly cover the wants of millions of people.

(5) In any work already undertaken, there has been absolutely no control over the magazine and newspaper. Consequently advertising has been able to extol the virtues of preparations in a way which the labels could not. At the same time there has been no penalty attached to such fraudulent advertising since any advertising laws which have been in existence have not been enforced.

## RECOMMENDATIONS

Since this committee has enumerated many weaknesses and criticized our present system, it should be in a position to offer constructive suggestions, and recommend a remedy for the faults which it has exposed. Several suggestions are here proposed:

(1) Uniform laws and their proper administration.

(2) Adequate advertising laws and restrictions.

(3) Adequate pharmacy laws and a license system.

## LABELING AND ADULTERATION

The first suggestion pertains to labeling and adulteration and several phases of such legislation should be taken into consideration.

(1) *State Food and Drug Laws.*—In quality and effectiveness of state food and drug laws, three standards may be established—good, bad and indifferent. In other words there is absolutely no uniformity in the various state codes. Therefore, it is imperative that an effort be made to make state laws more nearly uniform and at least equal in stringency to the Federal law. At the present time, if our understanding is correct, there is no provision in any states for the seizure, under due process of law, of adulterated or misbranded preparations. It is certain that any law on this subject must have a seizure clause in it, if it is to be effective.

(2) *Enforcement of State Laws.*—The enforcement of State laws should be placed in the hands of local and state health departments

since it is obvious that this is purely a public health problem.

(3) *Technically trained enforcement officials* with broad health views are essential since this is a health problem and not one of agriculture, our grievance with the present state system has already been touched upon. In most instances, Departments of Agriculture enforce these laws and, since their interests are mainly agricultural, their activities concentrate upon foods and animal feed matter to the consequent neglect of drugs and nostrums.

## ADVERTISING

The second suggestion pertains to adequate advertising laws. At the present time in most states there are advertising laws on the statute books. However, such laws in most instances are merely technical. No attempt is made in their enforcement, except by the various advertising clubs. Their efforts are directed only toward the field of fair advertising, consequently their viewpoint is not the health one. It is, therefore, suggested that there should be adequate advertising laws with sections devoted to misbranding matters. The enforcement of such sections should be in the hands of health agencies.

Until model advertising enforcement laws pertaining to these matters are passed it is necessary to have legislation amending the food and drug laws in such a way that newspaper or magazine misrepresentation may be considered in court as label misbranding. At the present time enforcement agencies have no control over advertising mis-branding, except as may be carried on by co-operation between the newspaper interests and enforcement agencies. This co-operative effort can hardly be considered as control.

Such advertising legislation, to be effective, should be comprehensive enough to enable the exclusion from the mails of all publications, bearing advertisements of products which are under indictment in the court. The constitutionality of such measure might be questioned, nevertheless, efforts toward such legislation should be made, for it has been our experience, in the past, that lawsuits under food and drug laws have often been indefinitely postponed, while the activity, against which indictment was made, proceeded unmolested.

It is the desire of this committee to emphasize the fact that health and medical agencies in the past have been rather negligent of their opportunities in the control of medical advertising. No earnest or concerted effort at co-operation with advertising interests have been made in the attempt to exclude fraudulent proprietary advertisement from so-called high class publications. It may be mentioned that the Scripps-McRae League has already established a censorship over various forms of medical advertising. This, apparently, has been done voluntarily in the in-

terests of good business. Much more could have been accomplished even without the aid of laws had our agencies realized their opportunities in the field of intelligent co-operation and constructive criticism.

The third suggestion pertains to pharmacy laws and licensure and emphasizes the importance of local pharmacy law administration and a local licensing system. At the present time, pharmacy law enforcement is charged to the various state pharmacy license boards and, to say the most for such a system, this is a very inadequate arrangement. These licensing boards conduct examination and license candidates according to their fitness to dispense and compound drugs.

#### SALE OF POISONS

Pharmacy Boards provide certain restrictions for pharmacists selling poisons to individuals. However, any itinerant vender or grocery may sell with impunity any number of poisons, either in the form of standard chemicals or in the form of the proprietary. If any accident occurs from this lack of control, local health agencies have no power of action against such vender. Therefore, it is suggested that local pharmacy laws should be enforced by local health departments, and in such an enforcement it is self-evident, in order for such agencies to exercise control, a license system, with power of revocation is imperative. Consequently, any license granted to dealers or manufacturers should be given only after strict inspection of the applicant's character and his mental fitness for such an occupation. Such a measure would tend first to place the sale of drugs in the hands of men competent to handle them, namely, the legitimate pharmacist or other qualified person. In addition to local licensing of pharmacies and drug handling establishments, it is advisable that any and all drugs or nostrums should be registered by the manufacturer, before sale or manufacture. The granting of such license to be predicated upon submission of label, proposed advertising and formulae. Any license so granted, by a body or commission responsible to public health authorities, in the state in which such manufacture takes place, should be based upon laboratory examination and specificity. If such a procedure be instituted, the issuance of license to retailers handling these registered products, would thus be obviated. The potent argument for such a registration and license is that, by this means alone, may enforcement officials pass scientific judgment upon the relative merits of therapeutic agents.

#### CLEVELAND AND NEW YORK

It might be mentioned that in only two localities at the present time is drug registration carried on. At the present time all new proprietaries going on the Cleveland market are passed upon by the City Chemist and at the same time it is required that formulae be submitted. This

requirement is not based upon any regulation or law but carried out because the local Druggists Association in cooperation with the Division of Health have agreed not to stock any preparation that is not submitted to the Division. The City of New York also has a registration system for proprietaries on their local market.

In conclusion, the committee wishes to emphasize that there be greater co-operation between Federal, State and Local Health Associations, since it is only by cooperative effort that we may be able to wage an effective fight against this evil.

The above report is published through the courtesy of the *Bulletin of the Cleveland Academy of Medicine*.

#### Occupational Diseases Reported Under Workmen's Compensation Act

Up until the middle of March there had been 185 cases of occupational diseases reported to the State Industrial Commission since the section of the Workmen's Compensation Act covering this class of disability became operative last August.

Six of these came as death claims, two of which have been disallowed. Four were still pending. During February there were 34 of these occupational disease cases reported, three being deaths. The cases of this nature disposed of during the month numbered 31.

Of the total of 185 disease claims a large proportion were due to dermatitis, there being 113 of these. Next in number were those caused by lead poisoning, 34; anilin poisoning 3; carbon dioxide 3; anthrax, arsenic and zinc poisoning, 1 each. Nineteen cases attributed to rheumatism and similar ailments have been disallowed as occupational disease claims.

During February there were fewer total claims filed with the Industrial Commission than during a similar period in several years past, the total for the month being 6,891, including 59 deaths. During February of last year there were 7,802 cases filed. The busiest month in the history of the Commission was July, 1920, when industry was at its peak and when 18,557 claims were reported. There has been a steady decline in number since that time.

#### To Those Who Have Practiced in Arkansas

*The Journal* has been asked by the Arkansas Medical Society to extend an invitation to Ohioians who formerly practiced in Arkansas to attend the annual meeting of that society in Little Rock, May 17-19, which has been termed "the home coming meeting." It is pointed out that it will be convenient for those enroute to the A. M. A. meeting at St. Louis to stop off and renew old acquaintances in Arkansas and then resume their journey.

## Organization Problems, Membership Policies, the Annual Meeting Plans and New Proposals Feature March Session of the Association Council

### MINUTES

Council of the Ohio State Medical Association met in Columbus, March 5, 1922, at 1:30 P. M. The following officers and councilors were present: President Teachnor, President-elect Carothers, Treasurer Platter; Councilors Haines, Hendershott, Updegraff, Stevenson, Brush, Rardin, and Goodman; Dr. Upham, chairman of the Committee on Public Policy and Legislation, Dr. Bigelow, chairman of the Publication Committee, and Executive Secretary Martin.

Following the convening of Council, the approval of the minutes of the previous meeting as published in the February issue of *The Journal*, Dr. Carothers and Dr. Haines reported at length on local arrangements for the forthcoming annual meeting of the State Association in Cincinnati on May 2, 3, and 4. Among the entertainment features were mentioned the golf tournament on Monday, May 1; the smoker and social session on Tuesday evening, May 2, and the annual banquet on Wednesday evening, May 3, as well as the special features of entertainment for the wives and daughters of members; the local entertainment committee being authorized to secure an attractive speaker or speakers for the annual banquet.

Dr. Goodman, chairman of the Auditing and Appropriations Committee, outlined the budget for the annual meeting, and assurance was conveyed on behalf of local committees that such budget would be adhered to.

As chairman of the program committee Dr. Goodman submitted in detail the program for the general sessions and the scientific sections, which was accepted and heartily approved by Council as read and corrected in minor details. (Full detailed program appears elsewhere in this issue.)

On the question of stenographers for scientific sections, the Council reaffirmed its policy of not providing stenographers for the various section sessions, based on previous experience, and a constructive policy was adopted whereby discussants would be urged to submit their remarks in typewritten form to *The Journal* within two weeks following the annual meeting, thus avoiding delay in correction of stenographic notes and rewriting of discussions.

Council also reaffirmed its policy of permitting an essayist to appear before only one section at the same annual meeting.

On the question of badges for the annual meeting, a proposal submitted by Dr. Geier, Cincinnati, to provide uniform badges, ordered in quantities sufficient for several years in succession, was laid on the table until after the next

annual meeting, in view of the short time between now and this year's session, and the local badge committee was authorized to proceed in securing badges for this year.

On the question of scientific exhibits, it was agreed that space and facilities were not available in the Gibson Hotel where all sessions will be held, and that scientific exhibits could not be provided for this year in addition to the commercial exhibits, with the understanding that this matter will be taken up in time for the next annual meeting.

On the question of a meeting place for a group which has petitioned for a Section of Clinical Diagnosis, Council decided that it has no constitutional authority to take official cognizance of such program until and unless officially provided by the House of Delegates, and a proposal on the matter was referred to Dr. Haines, Cincinnati, councilor of the First District, for consultation with Dr. McKim, chairman of the committee on meeting places.

On motion by Dr. Goodman, seconded by Dr. Haines, Council authorized the appointment by the President of a committee on credentials for delegates, and the Executive Secretary was instructed to request the secretaries of the constituent county societies to certify officially their delegates to the state meeting on or before April 1.

Announcement was made by Dr. Carothers that the time in Cincinnati the first week in May during the meeting would be daylight saving—Eastern Standard time.

Upon motion, duly seconded and unanimously carried, Council issued instructions that Chapter 1, Section 2, 3, and 4, of the by-laws restricting registration and attendance at the annual meeting and its various sessions to members in good standing of the State Association be strictly adhered to as shall Section 4, of Article IV of the Constitution which defines those who may be admitted as guests, limited to physicians from outside Ohio and to eminent members of scientific professions not medical but allied thereto.

\* \* \*

Dr. Upham, chairman of the Committee on Public Policy and Legislation of the State Association, explained the cordial relationship of mutual understanding which had been maintained on behalf of the Association with the State Department of Health, and through which Ohio has now set an example in defining "state medicine" and its limitations. (See first editorial in this issue of *The Journal*.) Dr. Upham's committee was commended and approved by Council



for its efforts and accomplishments in this matter. \* \* \*

A report submitted by the Executive Secretary showing a total enrollment of members in good standing in the State Association for 1922, of 4004, as compared with a total for the entire year of 1921 of 4868, was accompanied by a detailed comparison by counties.

President Teachnor then read to Council the following formal communication on membership policy which on motion by Dr. Rardin, seconded by Dr. Haines, was unanimously adopted as the official attitude of Council on this subject, and was ordered published as a part of this record:

"To the Members of Council:

"As president of the Ohio State Medical Association, I feel that the Council should come to a definite understanding and be guided by a definite policy on the question of active membership in the State Association.

"While abnormal economic conditions have affected adversely a definite proportion of the medical profession in Ohio, and while collections of medical fees at the present time are more difficult than at periods in the past, the need for strengthening medical organization and for uniting the medical profession through the machinery of the Ohio State Medical Association, for the mutual benefit and advancement of all members, is only too obvious.

"The membership dues in the State Association have been maintained at practically a nominal figure in spite of the possibilities for extending organization activities through an increased income. In spite of the adverse conditions every eligible physician in Ohio should realize the necessity of affiliation with medical organization, the dues in which should be considered as a minor item in overhead, one of the privileges and opportunities as well as a definite duty to any one in active practice.

"I have been impressed by the wholesome effectiveness of medical organization in most of the smaller counties in this state. A glance at the membership statement of those now in good standing for 1922 indicates a more normal condition in the smaller counties than in a few of the counties containing large cities, and this in spite of the fact that the benefits of organization are often more directly realized in the cities because of the added complications accruing from industrial practice and metropolitan conditions, because of the service of the State Association headquarters in contact with state and federal departments.

"There has been too great a tendency in a few of the more populous communities toward a complicated classification in membership in the local organization, causing some confusion and lack of complete coordination in fundamental organization purposes of the State Association. It is obvious that a large membership including as nearly as possible one hundred per cent. of those eligible is desirable over a smaller membership with much greater dues. Medical organization, if it expects to progress as a unit and establish for itself the esteem and respect of the public, must include as 'active' members as nearly as possible all those eligible to such affiliation; conversely a divergent classification of members in local societies causes confusion and misunderstanding as to respective obligations, rights and privileges among the different classifications.

"Regardless of the strength, efficiency and in-

fluence of any local medical society, its purposes and attainments can be measured only by its harmonious cooperation and collaboration with similar local societies through the medium of the State Association. These possibilities are predicated on full, active affiliation in the State Association.

"The tendency toward divergent classifications in local societies not only results in a confused status among the members of the local profession thus affected in their relation to medical organization in its broader scope, but has a tendency toward and may result in a decreased active membership in the State Association.

"Council, therefore, should demand in compliance with the Constitution and By-laws, that each of the constituent and component societies and academies of medicine comprising the membership of the Ohio State Medical Association, arrange that all local members in active practice, full or part-time, whether in private practice or in public health service, and all physicians who are members of teaching staffs of medical colleges, who naturally should be in touch and affiliated with organized medicine for their own benefit, and as a prerequisite to other scientific societies, be classified so that they may be full, active members of the Ohio State Medical Association with local dues including the five dollar annual membership fee in the State Association; that non-active members in the Ohio State Medical Association, through any special classification in their local societies, be limited to those physicians and surgeons who have entirely retired from active practice and to those medical officers of the United States Army who are only temporarily located in Ohio.

"It is of course understood that the Council of the Ohio State Medical Association does not attempt to establish purely local qualifications for membership in county medical societies, nor to interfere with the inherent rights of local societies to admit to or reject from membership those who are in practice in their respective jurisdictions; but Council does insist that the proper and reasonable constitutional provisions be adhered to and that all those admitted to active membership in local societies shall fully qualify for membership in the State Association under which the local societies hold their charter as units in organized medicine, for obviously, a county medical society or academy of medicine cannot be part official and part unofficial."

\* \* \*

Dr. Bigelow, chairman of the Publication Committee, submitted on behalf of a joint committee consisting of members of his committee and Dr. Carothers and Dr. Waggoner, members of Council, a report on advertising policies, signed by all members of the committee, as follows: Drs. Bigelow, Courtright, Geier of the Publication Committee; Drs. Carothers and Waggoner, Councilors:

The report of this committee was in part as follows:

"After a thorough consideration by this joint committee of the various advertisements in the current issues of *The Journal*, including the medical directory, it was decided that the principles and ethics governing personal advertising should apply to *The Journal* as well as to such advertisements elsewhere, and the committee recommends to the Council that advertisements which contain propaganda, whether classified or display, which exploit scientific theories, or which make exaggerated claims, shall not appear

in *The Journal*, but that all advertisements shall be limited to a plain statement of fact, it being presumed, for example, that when "radium" is advertised, that the medical readers of *The Journal* will know the therapeutic properties of such agency without the necessity of quoting authorities or statistics. The committee further agreed to recommend to the Council that the policy of medical advertising in *The Journal* be limited to a purpose of information to the physician readers.

"This joint committee recommends the establishment of a policy that all advertisement, whether display or classified, shall be subject to editing, and rejection in whole or in part, by the Publication Committee."

The following memorandum concerning classified directory of physicians limited to specialties appearing in the *Ohio State Medical Journal*, was submitted and recommended by the joint committee as follows:

"It shall be the official policy of the Publication Committee, under the authority and instructions from the Council of the Ohio State Medical Association, that the principles and ethics governing physicians relative to advertisements shall apply to the *Ohio State Medical Journal*; that no propaganda shall be permitted to appear in physician's advertisements, in the *Journal*, whether classified or display; that the Publication Committee bear in mind the purpose of such advertisements as being limited to that of information to the members of the profession in Ohio; and that as to the classified directory of specialties in *The Journal* that the copy be limited to the general heading, the special sub-heading of the particular specialty, the name of the physician—the location and address of the office or hospital, the office hours and telephone numbers."

That the headings and sub-headings in this department of *The Journal* be limited to the following:

Heading	Sub-heading
Medicine	Internal Medicine Diseases of the Chest Gastro-intestinal Diseases
Surgery	General Surgery Surgery and Gynecology Surgery and Obstetrics
	Proctology Orthopedic Surgery
Neurology	Neurology Psychiatry
Obstetrics	Obstetrics and Gynecology Obstetrics and Pediatrics
Pediatrics	Pediatrics Pediatrics and Obstetrics
Dermatology	
Eye, Ear, Nose and Throat	Ophthalmology Laryngology
Genito-Urinary Diseases	Gynecology Urology Syphilology
Clinical Laboratory	Pathology Bacteriology
Radium X-Ray	Radium and X-ray X-ray and Radium

Upon motion by Dr. Goodman, seconded by Dr. Carothers, Council adopted the committee report, and authorized the Publication Committee to proceed in carrying out the policy and recommendations contained therein.

\* \* \*

Following a general discussion on organization problems and policies, President Teachnor read a formal communication and suggested that it be transmitted to the House of Delegates when it convenes for its first session at the annual meeting. Upon motion by Dr. Stevenson, seconded by Dr. Goodman, the communication as suggested was unanimously adopted for transmission by the Council to the House of Delegates. (The communication appears on page 251 of this issue.

\* \* \*

Following a general discussion of the need of a constant extension of organization activities along present lines, upon motion of Dr. Updegraff, seconded by Dr. Hendershott, the special committee appointed some time ago and authorized at the last meeting of Council to act on behalf of Council, in selecting some one for the position of assistant executive secretary, was authorized to proceed in this matter.

On motion by Dr. Goodman, seconded by Dr. Haines and voted unanimously, Council appropriated from the unassigned funds, an amount not to exceed \$250.00 per month for the remainder of this year in carrying out the purpose of this provision.

\* \* \*

On behalf of the special committee of Council appointed some time ago to study the various phases of indemnity insurance, Dr. Hendershott in summarizing the results of a thorough investigation by the Committee, recommended that the insurance question, other than the medical defense plan efficiently administered at the present time through the State Association, be tabled for the time being. Upon motion, duly seconded and unanimously carried, these recommendations were adopted.

\* \* \*

A brief report on behalf of the Ohio Hospital Committee indicated that this committee had established a new plan of thorough investigation in arriving at findings for transmission to the Council on Medical Education and Hospitals of the American Medical Association, as a basis for interne training. Council approved this report.

A brief but general summary on policy and legislation was submitted and approved.

\* \* \*

On invitation, W. C. Wendt, a member of the State Legislature from Franklin County, and active in the State Pharmaceutical Association, appeared before Council and explained the bene-

ficial results of a plan of cooperation between the organization which he represents and this Association.

\* \* \*

On motion, Council adjourned to meet in Cincinnati on Monday evening, May 1, at 7 P. M.



## NEWS NOTES OF OHIO

*Cheshire*—Dr. C. W. Ely is spending the winter in Florida. Dr. E. F. Maag has located in this village for practice after several years spent in the government service in Panama.

*Greenville*—As the first of a series of lectures to assist local high school students in selecting a vocation, Dr. W. T. Fitzgerald spoke on the "Medical Profession."

*Akron*—Dr. George T. Rankin of this city and Miss Maude Foard of Chicago were married, February 25.

*West Mansfield*—Dr. Claude Davis has accepted a past-assistant surgeonsip in the United States Public Health service and is stationed in North Carolina. His father, Dr. G. E. Davis, with whom he was associated in practice, remains here.

*Cincinnati*—Drs. W. H. and Kennon Dunham, who for over 20 years have been located at Auburn Avenue and McMillan Street, have established offices in the Union Central Life Building. The former has associated with him Dr. C. E. Wooding, and Dr. Kennon Dunham has associated with him Dr. John H. Skavlem, recently of the University of Wisconsin.

*Kinsman*—Dr. Marjorie Burnham, who has been in Serbia four years, has returned to her practice here.

*Columbus*—Dr. Claude A. Burrett was recently elected president of the Gyro Club, a local business men's organization. He represented that body at an international convention of Gyro Clubs in Toronto in February.

*St. Marys*—Dr. and Mrs. Harry S. Noble are enjoying a trip through the British Isles, European continent, Palestine, and North Africa. Dr. Noble will attend a series of surgical clinics in Great Britain.

*Cleveland*—"The Physiology of Life at High Altitudes" was the subject of the Fifth Hanna Lecture delivered at the Medical Library, February 24, by Joseph Barcroft, F. R. S., Fellow, Kings College, Cambridge, England.

*Seaman*—Dr. James R. Lytle, a former resident of Indiana, Pennsylvania, has opened offices here.

*Tiffin*—Dr. V. T. Carr and Miss Viola Myers were married, February 22.

*Columbus*—Dr. John W. Wilce, Ohio State

# IODALBIN

a Protein-Iodine Compound  
for Internal Administration

THE therapeutic effects for which you prescribe iodides are produced most readily by those iodine compounds that are easily split up in the body. It is the available iodine that does the work.

In the case of Iodalbin, contact with the intestinal juice severs the loose bonds that unite the iodine with the protein base.

That's what makes Iodalbin rapidly effective.

And besides being effective, its blandness makes it acceptable to sensitive patients. It is especially gratifying to those who object to the taste and nauseating effect of sodium or potassium iodide.

**PARKE, DAVIS  
& COMPANY**

University football coach, has assumed his duties as a member of the city board of health.

*Dayton*—Exemption which has previously been extended to physicians from the rule forbidding parking of automobiles in the down town section for more than 90 minutes has been withdrawn.

*Huron*—Dr. Francis Reed of Wren has taken over the practice of Dr. F. M. Houghtaling which the latter disposed of because of his appointment as full-time health director of Erie County and Sandusky.

*Lancaster*—Dr. James M. Lantz, secretary of the Fairfield County Medical Society, has assumed his new duties as a member of the staff of the United States Veterans' Bureau with head-

quarters in Columbus. He retains his local offices.

#### File Copy of Your Liquor Permit

Records in State Prohibition Commissioner Parker's office shows that only about 20 per cent. of the permit holders in Ohio have complied with the McCoy state law requiring filing copy of federal prohibition permits. The state law requires that every holder of a permit, whether for the use of alcohol, the sale of intoxicating liquors, or the prescribing or use in office practice by physicians, shall file a copy of his permit ten days after receiving same from the Federal Department. Commissioner Parker may prosecute delinquents.

## ACTIVITIES, ACCOMPLISHMENTS AND PROPOSALS IN THE STATE DEPARTMENT OF HEALTH

### COMMUNICABLE DISEASES IN OHIO

Last year witnessed a notable decrease in the number of communicable diseases in Ohio, according to a compilation of reports made public by Dr. H. H. Snively, State Director of Health.

Only 100,904 cases of communicable diseases were reported to the state department last year, as against 197,233 in 1920. The large number for 1920 include 72,040 cases of influenza, but even with these subtracted there was a falling off of 24,283 cases of communicable diseases in general.

There were but 507 cases of influenza in 1921, the reports show.

While most diseases showed a decrease, there were notable increases in the number of cases of infantile paralysis and enteritis among children less than two years old.

Infantile paralysis jumped from 68 cases in 1920 to 288 in 1921. Experts fear a still greater increase this year, saying 1922 is the so-called "epidemic year" of the infantile paralysis cycle.

Infantile enteritis increased from 115 cases in 1920 to 263 in 1921, presumably on account of the long, extremely hot period last June and July.

Trachoma, which caused alarm in the river counties of Southern Ohio several years ago, is believed to be under control, except as it trickles annually from West Virginia and Kentucky. The number of cases reported last year was only 304, as compared with 1,176 the year before.

Figures of 1921 and 1920 show measles decreased from 38,898 to 8,199 cases; cerebral meningitis from 166 to 126; scarlet fever, from 16,204 to 14,312; smallpox increased from 7,213 to 7,286.

Tuberculosis increased from 6,158 to 6,406, while there are known to be between 50,000 and 60,000 active cases now in the state; typhoid jumped from 3,005 to 4,206.

Inflammation of eyes of children at birth increased from 1,428 to 2,429 cases.

### LOCAL CONSOLIDATIONS IN HEALTH ADMINISTRATION

An objectionable feature of the Hughes-Griswold health code is rapidly being eliminated by the action of numerous municipalities in joining with counties in hiring health commissioners, thus solving the problem of the weakest health district, the small city.

When the original Hughes health law was passed, it provided for health districts in all counties and in cities of 25,000 and over. It was thought that cities smaller than 25,000 could not afford to have adequate health departments. A supreme court decision in the case of another law declared this classification unconstitutional, however, so the Hughes-Griswold law provided for health districts in all counties and cities.

As a compromise, however it provided that counties could unite with cities. Several strings were tied to this arrangement. If legal unions took place the county board of health was abolished, which was construed to mean taxation without representation. Rural residents are slow about giving up their own boards of health and putting their health organization under the city health board. Then, when union took place, it meant that legally speaking, there would be but one district where two grew before. And, the state pays a subsidy up to \$2000 a year to each district. So the district could receive only \$2000 a year from the state and without union the state would pay \$4000 to the same political subdivisions.

The law provides that each district may employ a commissioner for whole or part time service. Wood and Ross Counties solved the problem by employing the same commissioners on part time as Bowling Green and Chillicothe, respectively, and since then Greene County and Xenia, Athens County and Athens, Wayne County and Wooster, Clark County and Springfield, Portage County and Ravenna, Clermont County and Batavia, Shelby County and Sid-

ney, and Erie County and Sandusky have followed. Each district occupies part of the commissioner's time. His whole time is taken up with health work. Two districts, neither of which could afford a full-time health commissioner, now have a full-time man between them. And little or no extra money has been squeezed from the poor taxpayer.

The advantages of the plan, which will doubtless be adopted by many other county and small city districts, are said to be numerous, among them being:

Each district has a practically full time health commissioner. In time of epidemic he does not spend his time looking after the sick folks in his practice, but he looks after the sick communities.

He can prevent the city-to-county and county-to-city spread of disease. He does not have to pause, baffled at the county or city line when on a hot trail. The county has a board to which complaints may be made. So has the city.

The state pays half of the salary of the city commissioner and of the county commissioner, both the same person. So with the public health nurse and clerk. Each district may and usually does receive \$2000 from the state, or \$4000 for the city and county.

Under this arrangement the clerk can serve two districts and get half his salary from each, so with other employes. Overhead is cut down, number of salaries is reduced, efficiency promoted.

PRAISE GIVEN STUDY COURSE FOR HEALTH COMMISSIONERS

The correspondence-study course which the State Department of Health is conducting for the benefit of Ohio health commissioners has found favor in various sections of the country to which its fame has spread and Ohio is again being given credit for a valuable innovation in health work.

Dr. W. S. Rankin, health commissioner of North Carolina, has advised the Ohio department that his state will probably inaugurate a similar course within the next year. "I have examined the matter carefully and am favorably impressed with the idea in general and the detailed way in which you are carrying it into effect. I am sure that this is one of the most valuable pieces of work being done by any state board of health and it cannot help but produce a very first-class public health personnel in your state and result in most effective work. I cannot help but feel envious," Dr. Rankin wrote.

The Ohio course will cover an entire year and includes nine months of study, reading, questionnaires and examinations; three months of designated field work, and an institute to be held in the fall at Cleveland in connection with the con-

# Speaking of Assets:---

the greatest security is not necessarily found in the financial statement—

The most valuable asset any organization can have is the *ability to do things successfully.*

The financial statement reflects the service of The Medical Protective Company.

Assets

1921.....	<b>\$1,139,934</b>
1920.....	909,982
1919.....	729,339
1918.....	615,651
1917.....	440,497
1916.....	365,979
1915.....	300,765
1914.....	253,520
1913.....	208,118
1912.....	172,310
1911.....	148,835
1910.....	130,237

All devoted to one line exclusively, a security to contract holders unsurpassed by any other organization.

**The Medical Protective Co.**  
of  
Fort Wayne, Indiana

vention of the American Public Health Association.

The first month's work, on public health law and administrative procedure, was under the direction of Assistant Director of Health James E. Bauman. The subjects of communicable diseases and epidemiology, supervised by Dr. F. G. Boudreau, carried through March.

#### STATE LABORATORIES BUSY

As an indication of the importance of laboratory activities in public health work, the laboratory of the State Department of Health is making more than 8000 examinations every month. The total for February was 8377, of which 7865 were bacteriological examinations. These examinations reflect the prevalence of diphtheria in the state, and also of the social diseases. Diphtheria examinations number 3156, and the social diseases were reflected in the total of 3790 examinations.

#### ABREAST OF THE TIMES

Bitten by the radio "bug," the State Department of Health is perfecting a system whereby state health messages may be broadcasted by wireless. It is planned to send the messages by word and code at stated intervals announcing the hour of sending and the wave length so that amateurs over the state may be ready to receive. The United States Public Health Service issues messages from Washington, and if present plans carry the State Health Department may do the same through amateurs in Ohio. The aim will be to develop the service so that every radio station in the state can be used as a means of direct official communication in the development of any emergency of what ever kind requiring immediate state action.

#### EXPANSION OF DIETETIC WORK

Dietetic work of the State Department of Health among children, which has been conducted on a small scale owing to limited personnel, is in process of expansion to take in school children of the entire state, through a close working arrangement with the Ohio Parent-Teacher association.

Success of the department's activities in its hitherto limited field has been so marked as to indicate the necessity for systematic cooperative effort under direction of the state department of health. The Parent-Teacher Association is believed to offer the most logical means of conducting the larger work, and all its equipment of organization and personnel has been placed at the disposal of the health department.

Such work hitherto done under the department auspices has been through the bureau of nursing and the bureau of child hygiene, in the division of hygiene.



Contracts for a large portion of the construction work upon the new receiving hospital addition to Longview Hospital, Cincinnati, have been awarded. Discussion of the location of the proposed addition continues, Dr. Herman H. Hoppe, head of the department of mental diseases at the General Hospital, advocating its erection on grounds adjoining the hospital near the University of Cincinnati Medical College, and legal advisers of the Longview Hospital commission and the county commissioners contending that it would not be legal to erect the building on any other property than that at Longview.

—Toledo Hospital has installed a new diagnostic clinic to enable physicians to secure a more thorough diagnosis of obscure cases unhampered by financial embarrassment of the patient. A charge for use of the clinic is made for those who can afford to pay.

—Dr. Frank McCafferty has become assisting physician at the Ohio Hospital for Epileptics, Gallipolis.

—Stark County has established a temporary 15-bed hospital for the treatment of tuberculosis, pending the erection of a larger and permanent hospital for which a number of sites have recently been inspected.

—Removal of McClellan Hospital, Xenia, from its old quarters to new brick buildings recently erected, was unexpectedly hastened, February 16, when fire destroyed the second floor of the old building and eight patients were speedily and safely removed from the building. The day following removal to the new buildings the Joseph P. Foody Post of the American Legion presented Dr. Ben R. McClellan, owner of the institution, with a flag for the flagstaff of the new hospital.

—A five-county tag day will be conducted, April 15, for the purpose of securing funds with which to purchase a piano for the use of patients in the district tuberculosis hospital of Allen, Auglaize, Mercer, Shelby and Van Wert Counties.

—Urging it as a business proposition, the mayor of Portsmouth recently submitted to the city council a strong recommendation for the building of an addition to Hempstead Hospital at an estimated cost of \$65,000.

—The first social worker to be designated for any Ohio state hospital is Miss Helen R. Wagner who has been appointed to work in that capacity under Dr. O. O. Fordyce, superintendent of the Toledo State Hospital.

—An additional ward at Cincinnati General Hospital has been assigned for use as a special surgical ward under the direction of Dr. George J. Heuer, professor of surgery at the University of Cincinnati.

*X-Ray,  
Radium,  
Removal of  
Foreign  
Bodies*

CHAS. F. BOWEN, M. D.  
344 East State Street  
Columbus, O.

## Lowest Death Rate, Highest Birth Rate; More Fatal Diphtheria, Less Tuberculosis and Cancer

The lowest death rate in Ohio, since the bureau of vital statistics was established 14 years ago, and the highest birth rate are the impressive and distinguishing features for 1921, according to the latest and most complete data secured from the division of vital statistics, State Department of Health, of which Dr. U. G. Murrell is chief.

Complete compilations are expected to show a total of 128,000 births in Ohio during the calendar year just closed, there having been 119,913 births, exclusive of still-births, reported for the first 11 months of 1921, as compared with a total of 124,303 for the entire year of 1920.

The total number of deaths reported in Ohio during 1921 was 67,225, exclusive of stillbirths, as compared with 73,846 in 1920. The death rate for the year just past was only 11.4 per thousand of population, the lowest death rate in this state on record. The winter months were the most dangerous as attested by the fact that the greatest number of deaths in any one month was 5942 in January and the lowest number, 4603 in June.

The exact compilation of births has been retarded by the failure of physicians to report promptly, there having been 35 per cent. of the births reported to the division of vital statistics later than the 10 day period allowed by law.

The division, which had conducted a campaign to overcome delays and neglect in reporting, and which may again resort to prosecution in the most willful and negligent cases, points out that the local registrars would be able to make their full reports on the fifth of each month, as expected, if the physicians would make their reports within 48 hours after a birth occurs.

Officials of the division, however, feel that the great majority of physicians throughout the state realize that the division of vital statistics is the bookkeeper on human life in Ohio, that such records are necessary in proving age, birth-place and parentage, rights on school enrollment, privileges under child labor laws, under workmen's compensation, graduation and practice of professions, employment, citizenship, voting and jury duty, marriage, guardianship, inheritance, federal and state civil service, military service, public office, property rights, federal and mothers' pensions, life insurance and annuities, passports for foreign travel and residence, and many other legal reasons.

An interesting comparative tabulation of deaths and a number of main causes in five of the largest cities of Ohio, complete for 1921 is given below. The figures under the heading of rate in the column of totals is the number of deaths in that particular city per 1000. The remainder of

the "rates" are the number of deaths for the particular cause or disease per 100,000 of population in that particular city.

CLEVELAND				
	1920	Rate	1921	Rate
Total .....	9938	12.3	8699	10.4
Typhoid fever.....	24	3.0	26	3.1
Measles .....	77	9.5	24	2.9
Scarlet fever.....	68	8.4	122	14.6
Whooping cough.....	77	9.5	49	5.8
Diphtheria .....	131	16.2	187	22.4
Tbc. total.....	873	107.9	810	97.2
Cancer total.....	665	82.2	633	65.9
Street car accidents....	29	3.6	21	2.5
Automobile accidents....	153	18.9	152	18.2

CINCINNATI				
	1920	Rate	1921	Rate
Total .....	6071	15.0	5700	13.9
Typhoid fever.....	13	3.2	15	3.6
Measles .....	77	19.0	14	3.4
Scarlet fever.....	31	7.6	14	3.4
Whooping cough.....	22	5.5	40	9.8
Diphtheria .....	52	12.9	71	17.4
Tbc. total.....	651	161.5	618	157.9
Cancer total.....	532	131.9	511	125.5
Street car accidents....	9	2.2	7	1.7
Automobile accidents....	56	13.9	80	19.6

COLUMBUS				
	1920	Rate	1921	Rate
Total .....	3547	14.7	3177	12.8
Typhoid fever.....	7	2.9	11	4.4
Measles .....	28	11.6	1	0.4
Scarlet fever.....	14	5.8	15	6.0
Whooping cough.....	24	9.9	14	5.6
Diphtheria .....	17	7.0	38	15.3
Tbc. total.....	279	115.4	227	91.6
Cancer total.....	247	102.1	249	100.5
Street car accidents....	6	2.5	6	2.4
Automobile accidents....	33	13.6	44	17.7

TOLEDO				
	1920	Rate	1921	Rate
Total .....	3423	13.9	3047	11.9
Typhoid fever.....	19	7.9	20	7.8
Measles .....	36	14.5	0	0.0
Scarlet fever.....	24	9.7	7	2.7
Whooping cough.....	27	10.9	12	4.7
Diphtheria .....	50	20.2	92	36.1
Tbc. total.....	330	133.6	317	124.4
Cancer total.....	186	75.3	227	89.1
Street car accidents....	7	2.8	9	7.8
Automobile accidents....	51	20.6	37	14.5

DAYTON				
	1920	Rate	1921	Rate
Total .....	1880	12.2	1734	10.9
Typhoid fever.....	11	7.1	8	5.0
Measles .....	18	11.6	2	1.2
Scarlet fever.....	10	6.5	18	11.4
Whooping cough.....	26	16.8	11	6.9
Diphtheria .....	16	10.3	18	11.4
Tbc. total.....	141	91.3	142	89.9
Cancer total.....	166	107.4	177	112.9
Street car accidents....	2	1.3	2	5.0
Automobile accidents....	25	16.2	15	9.5



PATIENTS REQUIRING HOSPITALIZATION ARE TREATED AT MT. CARMEL, GRANT, PROTESTANT, ST. FRANCIS, OR MCKINLEY HOSPITALS AT THE OPTION OF THE PHYSICIAN OR SURGEON REFERRING THE PATIENT.

## RADIUM THERAPY

BEN R. KIRKENDALL, M. D.  
137 EAST STATE STREET,  
COLUMBUS, OHIO.

# MEDICAL COMMENT ABSTRACTS AND CURRENT TOPICS OF INTEREST

## Treatment of Some Common Forms of Leucorrhœa

THE subject of leucorrhœa has interested Frank Benton Block of Philadelphia, for several years, chiefly because of its extreme frequency and the mental effect that it produces upon the majority of women afflicted. Were it not for this symptom of pelvic disease, it is quite probable that many of the concerns manufacturing so-called *female remedies* would find their business much less profitable. Although the presence of a vaginal discharge is *per se* quite harmless in most instances nevertheless the ignorant type of woman is frequently driven to the use of proprietary remedies on account of its presence, while her more educated sister is annoyed by its presence, to say the least.

Is leucorrhœa incurable? If not, why don't we cure it? The chief difficulty in the treatment of this condition, as I have observed it, is a lack of differentiation of the types of leucorrhœa and unless we classify each case that comes under our observation, we shall not get the best results from our treatment. Only too frequently the only advice that is given to a woman suffering from leucorrhœa is that she should take a daily douche, but the details of the preparation and administration of the douche are seldom explained. It takes little questioning on the part of the physician to learn that the great majority of women have no idea of the correct manner in which a douche should be taken, but have in mind only the element of speed and as a rule they feel that the quicker it is over, the better.

### ORDINARY TYPES OF LEUCORRHEA

It is with the idea of recalling a few of the common types of leucorrhœa and outlining a satisfactory plan of attack in each variety that I have undertaken this paper. None of the leucorrhœal discharges which are incident to gross pelvic diseases will be discussed as their treatment is the treatment of the causative major condition.

*Gonorrhœa.*—In discussing gonorrhœa as a cause of leucorrhœa, no reference is made to the cases where the gonorrhœal organism has ascended above the internal os of the uterus, as in these cases local treatment is useless. However, in the cases in which the infection is confined to the cervix, and there are many of them, a proper execution of local treatment will effectually control the vast majority of these discharges. In acute gonorrhœal endocervicitis, recognized by the history of sudden onset and the finding of Neisser's organism in the profuse, yellow discharge, the treatment should be instituted by frequent copious hot douches of 1-8,000 potassium permang-

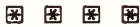
anate solution, which in a short time will cause a marked diminution in the amount of the discharge. It might be worth while to recall for a moment, that in order to obtain the full benefit from a douche, it should be taken in the recumbent position with the hips elevated and the rate of flow so regulated that at least five minutes should be consumed for every two quarts of solutions that is used. The quantity of solution used at any one treatment should be four quarts and the temperature of the fluid should be 115°F. When the discharge becomes markedly reduced, which ordinarily occurs after about three weeks of douching, local applications of silver nitrate (10 per cent.) or tincture of iodine, or both, should be made to the cervical canal. After a thorough trial of this treatment, if the discharge seems unchanged, we must consider some operative method of treatment. In such chronic cases, the leucorrhœa being due to deep-seated infection of the cervical glands, we can only cure the condition by removal of these glands, which can be accomplished by amputation of the cervix or by the tracheloplastic method that has been suggested by Sturmordorf.

*Cervical Erosion.*—It will be assumed that a correct diagnosis of cervical erosion has been made before treatment is attempted. This condition, which has frequently been considered to be a precancerous lesion, should be carefully watched throughout the treatment and if the progress is not satisfactory, operative removal of the lesion is indicated. Ordinarily, however, local cauterization of the erosion with 10 per cent. silver nitrate solution at weekly intervals suffices to cause a gradual improvement, although it may take several months of regular treatment before a cure is obtained. Associated with cervical erosions we frequently meet with those typical, hard, shot-like elevations on the cervix, known as Nabothian cysts, which represent retention cysts of the cervical glands. If these cysts are few in number and superficial they may be punctured without anesthesia and their mucous content expressed. If, however, they are multiple and in abundance we are obliged to give a general anesthetic and either remove the diseased cervical tissue or destroy the diseased glands by means of linear radial cauterization of the cervix as proposed by Hunner.

*Senile Vaginitis.*—There is probably no more distressing minor gynecologic ailment which we are called upon to treat than the type of leucorrhœa which appears after the normal or artificial menopause. In itself it is not dangerous, but it causes such intense burning and itching that the patient frequently suffers untold misery. Of the many remedies that have been suggested, such

# Radium Laboratory

350 East State St., Cor. Grant Ave.  
Columbus, Ohio



Edward Reinert, Ph. G., M. D.  
R. R. Kahle, Ph. B., M. D.

Citz. 9215

Bell, M. 7417



## The Holzer Hospital Gallipolis, Ohio

*Radium for all  
therapeutic  
uses*

# Radium Service

By the Physicians Radium Association of Chicago (Inc.)

Radium loaned to physicians at moderate rental fees. Patients may be referred to us for treatment if preferred.

Careful consideration will be given inquiries concerning cases in which the use of Radium is indicated.

### BOARD OF DIRECTORS

- William L. Baum, M. D.
- N. Sproat Heaney, M. D.
- Frederick Menge, M. D.
- Thomas J. Watkins, M. D.

## The Physicians Radium Association

1110 Tower Bldg., 6 N. Michigan Ave.  
CHICAGO

Telephones: | Manager:  
Randolph 6897-6898 | William L. Brown, M. D.

as iodine, silver nitrate, and douching, we have found none to be nearly so satisfactory as the implantation of fresh lactic acid bacilli into the vagina. This condition is very difficult to cure and we always explain to our patients that we cannot promise any permanent results and as a result the patients come regularly for the treatment, which gives them more relief than any previous applications they may have had. After the bacilli have been thoroughly implanted, a fresh application every three or four weeks will keep the patient comfortable without any supplementary treatment.

*Catarrhal Leucorrhœa.*—In mentioning the catarrhal type of leucorrhœa we have reference to a clear mucoid discharge, frequently found in unmarried women without evidences of gonorrhœal infection. This discharge is analogous to the mucous discharge from other mucous membranes when in a catarrhal condition and is due to hyperactivity of the otherwise normal cervical glands. This type of leucorrhœa is probably the least common of all the types described in the paper, but it is mentioned because it does not fall within any of the other classes. Inasmuch as there is no local pathology, topical applications are not essential and in our experience, the best results are to be obtained from the use of astringent douches. We begin by giving the patient a 1 or 2 per cent. alum douche once or twice daily and later this may be changed to the A. B. C. douche which while not quite so astringent is more agreeable to the patient. The ingredients of the A. B. C. douche powder are boric acid  $\bar{v}$ i, alum and phenol of each  $\bar{v}$ i, oil of gaultheria  $\bar{v}$ o and oil of peppermint  $\bar{v}$ i½. One tablespoonful of this powder is added to the two-quart bag of water and it will effectually control this type of leucorrhœa and can be stopped for varying periods as the discharge disappears. In closing, let me urge that if we are to improve our results in the treatment of leucorrhœa, we must first classify our cases and then apply the proper method of treatment to the particular case.—(*The Urologic and Cutaneous Review.*)

### Epilepsy, a Symptom of Splanchnoptosis

**S**PEAKING before the Southern Surgical Association, at Hot Springs, Va., December 16, 1920, C. A. L. Reed of Cincinnati, said in part:

The fact that chronic convulsive toxemia, usually called epilepsy, is constantly associated with displacements of the abdominal organs has now been demonstrated in 810 consecutive cases in my own hands. This demonstration has consisted of, *first*, the clinical history; *second*, the physical examination of the patient; *third*, the serial X-ray study, and, *finally*, in the vast majority of instances, the surgical exploration of the abdominal cavity. This record, showing the additional and significant fact that the visceral condition is always antecedent to and associated

with the convulsion phenomena, as shown by the earlier development of constipation, and the absence of both hereditary factors and extra-abdominal lesions, forces the conclusion that so-called epilepsy occurs only as a symptom to splanchnoptosis. This conclusion is further confirmed not only by my own observation but by the daily observation of every general practitioner to the effect that epilepsy is always associated with constipation; that the epilepsy is worse when the constipation is worse, and that the most effective, ready-at-hand relief from seizures is offered by laxatives. It was this fact, confirmed by surgical experience, that prompted me to write my first article on the subject under the title of "Constipation and Epilepsy," and upon which I based my second article, entitled "The Probable Cause and Logic Treatment of Epilepsy." My later experience recorded in subsequent reports,<sup>3</sup> has shown that constipation while antecedent to and associated with the seizures in these cases is, like the seizures themselves, a symptom of splanchnoptosis. The mere fact that many people who have splanchnoptosis do not have so-called epilepsy does not and can not in the least invalidate the observed and here recorded fact that eight hundred and ten people who did have epilepsy likewise had splanchnoptosis and that the development of the splanchnoptosis was antecedent to the epilepsy. The explanation of this difference, which will doubtless be furnished through biochemic research, is something with which I have no concern in this connection. I am interested at this time in the basic fact, namely, that epilepsy is always associated with, and is therefore, a symptom of splanchnoptosis.

#### EXAMINATION OF EPILEPTICS

The basic fact, here affirmed, is susceptible of verification at the hands of every practitioner who sees these cases and especially by every institution now acting in a custodial capacity to large groups of these unfortunates. To begin with, the cases must be examined—really examined. This means that a thorough history must be taken. Then the patient must be stripped. The physical inventory should be carefully made, front and back, from head to foot. Special search should be made for possible foci of infection, not as primary but as ancillary factors in the case. The abdomen should be gone over, first, with the patient on his back; next, with him erect. A very little practice with abdominal percussion will enable the physician to detect the gastric note, the cecal note, the transverse-colonic note, sometimes the sigmoidal note. With the patient on his back, these notes will generally be found approximately in their normal positions, with the possible exception of the cecal note which in these cases will always be found low in the right lower quadrant, sometimes as low as Poupert's ligament. Now stand the patients up and it will be found that all of these notes, these separate areas of resonance,

# Cincinnati Radium Laboratory

22 West Seventh Street

Needle, Tube and Plaque  
Applicators



CHARLES GOOSMANN, M. D.  
X-Ray Treatment When Indicated.

FIRST- the  
temperature

If taken  
with a  
**Tycos**  
Fever Thermometer  
*you know*  
the reading is correct

*Taylor Instrument Companies*  
ROCHESTER N.Y.

A99

Office Type and Portable Sphygmonanometers  
Urinary Glassware.

## The Management of an Infant's Diet

# Constipation

Infants that have a fat intolerance as a result of being fed upon mixtures containing a high percentage of cow's milk fat may develop a condition of constipation of a most pronounced type. This appears, at first, to be most difficult to correct; yet a very simple adjustment of the diet will bring prompt relief. The proper procedure is to remove all of the cream from the milk to be used in preparing the diet and add an easily assimilable carbohydrate. This carbohydrate element should be free from starch and one that has a high point of assimilation, for it is important that a relatively high percentage be used in order to compensate for the heat and energy lost by removing the fat.

## Mellin's Food

contains the carbohydrate—maltose—which answers the purpose, for maltose is utilized in larger amounts than any other carbohydrate. Successful results may therefore be obtained by preparing the modification with skimmed milk and at least four level tablespoonfuls of Mellin's Food to each pint of the food mixture.

Further details are given in a pamphlet which physicians may obtain upon request.

Mellin's Food Company, Boston, Mass.

will have become obscured, more or less blended, by gravitation into the lower zone of the abdomen. The only note that does not thus migrate downward is that of the cardia which, however, is generally farther around to the left and toward the back. In other words, the viscera will have dropped. This examination is all very easy—and very, very important.

Then all cases, especially in the present status of the whole question, should be given an X-ray study. When this study is done right it is very clarifying; when done wrong it is very misleading; (1) The patient should be free from all laxatives or enemas for at least twenty-four hours before taking the barium meal; (2) the barium meal should be taken at 9 o'clock in the morning; (3) the first picture, to show the stomach and beginning duodenal transit, should be taken ten minutes later—with the patient upright (4) the second picture, to show conditions at the ileo-cecal juncture, should be taken at 3 o'clock in the afternoon—with the patient prone; (5) the third picture, to show the condition and position of the colon, should be taken at 9 o'clock the next morning—with the patient upright. These pictures are essential; others (after ingestion) to show (a) completed transit or (b) relative positions of colon prone and standing; or (after enema) to show (c) redundancy or not of the sigmoid; (d) ileo-cecal competency or not; or (e) other conditions, may be taken or not according to the indications of the individual case. Of course, de-

census of the liver and kidneys is not shown by the X-ray but may be detected by careful palpation in different positions.

The ease with which all of this can be done, and the importance of the facts thus elicited, make such examination of these cases an imperative duty not only for individual practitioners but for institutions. I can not resist this opportunity to insist more especially upon the duties of institutions in the premises.

#### RECOMMENDATIONS

(1) All institutions for epileptics should be provided with a well-equipped, competent and liberally supported roentgenologic service.

(2) There should be a roentgenologic survey of the entire epileptic population of all public institutions for the purpose of determining the condition of the abdominal viscera.

(3) The diagnosis should be individualized in each case with reference, first, to visceral causative factors; and, second, to available treatment with the object and understanding that the treatment in all cases should be directed to overcoming such visceral conditions either by medical and hygienic treatment, or when necessary, by surgical restitution of the parts.

The same rules apply, with possibly greater force, to all hospitals for the insane,—but that is another story.

1. Cincinnati Lancet Clinic, July 25, 1914.
2. Journal American Medical Assn., March 27, 1915.
3. Ibid, January 29, 1916; September 20, 1916.

Whatever pharmaceutical problems physicians may have, these problems may be worked out scientifically in our laboratory by trained chemists.

Research work is an integral part of our organization. It is immediately available to physicians without added cost or expense.

The achievement of success in the treatment of acute illness often is, if indeed, not largely depends upon THE QUALITY of the used remedies.

Physicians may rely upon the dependability of the assured QUALITY OF OUR PRODUCTS, as is stated on each label.



1104-1108 North High Street,

COLUMBUS, OHIO

# Artificial Pneumothorax

in  
Pulmonary Tuberculosis



**LOUIS MARK, M. D.**

327 East State Street  
Columbus, Ohio



**Rent This TYCOS  
Nine Months  
Then It's Yours**

**\$2.50 Monthly Brings It**

The new 1922 model celebrated Blood Pressure Apparatus, Dr. Rogers' Sphygmomanometer is very accurately made and registers both systolic and diastolic pressures. The cash price of the Tycos everywhere is \$25.00. We will send it to you on receipt of only \$2.50 and, if after ten days' trial, you wish to keep it, simply pay the balance—\$22.50—the same as rent—in nine monthly payments of \$2.50 each. You pay only the cash price (no interest—no extras) and have nine full months in which to make it pay for itself.

**Leather Case and Booklet Free**

With every Tycos is included Free a genuine morocco leather case. You can put your Tycos into this case and carry the entire instrument in your pocket. Besides the case, we give you Free, a 44-page booklet which explains accurately, thoroughly and plainly just how and why the Sphygmomanometer is essential to the intelligent practice of medicine.

**Ten Days' Trial—Money Back**

Send today. Just sign and mail the coupon—enclose \$2.50 for first month's rent and we will immediately send you the instrument and you will only have to pay \$2.50 each month until the cash price, \$25.00, is paid in full. Send that \$2.50 today. Remember, we give ten days' trial and return your money if you are not satisfied. The price for all cash with order is just the same, \$25.00.

**SIGN AND MAIL COUPON**

**A. S. ALOE CO. Factory Distributors, 570 Olive St., St. Louis, Mo.**

I enclose first payment, \$2.50, for which send me Dr. Rogers' TYCOS and Outfit on ten days' trial as per your offer. I agree that the title is to remain in you until paid in full.

Name .....

Address .....

MEAD'S

## MEAD'S DEXTRI-MALTOSE

(Dextrins and Maltose)

### FOR INFANT FEEDING

A Physicians' Product—Backed by "Service that Serves"

MEAD'S DEXTRI-MALTOSE comes in a full pound (16 ounce) package.

The day of prescribing infant diet materials by the CAN, by the BOTTLE, or by the BAG has passed. Pounds and ounces mean dollars and cents to the mother. She knows that twelve ounces are not a pound but only three-quarters of a pound.

The combination of MEAD'S DEXTRI-MALTOSE, Fresh Cow's Milk and Water gives gratifying results in infant feeding.

MEAD'S represents more for LESS instead of LESS for MORE.

THE MEAD JOHNSON

MEAD'S INFANT DIET MATERIALS are advertised only to physicians. No feeding directions accompany trade packages. Information regarding their use reaches the mother only by written instructions from her doctor on his private prescription blank. Literature furnished only to physicians.

LITERATURE AND SAMPLES ON REQUEST

MEAD JOHNSON & COMPANY      Evansville, Indiana

See our exhibit at Annual Meeting, Cincinnati, May 2, 3 and 4.

## ACADEMIES AND COUNTY SOCIETIES

### Cleveland

Dr. John O. Polak, professor of obstetrics and gynecology, Long Island College Hospital, Brooklyn, spoke at the general meeting of the Cleveland Academy, March 17, on "The Present Status of Cesarean Section and Its Abuse." Dr. P. A. Jacobs, Cleveland, spoke on "Early Recognition of Urological Conditions", with lantern slides. The Clinical and Pathological Section of the Academy held an excellent meeting at Mt. Sinai Hospital, March 3, with the following program: 1. Six Cases of Congenital Heart Diseases, Dr. H. S. Applebaum. 2. Pulsating Tumor of the Neck, Dr. A. Loveman. 3. Presentation of Medical Cases, Dr. A. S. Maschke. 4. Presentation of Surgical Cases, Dr. Wm. E. Lower. 5. Extracapsular Fractures of the Femur in the Aged, Dr. C. H. Hyman. 6. Stabilizing Operations for Paralytic Feet, Dr. R. S. Reich. 7. Demonstration of Automatic Pipette in Serology, Dr. C. E. Swanbeck.

### Toledo

The Academy of Medicine of Toledo and Lucas County had as its guest on March 3, the date on which its general meeting was held, Dr. William Engelbach, professor of medicine at St. Louis University School of Medicine. Dr. Engelbach gave a splendid address on "The Endocrines", illustrated by lantern slides.

#### SECOND DISTRICT

*Darke County* Medical Society held a helpful and well attended meeting at the Darke County Children's Home, March 9. Dr. F. G. Boudreau, of the staff of the State Department of Health, gave a practical demonstration and lecture concerning the Schick Test which was well received.—B. F. Metcalfe, Correspondent.

*Montgomery County* Medical Society, in session at Dayton, February 17, enjoyed addresses on "Medico-Surgical Observations in Stomach Disorders" by Dr. F. C. Gray and "Tabes Mesentericus" by Dr. B. W. Beatty. The program of March 3 was given to a talk by Dr. Earl H. Morris on "What is Being Done to Make the Practice of Medicine More Scientific."

#### THIRD DISTRICT

*Logan County* Medical Society met for six o'clock supper, March 3, with 30 members present. Various phases of state medicine, handling of county poor cases, and practice of medicine by members of the various cults were thoroughly discussed. Dr. Robert Lockhart, health commissioner of Cuyahoga County, substituted for Dr. F. G. Boudreau who was unable to be present, and gave a talk on "The Schick Test and Use of Toxin-antitoxin for the Prevention of Diphtheria". This was extremely interesting and

seemed very important to all the members who had their numerous questions fully answered by Dr. Lockhart.—M. L. Pratt, Secretary.

*Marion County* Medical Society held its regular monthly session at the Marion Public Library, February 7. Nurses from the City Hospital and Sawyer Sanatorium were guests of the society. Dr. Filmore Young gave a very interesting and highly instructive paper on "Endocrinology" and conducted a clinic using several of his patients to illustrate the various stages of disease. After the meeting the officers gave a complimentary luncheon to the guests and members of the society, and this was followed by an enjoyable stereopticon lecture on "A Trip Through Yellowstone Park and the Rocky Mountains" given by Professor Joseph Muller, representing the Chicago and Northwestern, and Union Pacific railway systems. "Shall We Socialize Medicine?" was the subject of a paper presented by Dr. D. O. Weeks at the March 7 meeting of the society. A number of interesting cases were reported. A program of social events for the coming months is being planned by the entertainment committee of the society under the chairmanship of Dr. A. Rhu.—D. O. Weeks, Secretary.

#### FOURTH DISTRICT

*Sandusky County* Medical Society's second meeting of the year convened in Fremont, February 23, with Dr. M. O. Phillips presiding.

## Prescribe

# "Horlick's"

## the Original and Genuine

Endorsed by the medical profession, who for over a third of a century have proven its reliability in the feeding of infants, nursing mothers, convalescents, and the aged.

*Samples prepaid upon request.*

## Horlick's Malted Milk Co.

Racine, Wisconsin





Our Manufacturing Laboratories at  
Bloomfield, N. J.

*Here's where genuine Atophan is manufactured by a special process completely precluding the possibility of unpleasant empyreumatic admixtures.*

This means a still further improved Atophan for your cases of Rheumatism, Gout, Neuralgia, Neuritis, Sciatica, Lumbago and "Retention" Headaches.

*Ample trial quantity and literature from*

**SCHERING & GLATZ, Inc.**

150-152 Maiden Lane

NEW YORK

**THE STORM BINDER AND ABDOMINAL SUPPORTER**

PATENTED

**For Men, Women, Children and Babies**



Modifications for Hernia, Relaxed Sacroiliac Articulations, Floating Kidney, High and Low Operations, Ptosis, Pregnancy,  
:: Pertussis, Obesity, Etc. ::

*Send for new folder and testimonials of physicians. General mail orders filled at Philadelphia only—within twenty-four hours*

**KATHERINE L. STORM, M. D., 1701 Diamond Street - - - Philadelphia**

**D**o you believe that the fitting of trusses is a part of the Practice of Medicine? If so, send your patients needing trusses to

**The Columbus Truss & Optical Co.**

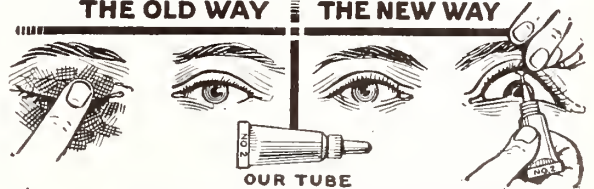
PARKER W. PHENEGER, M. D., Mgr.

We Specialize in Elastic Stockings Made to Measure

Office and Fitting Rooms

Suite 303-309 Rowlands Bldg., Broad and Third Sts. COLUMBUS, OHIO

**THE OLD WAY | THE NEW WAY**



**Better Ocular Therapeutics**

Can be obtained by the use of "M-E-S-Co" brand of Ophthalmic Ointments. Reasons: Selected Chemicals, Thorough Trituration, Perfect Incorporation, Sterilized Tubes, Boiled and Strained Petroleum, Excellent Service, No Waste, No Dirty Salve Jar, Right Prices. Write for complete information  
**MANHATTAN EYE SALVE CO., Inc.**  
Louisville, Ky.

Resolutions of regret at the death of Dr. C. R. Truesdale were adopted. Dr. Thomas Heatley, Toledo, read a timely and interesting paper on "Unusual Appendiceal Conditions", in which he stressed the importance of early operation, the urgent need for careful differential diagnosis in all pain in this region and showed by a case report how hard it is at times to determine absolutely what pathology exists. He also recommended exploratory section when in doubt. Dr. L. R. Effler, also of Toledo, gave a most valuable dissertation on "Sinus Involvement", warning his hearers to be on the look-out for pains in the head, showing how pain is so referred at times as to incriminate a perfectly innocent organ or region, and showing necessity for careful examination and observation, also exclusive reasoning. Dr. Effler voiced his sentiments against the suction treatment of sinus empyema. He advised puncture and irrigation and stated his preference for sterile water as an irrigating fluid. Drs. E. M. Ickes and S. C. Sackett led the discussion on the two papers. The essayists were thanked for their contributions and voted to honorary membership in the society.—C. I. Kuntz, Secretary.

*Williams County* Medical Society, meeting in Montpelier, February 4, heard a paper on "Encephalitis Lethargica" by Dr. A. E. Snyder, who reported a number of cases observed following the recent influenza epidemic. "The Hughes-Griswold Law" and its functioning in this county was the subject of a paper presented by Dr. M. V. Repogle, county health commissioner, and very thoroughly discussed by all the 16 members present.—F. E. Solier, Secretary.

#### FIFTH DISTRICT

*Erie County* Medical Society met in Sandusky, March 30. Dr. C. J. Broeman, Cincinnati, spoke on "The Part Radium Plays in the Treatment of Malignant Disease". On the afternoon of the same day Dr. Broeman gave a general talk on radium before the sisters and nurses of Provident Hospital, Sandusky.

*Lorain County* Medical Society held an enthusiastic meeting at Lorain, February 14. Dr. J. J. Kurlander of Cleveland was the guest of the occasion and gave a splendid talk on "Osteomyelitis."—W. E. Hart, Secretary.

*Trumbull County* Medical Society with the dental profession as guests, met at the Hotel Warner, Warren, February 16. Dr. Weston A. Price of Cleveland discussed "The New Interpretation of Local and Systemic Dental Infections". Among the interesting points brought out by Dr. Price were the selective affinity of bacteria for certain tissues in a given family; that pyorrhea may be a good omen, showing that the individual possesses an active resistance to invading germs; that too much stress is being placed upon the X-ray plate in the diagnosis of root abscesses; and that streptococcus infection does not cause rarefaction of bone around a tooth. Dr. Price's lecture was well illustrated

URINE  
BLOOD  
SPUTUM  
EFFUSIONS  
STOMACH  
CONTENTS  
WASSERMANN &  
NOGUCHI  
REACTIONS  
GONORRHEAL  
COMPLEMENT  
FIXATION TEST  
BLOOD CHEMISTRY  
PROTEIN  
SENSITIZATION  
TESTS

BASAL METABOLISM  
AUTOGENOUS  
VACCINES  
FAECES  
GENITO-URINARY  
SURGICAL and  
GYNECOLOGICAL  
PATHOLOGY  
DARK FIELD  
ILLUMINATING  
FOR  
SPIROCHETA  
PALLIDA  
MEDICO-LEGAL  
POST MORTEM  
X-RAY

# LABORATORY

Clinical and Pathological

COLUMBUS, OHIO 370 East Town Street

J. J. Coons, B. S., M. D., D. Sc.  
H. M. Brundage, M. D.  
Dorris Coss, B. S., M. S.  
Ruth Miller, B. S.

PROMPT SERVICE

Immediate Report on Frozen Sections of all Tumors.

# To Prevent Hydrophobia

Use

## Pasteur Treatment

With a

Potent Product and Prompt Service

PRICE \$25.00

Order from

James McIlvaine Phillips, M. D.

2057 N. High St.

Columbus,

Ohio

# LOESER'S INTRAVENOUS SOLUTIONS



## Intravenous Medication

demands of the physician the selection of solutions of the highest proven standard. Loeser's Intravenous Solutions represent the highest attainable standard, assured by scrupulously exact laboratory methods and exacting chemical, toxicity, and clinical tests.

They are sterile stable solutions of U. S. P. and standard remedies of established therapeutic value.

They are marketed under the title of the contents plainly stated on the label.

**Intravenous Medication** demands of the physician refusal to employ imitations, secret "cures," "specifics," and "specialties" offered under fanciful names with ambiguous statements as to contents.

*"Journal of Intravenous Therapy,"  
clinical data, price list, on request.*

**New York Intravenous Laboratory**  
100 West 21st Street  
New York, N. Y.

*Producing Ethical Intravenous Solutions  
for the Medical Profession Exclusively.*



by stereopticon and motion pictures and a thorough discussion followed its presentation. Eighty members and guests were in attendance. The society recently held a dinner-dance at the country club which was attended by more than half the membership and proved so successful that it is planned to make it an annual affair.—J. D. Knox, Secretary.

## SIXTH DISTRICT

*Mahoning County* Medical Society met on February 21 for its regular monthly meeting. The speaker was Dr. C. C. Wholey of the University of Pittsburgh and his subject was "The Less Commonly Noted Manifestations of Epilepsy".—A. W. Thomas, Secretary.

## EIGHTH DISTRICT

*Muskingum County* Academy of Medicine held its regular monthly meeting March 1, in the Zanesville Chamber of Commerce. Interesting papers were read by Dr. E. R. Brush on "Early Treatment of Cranio-Cerebral Injuries" and Dr. G. Warburton, on "Infant Feeding."—Beatrice T. Hagen, Secretary.

## NINTH DISTRICT

*Gallia County* Medical Society has re-elected the following officers for 1922: president, C. G. Parker; vice-president, S. W. Williams; secretary-treasurer, Milo Wilson; legislative committeeman, W. E. Howell; medical defense committeeman, J. S. Biddle. Drs. G. G. Kineon and Milo Wilson have been selected as delegate and alternate, respectively, to the annual meeting of the State Association. The society has been holding well attended sessions. The January and February meetings were devoted to the subject of obstetrics. At the former Dr. Ella G. Lupton presented a paper on "Complications of Pregnancy", giving special attention to causes and symptoms leading to eclampsia. At the February session Dr. A. G. Mack was the essayist, his subject being "Post Partum Hemorrhage."—Milo Wilson, Secretary.

*Pike County* Medical Society held one of the best and most interesting meetings it has ever had, March 6, at the office of Dr. O. C. Andre, Waverly. Dr. E. W. Tidd reported a number of cases of autointoxication and its sequelae with treatment for the different phases. Dr. R. M. Andre reported a case of acute dilatation of heart following articular rheumatism. Dr. C. H. Wilson reported one of impetigo contagioso. Dr. O. C. Andre reported a number of cases of intestinal parasites, and Dr. I. P. Seiler reported cases and remarked on the prevalence of an epidemic of intestinal jaundice in children. The next meeting will be held April 3, when Dr. O. C. Andre will read a paper on "Temperature." Officers for 1922 are: R. M. Andre, Waverly, president; G. B. Nye, Waverly, vice-president; I. P. Seiler, Piketon, secretary-treasurer; and E. W. Tidd, Beaver, delegate and legislative committeeman.—I. P. Seiler, Secretary.

## SAVE MONEY ON YOUR X-RAY SUPPLIES

Get Our Price List and Discounts on  
Quantities Before You Purchase  
**HUNDREDS OF DOCTORS FIND WE SAVE  
THEM FROM 10% TO 25% ON X-RAY  
LABORATORY COSTS**

### Among the Many Articles Sold Are

**X-RAY PLATES.** These brands in stock for quick shipment. **PARAGON** Brand, for finest work; **UNIVERSAL** Brand, where price is important.  
**X-RAY FILMS.** Duplitzed or Dental—all standard sizes. Eastman, Ilford or X-graph metal backed. Fast or slow emulsion.  
**BARIUM SULPHATE.** For stomach work. Finest grade. Low price.  
**COOLIDGE X-RAY TUBES.** 5 Styles. 10 or 30 milliamp.—Radiator (small bulb), or broad, medium or fine focus, large bulb. Lead Glass Shields for Radiator type.  
**DEVELOPING TANKS.** 4 or 6 compartment stone, will end your dark room troubles. 5 sizes of Enameled Steel Tanks.  
**DENTAL FILM MOUNTS.** Black or gray cardboard with celluloid window or all celluloid type, one to eleven film openings. Special list and samples on request. Price includes your name and address.  
**DEVELOPER CHEMICALS.** Metol, Hydroquinone, Hypt, etc.  
**INTENSIFYING SCREENS.** Patterson TE, or celloid-backed screens. Reduce exposure to one-fourth or less. Double screens for film. All-metal Cassettes.  
**LEADED GLOVES AND APRONS.** (New type glove, lower priced).  
**FILING ENVELOPES** with printed X-Ray form. (For used plates). Order direct or through your dealer.

If You Have a Machine Get Your Name on Our Mailing List



**GEO. W. BRADY & CO**

771 So. Western Ave.,  
Chicago

## Dares Haemoglobinometer

Candle lighted, or Electric lighted.  
We are accepting orders for prompt delivery.  
Write for booklet and prices.

## Tycos Office Sphygmomanometer

With 6 inch silvered dial.  
A distinct advance over the pocket type.  
Immediate delivery. Price \$37.50.

Surgical Instruments—Dressings,  
Pharmaceuticals, Biologicals

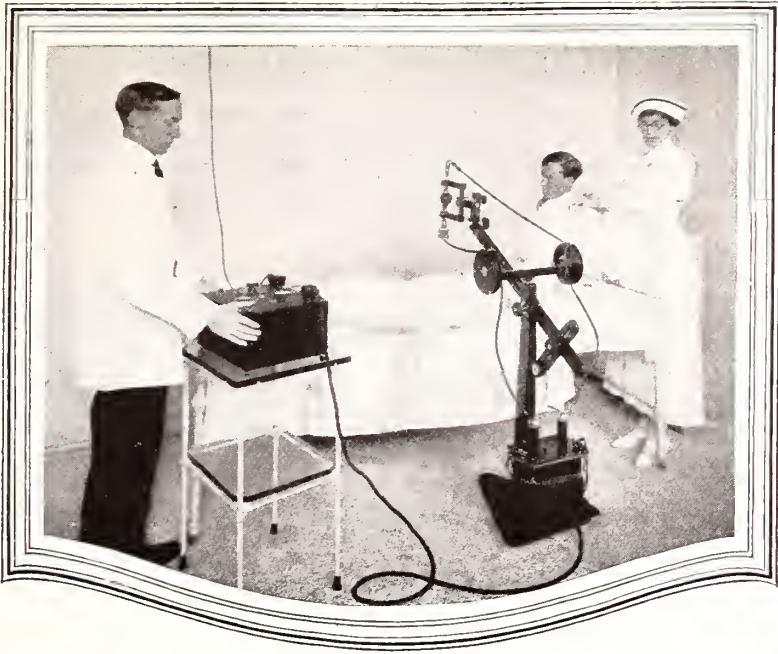
Your orders will receive prompt attention—  
"You will do better in Toledo."

**The Rupp and Bowman Co.**

319 Superior St.

TOLEDO,

OHIO



## X-RAY APPARATUS SIMPLIFIED

**W**HEN the first cameras were introduced, over half a century ago, only a few photographers could use them. The modern camera, more complicated than any camera of the old days, is in the hands of many.

So it is with X-Ray apparatus. It was simpler in its earlier forms, but only a few men could use it—men who were not only physicians but physicists and electricians. In its modern form the Victor X-Ray machine no longer presents mysteries that the physician cannot master.

Two policies of the Victor X-Ray Corporation have made it possible thus to extend the use of X-Ray machines.

The one is the policy of conducting research persistently and systematically, so that the machine has become more

and more automatic in character. The other is the policy of establishing Service Stations to which physicians can turn if their machines need attention or if they need guidance in obtaining the best results.

Because it is not an ordinary commercial organization, engaged solely in selling apparatus useful to physicians, but rather a scientific institution dedicated to the advancement of X-Ray technique, the Victor X-Ray Corporation does not usually sell its apparatus without first satisfying itself that it will meet a physician's requirements. A technically trained representative is sent, on request, from one of its Service Stations to make a study of a physician's needs. Not until then is any special type of Victor apparatus recommended.

**VICTOR X-RAY CORPORATION, Jackson Blvd. at Robey St., Chicago**

*Territorial Sales and Service Stations:*

Columbus: 145 E. State St.



## "Crippled Children Week" Planned for May; Forty Clinics Conducted in the State

Announcement is made that part of the program of the Ohio Society for Crippled Children will be centered in securing enactment by the next Ohio legislature of compulsory physical examination of children entering schools in order to uncover and secure the correction of physical defects, which later on might cause a child to become physically or mentally defective.

An extension of present laws for compulsory education of child cripples is needed it is declared because now many parents, ashamed of the crippled condition of their unfortunate children, keep them in hiding and permit them to grow up without education.

The establishment of special schools for the teaching of crippled children in every city of 20,000 or more population is being advocated, as well as five or more convalescing homes, in various parts of the state for the care of crippled children after they have received hospital operations and treatment.

The week of May 8 has been designated by the Ohio Society as "Crippled Children Week", with the idea of attracting more general attention and securing greater public support for the health, care and education of crippled children.

The special committee of the Ohio State Medi-

cal Association on crippled children has given much time and thought to the various phases of this general problem and will probably be ready to report at or before the coming annual meeting.

Nineteen months ago the Bureau of Child Hygiene of the State Department of Health undertook a survey of the crippled children in Ohio with the object of determining what type of state institution was needed for their care under an appropriation of \$90,000 which had been made available by the legislature.

As an outgrowth of this survey a series of clinics have been conducted in various parts of the state with the cooperation of the local health commissioners, county medical societies and other health and welfare agencies. The first clinic was conducted at Ravenna, Portage County, in October, 1920, and since that time similar clinics have been held in 40 other counties.

The earlier clinics, according to chief of the Bureau of Child Hygiene, were held entirely for medical diagnosis. But the facts gathered in the survey soon gave statistics which warranted increased state appropriations for education and treatment of the children. The last legislation

### Our Business

is confined exclusively to the manufacture of Strictly High Grade Medicines and Pharmaceuticals for Physicians, Dispensing and Prescribing.



Our Offices and Laboratories are now located in our New Building, 330-336 Oak Street, one square north of Grant Hospital.

NO GOODS SOLD AT RETAIL

**The COLUMBUS PHARMACAL Co.**  
COLUMBUS, OHIO

### Every Physician

Is Interested In

### Physician's Supplies

In dispensing, he requires a great variety in his office—in prescribing he uses the PRESCRIPTION DEPARTMENT that is UP-TO-DATE.

If you are unacquainted with our plan of handling the physician's requirements, you may profit by giving us an opportunity to show you what we can do.

### The Wendt Bristol Co.

47 South High St., Columbus, Ohio

**FINE PHARMACEUTICAL SPECIALTIES**

## HERE IS COMPLETENESS

FOR GENERAL OFFICE PRACTICE

# Ten Pieces of Snow-White Furniture

WITH SPECIAL OPERATING TABLE

*Made with True Betzco Thoroughness*



**\$50.00 Down—EASY MONTHLY TERMS—Total \$200.00**

Betzco Eleven Piece General Practice Outfit has been created to meet the demand for an adequate outfit for physical examination, diagnosis, treatment and operations. It is one of the most complete and most reasonable outfits of its kind on the market. Behind it is our absolute guarantee of satisfaction or your money back. It offers every convenience for a successful and remunerative office practice. Nowhere will you find such an outfit at such a price—think of it—eleven pieces of the most modern equipment for \$200.00. Every piece in the outfit is thoroughly practical, up to date and remarkably sturdy. There is no finer finish than the Betzco snow-white, wear-resisting enamel that is baked onto every piece of this furniture. Master workmen cut the steel, bend it, weld it and enamel it. Every detail of construction and finishing receives the most painstaking attention. The quality rings true because all processes of manufacture are careful and exact.

### THIS OUTFIT INCLUDES

**Folding Chair Table**—Offers practically all positions required in office practice and folds flat for easy transportation. Equipped with large easy-roll casters, leg holders and heel stirrups.

**Operating Cushion**—Extra heavy, good leatherette covering, thick and comfortable.

**Standard Model Instrument Cabinet**—A modern, sanitary cabinet with four plate glass shelves, glass door and sides. Clean constructed from heavy, selected furniture steel, electric and torch welded. Height, 58 inches; width, 20 inches; depth, 15 inches. Mounted on easy-roll steel casters.

**Platform Beam Scale**—Has compound beam and telescoping measuring rod giving height from 2 ft. 6 in. to 6 ft. 6 in. Scale capacity 300 lbs. Inlaid rubber mat on platform.

**Solution and Irrigator Stand**—Provided with two revolving enameled immersion bowls in bracket and adjustable in height. Also equipped with complete irrigating outfit including bailed percolator, tubing, cut-off and rubber tips, adjustable in height. Mounted on easy-roll steel casters.

**Specialist's Examining Chair**—With headrest adjustable in height and mounted on rubber feet. Constructed with tubular wrought iron frame and heavy furniture steel, seat and back.

**Operator's Adjustable Stool**—A sturdy stool with revolving seat and mounted on rubber feet, adjustable from 18 to 24 inches.

**Acid-Proof Utility Table**—Acid-proof porcelain top, heavy pressed steel frame. Size 16 x 20, mounted on rubber feet.

**All Steel Costumer**—A convenient piece of furniture for the examining or reception room. Equipped with four large and four small brass hooks.

**Adjustable Gooseneck Lamp**—An indispensable convenience for examination and diagnosis. Has telescoping stand mounted on easy-roll steel casters. Readily adjustable to height or position.

**Sanitary Waste Bucket**—Has tight fitting cover which works automatically from foot pedal. Supplied with removable, galvanized container, bailed. Capacity, 16 qts.

**SPECIAL TERMS** Our special terms for this superb outfit are \$50 with your order and \$15 per month for 10 months. A real opportunity to secure complete and up-to-date equipment on the easiest terms.

**6S16 Eleven-Piece General Practice Outfit, Complete, \$200.00**

**FRANK S. BETZ CO.**

**HAMMOND, IND.**

NEW YORK—6-8 West 48th St.

CHICAGO—30 E. Randolph St.

increased the subsidy to local boards of education for special schools for children from \$150 to \$3000 a child. It also added a boarding provision of \$250.

The statistics also justified increase in the total budget for this work and therefore the clinics were expanded until they have grown to be cooperative arrangements between three large state departments working in close harmony with each other, and the other agencies interested.

A representative of the State Department of Education now attends the clinics and arranges for specific classes for the cripples where necessary. A representative of the Vocational Rehabilitation Division also attends and sees that handicapped adults, who are now included in the clinics as well as children, are placed in training if their chance for recovery or mentality justify it. An appropriation from federal and state funds is available for this purpose.

The division of charities of the State Department of Welfare also takes part in the clinics, handling such dependent children as the physicians find can be helped and who are unable to pay for care. The Bureau of Juvenile Research also cooperates in passing on the mentality of certain classes of patients and determining whether it will justify operations or vocational training.

Case records of the clinics kept by the State Department of Health now include thousands of cases to which are appended the diagnoses and recommendations for after care. Many of the records show additional notes of treatment completed with good results. Credit for success of the clinics is due the orthopedic specialists who have contributed their services to examining the cripples in consultation with the members of local medical societies. The juvenile courts, county and city school officials, Rotary and Kiwanis Clubs, Red Cross and Parent-Teachers' Associations are doing follow-up work for those unable to pay for medical attention subsequent to diagnoses at the clinics.

### Conservation of Vision

It has been estimated that of the 6000 blind persons now in state institutions, approximately 2000 lost their vision from babies' sore eyes. However, since the concerted movement from the prevention of blindness during the past ten years the number of cases are said to have been greatly reduced.

State law requires that cases of inflammation, swelling or redness of babies' eyes must be reported within six hours to the local health department.

The campaign for conservation of vision undertaken recently by the State Department of Health, the Ohio Commission for the Blind and other agencies, contemplates not only prevention of blindness in the new-born but in mini-

### Bacteriological Laboratories of

**G. H. SHERMAN, M. D.**  
DETROIT, U. S. A.



### Fort Wayne Medical Laboratory Inc.

ESTABLISHED 1905

### CLINICAL AND X-RAY

DR. BONNELLE W. RHAMY, Director

Bacteriological, Serological, Pathological, Toxicological and Chemical examinations of all kinds.  
Full instructions, fee table, sterile containers, Keidel and culture tubes sent on request.

Wassermann Tests (Daily except Sunday).....	\$5.00
<i>(Send 3-5 cc. of blood)</i>	
Gonorrhoea Complement Fixation Test.....	\$5.00
<i>(Send 3-5 cc. of blood)</i>	
Tuberculosis Complement Fixation Test.....	\$ 5.00
Blood Chemistry—Sugar—Urea—Nitrogen, etc., Each .....	5.00
Spinal Fluid Gold Curve.....	5.00
Blood Typing for Transfusion each Blood.....	5.00
Blood Cultures.....	5.00
Tissue Diagnosis.....	5.00
Basal Metabolism Estimation.....	10.00

#### AUTOGENOUS VACCINES

Bacteriologic Diagnosis and cultures.....	\$ 2.00
Twenty Doses Vaccine in 2 cc. vials.....	5.00

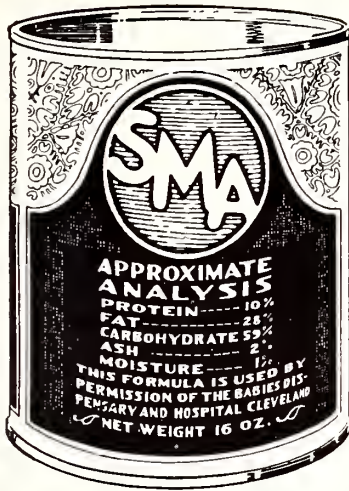
### COMPLETE X-RAY DEPARTMENT

Diagnostic and Therapeutic

*Special Delivery Postage Insures Prompt Delivery*

327 W. Berry St. Ft. Wayne, Indiana  
1 Block South from Interurban Station.





# A Pioneer in the Constant Use of Cod Liver Oil

Seven years ago, at the very beginning of the practical work in the development of a food to keep babies well, the anti-rachitic and anti-spasmophilic qualities of S.M.A.\* were provided for intentionally by the addition of "a liberal amount of cod liver oil".

## S. M. A.—A Food to Keep Babies Well

Since 1915 every quart of S. M. A. has contained and still contains sufficient cod liver oil not only to prevent, but also to cure rickets.

Every artificially fed infant should be given cod liver oil as a part of its food. Yet many mothers either neglect to do this, or find it impossible—to the detriment of the baby.

In the form of S. M. A. the infant not only gets an adequate amount of cod liver oil, but he likes it, and thrives on it.

Cod liver oil will be found acceptable to all infants and children when given in the form of S. M. A.

Hundreds of physicians have used S. M. A. with excellent results in thousands of cases, and the number is increasing steadily.

Try S. M. A. and you will find that

- (1) It is the same for the month-old baby and for the baby one year old.
- (2) It needs only the addition of boiled water to prepare it.
- (3) It absolutely prevents spasmophilia.
- (4) It makes happy, solid, breast-fed looking infants.

Write today for the S. M. A. bulletin for physicians.

\*H. J. Gerstenberger et al. I. Studies in the Adaptation of an Artificial Food to Human Milk. Am. J. Dis. Child. Vol. X, Pg. 249-265.

H. J. Gerstenberger et al. II. Studies in the Adaptation of an Artificial Food to Human Milk. (A Report of Three Years' Clinical Experience with the Feeding of S. M. A.) Am. J. Dis. Child. Vol. XVII, Pg. 1.

## THE LABORATORY PRODUCTS COMPANY

3829 CEDAR AVENUE CLEVELAND, OHIO

### DISTRIBUTING AGENTS

**CLEVELAND**  
The Telling-Belle Vernon Co.

**AKRON**  
The Akron Pure Milk Co.

**PHILADELPHIA**  
Abbott's Alderney Dairies Inc.  
Supplee-Wills-Jones Co.

**DENVER**  
Windsor Farm Dairy Company

**GREATER NEW YORK**  
Sheffield Farms Co., Inc.

**DETROIT**  
Detroit Creamery Co.

**INDIANAPOLIS**  
The Polk Sanitary Milk Co.

**GREATER BOSTON**  
H. P. Hood's Sons Co.

**PITTSBURGH**  
Rieck-McJunkin Dairy Co.

**LOUISVILLE**  
D. H. Ewing's Sons

**MILWAUKEE**  
Gridley Dairy Co.

**MONTREAL**  
The Guaranteed Pure Milk Co., Limited

**WINNIPEG**  
Crescent Creamery Co.

mizing loss of vision through neglect and accidents.

From the standpoint of industrial economy, Dr. E. B. Starr, chief of the division of industrial hygiene, State Department of Health, points out that proper lighting in the conservation of vision results in: (1) reduction of accidents; (2) greater accuracy of workmanship; (3) decreased spoilage of product; (4) increased production; (5) less eyestrain; (6) greater contentment of workmen; and (7) better order, cleanliness and neatness.

## PUBLIC HEALTH NOTES

The value of milk diet for undernourished, anemic and underweight children has been strikingly exemplified in the schools of Chilli-cothe and Ross County, where a milk campaign has been conducted under Health Commissioner G. E. Robbins. In every township in the county except one it has reduced the number of underweights in the schools by more than 10 per cent. In this one township, backward and unresponsive to health teaching or economic argument, there are few tuberculin-tested cattle, little milk is used in the homes, the schools are few and Dr. Robbins reports that he has been able to make little headway with the plan for upbuilding the youth of the district through improved and supervised diet. The milk campaign was thoroughly organized with the assistance of dairy interests of the county which are delivering milk to the schools in half pints at three cents a bottle, in addition to donating one bottle for every five bottles sold, and its progress has been noted at every step. Each school building is provided with scales with measuring standard; all weights are taken each month and applied to a weight-for-age chart. Standard charts constantly are displayed on the walls of each room.

—A medical dispensary is now being operated in connection with the Dayton branch of the United States Veterans' Bureau.

—As part of a retrenchment program the health budget for the city of Akron has been tentative sliced \$25,000 for the ensuing year. If the reduction is made permanent it will probably prohibit the diverting of extensive funds for new work which had been planned.

—An epidemic of influenza and pneumonia swept Muskingum County in late February, seriously taxing the available medical and nursing service. Districts hit hardest by the epidemic were New Concord, White Cottage, Dresden, Frazeyburg and Rural Dale. The influenza was reported by Dr. J. M. O'Neal, county health commissioner, to be of milder form than that of three years ago, but frequently followed by pneumonia.

## An Intestinal Antiputrefactive

That has stood the test of twelve years of constantly increasing clinical use.

### BULGARA TABLETS, H. W. & D.

The vigorous and viable *Bacilli Bulgarici* which these tablets contain tend to render inactive bacteria which cause putrefaction, fermentation and other intestinal disturbances.

*Bacterial reports and other literature upon request.*

"H. W. & D." --- Specify --- "H. W. & D."

**Hynson, Westcott & Dunning**  
BALTIMORE

## Distributors to the Medical Profession

### NEOSALVARSAN

Dosage VI	0.9 gram	\$1.35	per ampoule
Dosage V	0.75 gram	1.20	per ampoule
Dosage IV	0.6 gram	1.00	per ampoule
Dosage III	0.45 gram	.90	per ampoule
Dosage II	0.3 gram	.70	per ampoule

### NEOARSPHENAMINE (D.R.I.)

Dosage VI	0.9 gram	\$1.35	per ampoule
Dosage V	0.75 gram	1.20	per ampoule
Dosage IV	0.6 gram	1.00	per ampoule
Dosage III	0.45 gram	.90	per ampoule
Dosage II	0.3 gram	.70	per ampoule

### LEVY'S LUER SYRINGES

1½ cc. \$ .40 each	10 cc. 1.00 "
2 cc. .50 "	20 cc. 1.75 "
5 cc. .70 "	30 cc. 2.00 "

Perfectly ground, American Luer Tips

## Charles E. Findlay Co.

Physicians' and Hospital Supplies  
677 N. High Street Columbus, Ohio  
Bell Phone, Main 6518

# MEDICAL ECONOMICS

PUBLIC HEALTH - SOCIAL WELFARE *and* ORGANIZATION PROBLEMS  
WITH EDITORIAL COMMENT *by* D. K. M.

## Summons to Cincinnati

Cincinnati's renowned hospitality will be fully exemplified during the seventy-sixth annual meeting of the Ohio State Medical Association in that city on Tuesday, Wednesday and Thursday, May 2, 3 and 4.

The medical profession of Cincinnati, well known for its spirit of cooperation, activity and accomplishments, headed by energetic committees, has the "stage all set." Judging by indications, this year's meeting will be one of the most profitable and enjoyable in history.

Those members who have not already decided to be in attendance, will do well to make immediate plans to be among those present. The splendid scientific program for the section meetings and general sessions was published in full in the April issue of *The Journal*.

As a last minute reminder, the opening general session will start at 10:00 a. m., Tuesday, May 2, in the ball room of the Hotel Gibson, where all sessions will be held. The "time" designated throughout the program as published will be Eastern Standard. The first session will be featured by the "key-note", annual address of the president, Dr. Wells Teachnor, preceded by brief "welcomes" on behalf of the city of Cincinnati and the local academy of medicine.

The opening session on Tuesday morning will be followed immediately by the first session of the House of Delegates. Tuesday afternoon will be devoted to the seven scientific section meetings. On Tuesday evening there will be the frolic and smoker. Those who were so fortunate as to attend this function last year in Columbus may be sure that the local committee on entertainment is determined to go at least one better.

Wednesday morning will be entirely devoted to section meetings; Wednesday afternoon to the second session of the House of Delegates and the second general session at which Drs. Charles Phillipa Emerson of Indianapolis and Samuel Goodwin Gant of New York City will be the orators, and Wednesday evening to the annual banquet, at which it is hoped to have a one hundred per cent. attendance, justified by an attractive program. The local entertainment committee, under the chairmanship of Dr. W. D. Haines, has announced that it has secured Hon. Hugh L. Nichols, formerly chief justice of the Supreme Court of Ohio, and Judge Rufus B. Smith, Cincinnati, as banquet speakers. Judge

Nichols' subject will be "Patriotism and Loyalty to American Ideals."

On Thursday morning will be held the final general session, the joint meeting under the direction of the Medical and Surgical Sections. The program for this meeting is prepared with the idea of interesting all members of the Association and for that reason no other meetings are planned for Thursday morning.

The various general meetings will be interspersed with special luncheons and other gatherings, insuring a "continuous performance" from start to finish.

All those in attendance will be expected to register immediately on arrival. The registra-

## Bring Your Membership Card

Before setting out for the annual meeting see that you have your 1922 State Association membership card tucked safely in your bill folder. This forethought on your part will save annoying delay in verifying your membership standing and prevent congestion at the registration desk during rush hours. Presentation of the little tan card showing your 1922 dues have been paid will enable you to register without question. If you are unable to produce it, your name will have to be looked up on the books before you are permitted to register and receive a badge.

tion headquarters will be in the basement of the Hotel Gibson, where the attractive exhibits are also to be held.

The annual golf tournament of the Ohio Medical Golfing Association, which is growing in popularity each season, will be held on Monday, May 1, and many members have indicated their intention of going to Cincinnati a day early to participate in this event.

All members arriving by railroad should be sure to comply strictly with the requirements set forth on page 263 of the *April Journal* in order to secure reduced fare on the return journey.

Those who have not yet secured hotel reservations, should do so at once by mailing requests directly to the hotel selected. Please refer to the list of hotels and rates published on page 262-3 of the *April Journal*.

### Chiropractic Situation—Court Decision

Organized obstruction to law enforcement, on the part of the unlicensed chiropractors of Ohio, has been condemned emphatically by the Supreme Court of the United States which on March 27, refused to review the decision of the Supreme Court of Ohio in the now famous injunction suit instituted two years ago by those unlicensed practitioners, against the State Medical Board. After going through all the courts in Ohio and after the highest tribunal in the state had upheld the constitutionality of the Ohio Medical Practice Laws, as well as approved the State Medical Board in its rules, regulations and procedure, the action of the United States Supreme Court constitutes a well merited rebuke to those who defy law enforcement and who, without any certificate of qualifications, attempt to treat the sick.

It is significant that the highest court in the land has thus disposed of the many contentions and claims of the chiropractors as to the constitutionality of the Ohio statutes relating to the practice of medicine and surgery in Ohio and the limited branches, including chiropractic. It has likewise effectively disposed of the claims and assertions of the chiropractors that the regulations of the State Medical Board pertaining to that limited branch were illegal. That the decision of the United States Supreme Court squarely discountenances and rejects the chiropractic claims is evidenced by that decision itself. The Court of Appeals and the Supreme Court of Ohio sustained the constitutionality of the law and the validity of the Board's regulations. From these the chiropractors appealed to the Supreme Court of the United States and made their attack on the validity of such laws and regulations.

One of the defenses offered by the Attorney General for the State Medical Board and its secretary, Dr. H. M. Platter, was that such constitutional questions upon which the chiropractors based their claims was without merit and had already and repeatedly been held by that high court to be without merit and that such questions were frivolous and made for delay only. To sustain such a defense the United States Supreme Court must be fully satisfied of the frivolity or unsoundness of such claims before it will summarily dismiss an appeal to it. But this is precisely what that court concluded, as its dismissal of the case is based primarily on the frivolity of the questions presented. The per curiam opinion sets forth that the plaintiffs' (chiropractors) case is dismissed first, on the authority of *Farrell vs. O'Brien*, 199 U. S., p. 89-100. This quotation from this opinion shows the reason for the dismissal of the chiropractic case:

"It is settled that the mere averment of a constitutional question is not sufficient, where the question sought to be presented is so wanting in merit as to cause it to be friv-

olous or without any support whatever in reason."

Thus it is clear that any contention by the chiropractors that the case was not heard on the merits in the federal court are without any foundation.

Repeatedly proving that their efforts in the courts are purely for "delay" and to obstruct the enforcement of law, another suit was filed by the chiropractors in Cincinnati on April 6 in the Common Pleas Court and a temporary injunction issued by Judge Caldwell. In the light of the recent court decisions it is at least reasonable to expect that the court will soon dissolve the latest injunction when it learns that all questions have already been adjudicated.

It will be remembered that the Common Pleas Court of Cuyahoga county in the spring of 1920 granted the temporary injunction application of the chiropractors. This decision with pertinent comments appeared in the April, 1920, issue of *The Journal*, page 227 and 271. In a forceful opinion the Court of Appeals on November 12, 1920, reversed the lower court and upheld the laws in their entirety, page 925, December, 1920, *Journal*. In an opinion concurred in by all members of the Supreme Court of Ohio on April 26, 1921, the decision of the Court of Appeals was reaffirmed (June, 1921, *Journal*, pages 367 and 425), but still for the purpose of delay and to prevent the enforcement of the Ohio practice laws which had by this time been so completely affirmed, the chiropractors carried the case to the United States Supreme Court (August, 1921, *Journal*, page 530).

The Attorney General of Ohio, John G. Price, deserves commendation for his effective efforts in seeing that the laws involved were properly construed and in representing the State Medical Board on the issue through the various courts. A distinct tribute is also due to Mr. Ray Martin, special counsel in the Attorney General's department, who under the direction of his chief, submitted exhaustive briefs in both the Supreme Courts of Ohio and the United States and who argued the case for the state on both appeals.

There are said to be approximately 400 unlicensed chiropractors in Ohio, who instead of attempting to comply with the statutory provisions and court decisions, have declared through their leaders, that they will "rot in jail" rather than comply with the law. At a meeting which they held in Columbus early in April their spokesmen are quoted as saying that "the fight has just begun" and that the decision of the Supreme Court will only modify their next method of attack. They have been attempting to pledge prospective legislators and state officials to a bill for a separate chiropractic licensing board, similar to the measures introduced in recent sessions of the legislature. They say that the State Medical Board is no more qualified to examine chiropractors than a board of preach-

ers would be. They fail to explain that the only examination which the State Medical Board gives to such applicants for licensure are in the fundamental branches such as anatomy and diagnosis, and that they are entitled to be examined in their special method of practice by a committee of chiropractors appointed by the board on recommendation of their state chiropractic organization.

In several instances it has been found that the chiropractors have already organized to further the candidacies of prospective legislators who will support their bill. In several cases it appears that where their own members or adherents announce that they will run for the legislature, such candidates, when they find they have little or no chance of nomination and election, will promise to the stronger candidates that they will withdraw in return for a pledge of support to their bill.

It would be a sad day in Ohio if after years of litigation during which the uniform and unified system of examination and licensure in Ohio has been upheld and approved, the complete system intended for the protection of the public against unlicensed and unqualified charlatans were to be destroyed through legislative action, based on false pretense and misrepresentation.

Definite "specific prophylaxis" against such poison in the body politic is evidently indicated, and in the meantime it is to be hoped that the laws will be enforced.

If the public is genuinely concerned about the protection and preservation of its health it must eventually demand of its law-making representatives that statutes be enacted which will require certain definite minimum standards for *all* who treat the sick in any manner whatever. These requirements might properly be set at two years' work in an approved college of arts and science followed by a four year course in a standardized scientific school.

It is a hopeful indication that the most clear-thinking lay writers now realize that a thorough education in the fundamentals is essential in order that the public be protected from mercenary motives as well as from ignorance. They see through the preposterous contention of the chiropractors who claim that "diagnosis" is unnecessary.

This thought is forcefully stated in an editorial in a recent issue of the *New York World* which says in part:

"Fair play to the public would require adequate education of chiropractors—for example, a regular medical course plus specialized post-graduate work expected of a specialist in other fields of medicine.

"In such a course many would-be chiropractors would come to the conclusion that manipulation of vertebrae is not a cure-all, whatever its possibilities.

"Fair play to the public demands that chiro-

practic processes should be used only by men who know thoroughly what they are doing and why. Both common sense and science deny that all ills are traceable to the spine.

"Fair play to the public demands a strict curb on a great mass of quackery masquerading under the name of chiropractic. Fair play to the public would send a substantial percentage of chiropractors either to school or to jail.

"Adequate education might develop some competent healers of a limited group of diseases from the crowd of incompetent meddlers. But, given education, it is probable most of them would cease to be chiropractors."

### Enforce the Law

Commenting on the law-defiant attitude of the chiropractors, a forceful editorial on the above subject in the last Bulletin of the Ohio Public Health Association points out that laws intended to conserve health must be enforced. Several strong points are equally well emphasized. The editorial follows:

Following the handing down of a decision by Chief Justice William H. Taft of the United States Supreme Court on March 27th, upholding the laws of Ohio which require chiropractors as well as all others who practice the art of healing to be licensed, the State Medical Board on April 6 began prosecutions of unlicensed chiropractors in Cleveland and plans to carry on these prosecutions throughout the state.

At the same time, 50 chiropractors, meeting in Akron, through O. L. Brown, the state president of the chiropractors' association, announced that these unlicensed chiropractors would "rot in jail" before they would obey the law, sustained by the highest court of the land.

Open defiance of law, anarchistic utterance against laws and rebellion against constituted authority was dealt with severely when this country was engaged in winning the World War. Chiropractors have for several years refused to comply with the state law regulating all those engaged in the healing art, but with the hope that the courts would exempt them from the provisions of the law. Now that they have exhausted every legal means, they announce that they intend to continue to fight the state and "go to jail" if necessary.

The World War—a war of destruction—has ended but in this period of reconstruction the state and nation are engaged in a greater war—a war to eradicate disease, to conserve health and to lengthen life. The present attitude of the chiropractors in this state toward laws and constituted authority is just as reprehensible as any red propaganda ever advocated during the World War and deserves the same treatment.

Patriotic citizens will back up public officials who prosecute violators of the health laws of the state, and there are no laws more vital to

the public health and welfare than those to protect the sick against the quack and the pretended healer. The merits of chiropractic are not at issue. The state has prescribed methods by which those qualified to treat the sick may be licensed and the courts approved these methods.

#### State Census for the Disabled, Week of May Eighth

On page 293 of the April issue, the plan for conducting a state census of the disabled through the State Medical Association, was explained. Before May 1st there will be sent to each member of the Association, blanks to be used in reporting the name, address, and nature of impairment of any disabled man or woman whom it is desired to call to the attention of the Civilian Rehabilitation Service.

An appeal will be made through all the papers of the state to the people, asking them to refer any names of disabled persons to their local physician. During the week of May eighth it is hoped that each physician will make a list of these names and at the end of the week use the self-addressed, stamped envelope which is being sent to him in reporting these names to W. F. Shaw, Supervisor, Civilian Rehabilitation Service, State House Annex, Columbus.

This is an opportunity for the members of the State Medical Association to render a real service for disabled, handicapped men and women residing in Ohio. These injured persons, in many instances, may be trained for lives of useful service. Where training is feasible and where mental powers are present, the only hopeless cripple is a deliberate shirker, one who seeks to capitalize his disability. This is the kind of things which ought to stop, according to state officials in charge of this work. It will be recognized at once that it is good business and good common sense to enable handicapped men and women to overcome their disability and to assume such a position in the community as their individual aptitudes and desires will enable them to attain.

Please keep the week of May eighth, Rehabilitation Week, in mind and do your part. In our June issue it is hoped that the state department can give a summarized report of an unselfish service gladly rendered by the State Medical Association.

#### "Premedicated" Alcohol

A plan on foot in Washington which, to the average physician, may sound reasonable and possibly desirable, is to permit the use of denatured, or, as it has been dubbed, "premedicated" alcohol for use in remedies intended for internal administration. Perhaps we would be more inclined to look with favor upon this proposal if it came from some other source; but, in view of the fact that it is being sponsored by the proprietary medicine interests, we feel like

#### Legal Opinion on Anesthesia Status

To the Council,  
Ohio State Medical Association.  
Gentlemen:

In compliance with a request from the Council of the State Medical Association this Department submitted a request for an opinion whether the enactment of Section 1286-2 of the General Code was necessary to legalize the administration of an anesthetic by a registered nurse. This Department is advised that the enactment of the amendment was necessary and that such service can only be legally performed as set forth.

Respectfully submitted,  
(Signed) H. M. PLATTER, *Secretary*,  
State Medical Board of Ohio.  
March 28, 1922.

scrutinizing it pretty carefully, says the *American Journal of Clinical Medicine*.

The petition for such a ruling, according to information secured by the *Journal of the American Medical Association*, was submitted by Mr. Harry B. Thompson, general counsel for the Proprietary Association—the organization of "patent medicine" interests—and by the Chattanooga Medicine Company, makers of "Wine of Cardui."

It is proposed that alcohol may be denatured, that is, "premedicated," by using just enough of one or more of the ingredients of the particular mixture to be made to render the alcohol unfit for beverage purposes—nominally, at least! When thus medicated, the alcohol is to be tax free. The proposal, which on the face of it may seem attractive because of the great difference in the price of pure alcohol and denatured alcohol, contains dangers to medicine and to pharmacy. It means that alcohol, in such instances, would be denatured or "premedicated" at distilleries, and would then be shipped to the pharmaceutical houses where the manufacture of the medicine would be completed. In case of preparation of high grade pharmaceuticals, therefore, scientific control would be difficult. Furthermore, it would be necessary for the manufacturer to have as many "denatured" alcohols as the number of alcohol-containing preparations he makes—a relatively large number; again increasing the possibilities of error. From the scientific point of view, the serious objection is that the proposed plan would disturb pharmacopeial standards and methods of procedure, introducing rigidity where elasticity is often required. Extemporaneous pharmacy would be seriously hampered, and this, in turn, would affect the physician and, more important, the patient. It may be argued

(Continued on page 373)

## The Prevention of Deformity\*

CLARENCE H. HYMAN, M.D., Cleveland

Junior Assistant in Orthopedics, Mt. Sinai Hospital; Assistant in Orthopedics, Gates Hospital for Crippled Children, Elyria.

*Editor's Note.*—Preventable deformities are usually associated with infantile paralysis, rickets, tuberculosis, fractures, acute infections and extensive wounds of soft parts. In the opinion of Dr. Hyman, it is not so much on account of ignorance on the part of the medical profession that preventable deformities are allowed to occur, as through thoughtlessness and the lack of appreciation of their gradual, insidious development. The attending physician is generally too much concerned merely with the curing of the disease or the healing of the injury, losing sight of the ultimate outcome of function of the afflicted part or of some remote member. Of course, when existence is in danger, every other consideration should be subordinated to the saving of life, but the prevention of deformity should not play a less important part when the patient is on the road to recovery. Even then the resulting deformity may be one that is most disabling and resistant to treatment, necessitating months of inconvenience, discomfort and expense during treatment, or requiring extensive operations for relief, and even then resulting in a permanent disability.

AS A GENERAL medical principle, we know that many diseases can be prevented, or at least their incidence can be reduced to an almost negligible minimum. The vast majority of acquired deformities can be prevented, making their occurrence a rarity. It is not so much on account of ignorance on the part of the medical profession that these deformities are allowed to occur as through thoughtlessness, and the lack of appreciation of their gradual, insidious development. Ordinarily, the attending physician would be shocked if told that a deformity developed in a patient under his constant observation, and yet this is the time deformities do develop—under our very eyes. The attending physician is generally too much concerned merely with the curing of the disease or the healing of the injury, losing sight of the ultimate outcome of function of the afflicted part or of some remote member. Of course, when existence itself is in danger, every other consideration should be subordinated to the saving of life, but the prevention of deformity should not play a less important part when the patient is on the road to recovery. Even then the resulting deformity may be one that is most disabling and resistant to treatment, necessitating months of inconvenience, discomfort, and expense during treatment, or requiring extensive operations for relief, and even then resulting in a permanent disability.

This fact can not be too strongly emphasized and should ever be in our minds. It is just as important that the physician, in caring for a long protracted illness such as typhoid fever or a chronic arthritis, during which the patient is required to be constantly in bed over a long period of time, should bear in mind those deformities resulting from faulty positions or attitudes, such as foot drop, flexion of the hips or knees and stiff shoulders in the adducted position, as for the surgeon in treating a fracture, not to allow stiff deformed joints neighboring a fracture. That these deformities are of fre-

quent occurrence there can be no question; so frequent, in fact, that they compose at least one-fourth of the orthopedic surgeon's practice. Not long ago one of the most frequent deformities was foot drop. It is now so generally recognized how foot drop occurs and that it can be prevented, that it is a disgrace to allow a patient to develop this deformity after a fracture. Yet foot drop is only one of many and one of the less disabling of deformities, and it should be considered a disgrace to allow any preventable deformity to develop.

Undoubtedly, in any large hospital, in which the patients are supposed to be receiving the best of care, a person going through the wards can pick out a surprisingly large number of such deformities, unless the members of the staff have been trained to be constantly on the lookout for their development.

Preventable deformities are usually associated with infantile paralysis, rickets, tuberculosis, fractures, acute infectious and extensive wounds of soft parts. Let us briefly consider how deformities in each group occur so that we may be able to work toward their prevention more efficiently.

### INFANTILE PARALYSIS

There is evidence enough to believe that the extent of destruction of the anterior horn cells is not so great as was formerly supposed, and that the paralysis is due more to the pressure of an exudate about the anterior horn cells, which under favorable conditions is gradually relieved. This will account for the many cases of recovery months after the acute symptoms when the patient is placed at rest. Treatment should be begun as soon as the diagnosis is made. Just as in peripheral nerve injuries, the principle that a paralyzed muscle should not be allowed to stretch should be recognized. An overstretched muscle loses its physiological property of contraction, and when the nerve impulses are again transmitted, the muscle is in no receptive mood. The antagonistic muscles not paralyzed are always in tone and exert a constant force tending

\*Read before the Mt. Sinai Hospital Medical Society, 1921.

to further overstretch the paralyzed muscles, and permanent shortening of the stronger muscles results. To take a concrete example, say after a paralysis of the dorsal flexors of the foot, the powerful calf muscles hold the foot in plantar flexion and soon there is a permanent shortening of the Achilles tendon. Very frequently it is seen that, after a tenotomy of such a contracted Achilles tendon, with the foot flexed in a position to relax the dorsal flexors, function is again established. Cases of infantile paralysis should be kept absolutely at rest in bed, with the paralyzed muscles relaxed, for at least three months, and no massage or exercises begun until there is a cessation of all pain and tenderness. Particular care must be taken not to tire the muscle, as more harm than good will be done.

#### RICKETS

The etiology of rickets is not yet clearly understood in spite of the large number of investigations carried on recently along the lines of vitamin deficiency in the diet. Overcrowding is certainly an important incidental factor. The relatively large number of cases seen among Negroes and Italians in this country has not yet been satisfactorily explained. The deformities result from a softening of the bones, which are easily moulded, and when the disease appears, parents should be made to realize the danger of weight bearing and should be instructed not to carry the child in an habitual way. Deformities of the extremities should rarely be allowed to occur in rickets, and when once corrected by the surgeon should not be allowed to recur. Too often the operation for bow legs is done when the bones are still soft, and at the end of the allotted six weeks, when the casts are removed, weight bearing is again permitted only to have the deformity reappear.

#### TUBERCULOSIS

That there is an intimate association between the joints and the nerve centers in the spinal cord is shown by the hyper-excitability of the muscles, as manifested by the increased deep reflexes in an acute arthritis and the muscle spasm in tuberculosis. A diminution in the size of the anterior horn cells has been demonstrated within forty-eight hours after the production of an experimental arthritis. Here again it is the stronger muscle or group of muscles, working to the better advantage, that overpowers the antagonistic muscles leading to a permanent shortening or contracture. Early flexion deformity of the knee is generally recognized, but the detection of deformity of the hip requires more careful observation. The deformity is that of flexion, adduction and generally internal rotation, and is seen in practically all cases unless particular care has been used to prevent it. The kyphos in Pott's disease is due, of course, to the destruction of the vertebral bodies and, unques-

tionably, the method of choice in the treatment of Pott's disease is recumbency on a Bradford frame bent so that the angle of the bend is opposite the site of the disease. Too much reliance on plaster jackets and braces is to be avoided, however useful they are during the terminal stages of the treatment.

#### FRACTURES

Non-union and malunion are usually the result of improper fixation or too early weight bearing. I believe that incomplete fixation, after reduction is once obtained, particularly in cases in which there has been sepsis, is the most frequent cause of delayed union or non-union; and that malunion frequently occurs after the fragments have been properly reduced by too early weight bearing. It is here that the use of X-ray examination is important in doubtful cases. By manipulation and palpation no mobility between the fragments may be obtained and a large callus may be present, yet if there is tenderness at the site of the fracture or pain on attempted manipulation, X-ray examination may show a large superabundant callus surrounding the fracture with little or none between the broken ends. In fractures of the long bones the principle of fixation of the joint, both above and below the fracture, should not be forgotten. On the prevention of stiff joints in joint fractures much could be said concerning the early mobilization of the joint. This is not an inflammatory reaction and early active mobilization and later forcible manipulations are indicated; while in inflammatory reactions, such as acute and sub-acute arthritis, much harm can be done as inflammation is increased by too early motion. Arthritic joints need protection.

#### INFECTIONS

Infections are concerned with the production of deformities chiefly when joints or tendons are involved. Active mobilization of joints, according to the method of Willems, has given remarkable results when there is the complete co-operation of the patient. However, whether this method is used, or immobilization, care should be taken, if a stiff joint or a limitation of motion is expected, that the joint be in a position of election to be described later. Complete drainage of infected tendon sheaths together with immediate active mobilization of the tendons is necessary in order to obtain the maximum degree of motion.

#### TRAUMA TO THE SOFT PARTS

In extensive wounds of the soft parts including burns, the limb should be fixed in a position opposing the force of contraction of the scar. Fixation must be continued until long after the wound has healed when there is no further tendency for the scar to contract.

In extensive lacerations and crushing wounds, we should not be misled by the practice of ex-



tensive débridement, of which so much has been written in the treatment of gun-shot wounds. The overwhelming infections of war are rarely seen in civil practice and needless sacrifice of soft parts results in extensive scars and adhesions. Also the principle of removing loose fragments of bone in compound fractures and the excising of the ends is to be condemned, as non-union and sepsis generally follow.

#### POSITIONS OF ELECTION IN DEFORMITIES

Let us briefly review the few basic principles not always borne in mind. In the likelihood of any joint having a limitation of motion or an ankylosis, there are certain positions that are most useful—the so-called positions of election.

*Fingers.*—The position of most useful function is that of semi-flexion, making it possible to grasp objects and perform certain necessary functions; and, if there is slight motion, to write and button clothes. Fingers, stiff in extension or curled up in flexion, are useless members and the patient might possibly be better off with an artificial hand. Deformities may be prevented by the use of simple splinting in the desired position.

*Wrist.*—The position of most useful function is that of dorsal flexion. The hand is practically useless when the wrist is ankylosed in flexion, even though there is good power in the muscles leading to the fingers. The flexors are relatively lengthened and the extensors are overstretched. The power of the grip is lost. A limitation of motion in the wrist occurs in arthritis deformans, infections, injuries to the muscles and tendons about the forearm, and is most commonly associated with fractures about the wrist. It can be prevented by the application of a cock-up splint which is easily made and quickly applied. In this connection Colles' fracture deserves particular mention because of its frequency, and because the results, as ordinarily seen, are not good. It is true that the successful treatment of this fracture requires the wrist be put up in flexion and ulnar adduction to restore the normal forward inclination of the articulating surface of the lower end of the radius, yet this position should not be continued longer than one week—or just long enough to insure no displacement of the fragments when the wrist is brought up into dorsal flexion. A Colles' fracture properly reduced has little tendency to become displaced, and the likelihood of any displacement by changing the position of the wrist from flexion to extension is *nil*. In fractures of the semilunar or scaphoid bones the wrist should certainly be placed in dorsal flexion. In cases of fracture of the scaphoid, unless early and complete dorsal flexion is obtained, the chances are that a useful wrist will not be obtained without resection of the entire bone. Dislocations of the semilunar bone require careful supervision. Here it is necessary to put up the wrist in extreme flexion to hold the bone in place, but if held in

this position longer than ten days, months of after-treatment may be necessary, and even then a useful range of motion may not be obtained.

*Elbow.*—Flexion to approximately 100 degrees is the most useful position. An arm with the elbow stiff in extension is practically useless except for putting on shoes. At an angle of 100 degrees the arm can be used for almost anything: buttoning clothes, combing hair and putting hand in pocket. All fractures of the elbow, except fractures of the olecranon, should be placed in acute flexion, not only to hold the fragments in apposition, but also secure election position, bearing in mind the frequent unavoidable stiffness. This should be followed by early passive motion and massage within three weeks. In supracondylar fractures, restoration of the normal anterior curve of the lower end of the humerus must be obtained, and a study of the lateral view of the X-ray plate is important.

The position of supination of the forearm is commonly overlooked, and is especially important in fractures of the shaft of the radius. These fractures should be fixed in almost complete supination. The ability to pronate always comes, because of the relatively stronger pronators; but if the fracture of the shaft of the radius is allowed to unite with a torsion of the lower fragment on the upper, subsequent supination will be impossible. The occupation of the individual must be considered; supination is more useful in a laborer; pronation, necessary in writing is imperative in a clerk.

*Shoulder.*—The position of most useful function is abduction to about 70 degrees, with the arm held slightly anterior to the trunk. If the shoulder is stiff in adduction, there is practically complete loss of function of the arm. If ankylosed in the abducted position, the motion of the scapula compensates to a large degree the motion lost in the shoulder. In addition to the usual causes of ankylosis or limitation of motion in other joints, sub-deltoid bursitis deserves special mention, because it is the most common cause of a stiff shoulder. An efficient airplane splint can be easily and quickly made, is easily applied and is comfortable. Fractures of the neck of the humerus, as a rule, should be put up in abduction and external rotation—the never again position.

*Hip.*—Slight flexion, abduction and external rotation is the position to be desired. If abducted, the knees interfere; if fully extended, the patient can not sit in comfort; and if there is too much flexion, he can not stand erect without distorting the lumbar spine in extreme lordosis. The elective position is a debatable question if both hips are ankylosed, and here again the occupation of the individual must be considered. Hip deformities occur most frequently in tuberculosis, infantile paralysis and acute infections on account of faulty attitudes in bed. They may be prevented by the use of light traction.

*Knee.*—In this country the preference among

most orthopedists is that the knee should be flexed about 30 degrees, while abroad the opinion appears to be that of complete extension. A flexed knee is more useful in sitting; an extended knee in standing or walking. Here again light traction is sufficient to prevent incipient flexion deformity of the knee.

It may not be amiss to mention a very efficient method of overcoming flexion deformity: that of gradual overstretching of the hamstrings and joint capsule by means of wedging. A cast is applied from the ankle, or preferably the toes, to the tuberosity of the ischium, and a transverse slit is made posterior to the knee joint half encircling the cast. Tongue depressors are driven in daily and even the most obstinate cases will yield excepting, of course, those with a bony ankylosis.

*Ankle.*—The desired position of the ankle is evident and approximates a right angle. If there is shortening of the leg, slight equinus is preferable to give increased length. Pressure of the bed clothes may be eliminated by a cradle, but this is not sufficient as the weight of the foot itself is enough to overstretch the dorsal flexors. The patient should be made to completely dorsiflex the foot several times daily, and if he is unable to do this, a light wire splint to hold the

foot in dorsal flexion should be applied. A simple device for correcting foot drop when it has once occurred is useful. A plaster cast is applied from the toes to the knees incorporating webbing straps protruding above and below with a buckle attached to one of the straps. An elliptically shaped window with its long axis transverse is cut out over the front of the ankle and the straps buckled over in front are tightened each day, pulling the foot into dorsal flexion.

Traumatic flat foot, seen so frequently following a Pott's fracture, is the result of an incomplete reduction. In addition to a lateral displacement of the foot there is frequently a posterior subluxation of the astragalus on the tibia, and the correction of both of these deformities is necessary. The foot must be shoved medially and strong traction be made anteriorly on the foot which is then placed in marked inversion and dorsal flexion.

These few points or principles, simple as they appear, are of the utmost importance in doing good work, and should ever be borne in mind. It is only by constantly asking ourselves the question, "Is it possible for a deformity to develop, and if so, how can it be prevented", that we shall avoid serious blunders.

821 SCHOFIELD BLDG.

## Argyria\*

O. P. KIMBALL, M. D., Cleveland.

*Editor's Note.*—Since every physician appreciates the difficulties in the treatment of metallic poisoning and in the case of silver poisoning the added distress suffered by the patient because of the discoloration of the skin, it behooves us, as Dr. Kimball suggests, to exercise extreme caution in the use of this metal in internal medication or as an external application.

**T**HE RECENT PRESENTATION in the Cleveland Clinic of a case of marked argyria has occasioned a study of the literature and a general discussion of this condition.

The subject of argyria has appeared in medical literature since about the middle of the 17th century when Angelus Sala suggested the use of silver nitrate in the treatment of certain nerve affections, especially epilepsy, tabes dorsalis and chorea minor. Many cases of universal argyria naturally resulted from this practice, but in spite of its conspicuous results, silver nitrate was still generally employed until about the middle of the 19th century, when sharp criticism greatly limited its use. Cases of universal argyria are still occasionally reported, however, as are also cases of localized argyria resulting from local treatment with some silver preparation.

### FROMMANN'S CLASSICAL REPORT ON A CASE OF ARGYRIA

In all the reports of this condition that I have

found, the emphasis has been placed on the discoloration of the skin; and even the detailed descriptions point out that when anemia and nephritis occur they should be considered as only coincident with, but not caused by the silver poisoning. The most complete report including the clinical history of the case and the autopsy and histological findings is that published by Frommann, in 1859. The pathology of argyria as given by Frommann can be summarized as follows:

The discoloration of the skin is produced by an impregnation of the underlying tissues with very fine silver granules. The epidermis remains clear, the silver deposit lying underneath it, in the derma, in the connective tissue, about the hair follicles and the sebaceous glands, around the smooth muscle fibers, around the media of the medium-sized arteries and veins, and in the adventitia of the smallest vessels, (Fig. I, 6). A very important feature of the localization of these deposits is their attraction to the elastic substance of the connective tissue, the non-elastic substance being almost completely free from the deposition of silver.

\*From the Cleveland Clinic.

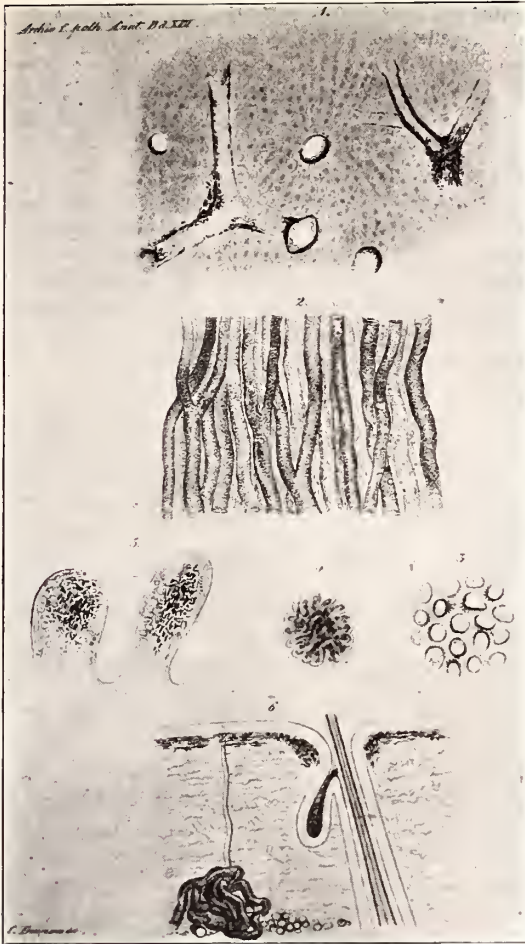


Fig. 1. Argyria (from autopsy of case of Dr. C. Frommann):

1. Section of liver showing black rim around central veins. At either side longitudinal section of veins showing thick deposits at points of branching.
2. Straight uriniferous tubules from a section in the neighborhood of the papilla.
3. Cross-section of the straight uriniferous tubules.
4. A malpighian body with black deposit whose peripheral convolutions have been lightened by caustic potash.
5. Deposits in the intestinal villi.
6. Perpendicular section through the skin of the temple. On each side of the hair can be seen the colored border under the rete mucosa. On one side is shown the deeply pigmented convolutions of a sweat gland.

A silver impregnation like that in the skin is found in practically every organ and tissue in the body. It is interesting to note that the silver deposits are not in the specific cells of the organs but almost exclusively in the elastic fibers of the connective tissues. For example, the silver deposits are abundant in the walls of the finer branches of the portal vein and of the small veins of the liver, in the walls of the small vessels of the spleen, and in the glomeruli of the kidney, (Fig. 1, 1-4).

The intestinal canal from the stomach to the rectum is heavily impregnated with silver, particularly the villi, the walls of the small blood vessels, and, to a lesser degree, the submucosa

and smooth musculature of the small intestines, with a marked pigmentation in the mesenteric glands, (Fig. 1, 5).

With reference to the brain and nerve tissues, Frommann reports a discoloration of the choroid plexus. Myerson in a recent report of his researches states that he has found argyrophilic granules only in the cells of the vagus nucleus, spinal ganglia, locus caeruleus and substantia nigra where they are always extra-nuclear. He could not discover any functional relation between these deposits and the central nervous system or the motor system; and moreover he states that the occurrence noted above appears only in man.

In the blood, there appears a definite stippling of the red blood corpuscles as in lead and bismuth poisoning. Also a marked anemia is frequently associated with poisoning with silver as with lead or bismuth poisoning.

#### THE CLEVELAND CLINIC CASE

The case we have to report is that of a young man who came to the Cleveland Clinic on September 8th, 1921, to have an X-ray picture taken to see if a duodenal ulcer had healed. At this time his only complaint was weakness and shortness of breath on exertion. He gave a history of severe tonsillitis and quinsy in July, 1920, which had been followed by repeated milder attacks of tonsillitis. In October, 1920, stomach trouble supervened, gradually growing worse until in December, 1920, an X-ray examination confirmed the diagnosis of duodenal ulcer. He returned to his home and on January 1st, 1921, began treatment consisting of a very restricted diet and 10 minims of 10 per cent. silver nitrate after each meal. His gastric disturbance soon disappeared, but by June, 1921, as the result of the limited diet he had lost 20 pounds in weight and was very weak. At this time he was put on an unrestricted diet, but the medication remained the same until August 30th, 1921. At this time he had more than regained his normal weight and as there had been no recurrence of the gastric disturbance he discontinued the silver nitrate. Up to this time he had taken 10 minims of a 10 per cent. solution of silver nitrate after each meal for eight months, *i. e.*, a total quantity of 1½ ounces of silver nitrate or approximately 1 ounce of silver.

When the patient presented himself on September 8th his general appearance was that of a normal, healthy young man of 21, excepting for a slight but definite discoloration in the face, which was most noticeable under the eyes and over the nose, where it was almost a slate color. The head and eyes were normal excepting for a slight discoloration of the sclera. The mucous membrane of the mouth was pale, and of a bluish tinge, the gum margins being distinctly blue with a definite black stippled line of metallic deposit on the gum margins of several teeth.

The tonsils were large and cryptic and showed a more pronounced color than that of the mucous membrane of the mouth and throat.

Although the temperature was 100.4°, there was no clinical evidence of any pathological con-

TABLE I.  
Histologic Blood Findings in Case of Argyria

Date	A		B	
	Sept. 8,	1921	Nov. 2,	1921
Red blood cells-----	2,900,000		4,600,000	
White blood cells-----	2,800		4,000	
Hemoglobin-----	45	p.c.	65	p.c.
Polymorphonuclears-----	50	"	46.5	"
Eosinophiles-----	1.5	"	1.5	"
Basophiles-----	1.0	"	0.0	"
Lymphocytes-----	35.0	"	51.5	"
Large mononuclears-----	3	"		"
Transitionals-----	9.5	"	0.5	"

dition in the chest or abdomen. The urine was loaded with albumin and fine granular casts. The histologic blood findings are shown in the accompanying table, (Table I-A). In every microscopic field the characteristic stippling of the red cells was apparent. The Wassermann test was negative.

Blood chemistry examination gave a normal result; carbon-dioxid tension, 37.2; urea, 17 mg. per 100 cc., uric acid 3.1, sugar, 138, chlorides, 605, creatinin, 3.02.

Microscopically, the blood picture was that of a rapidly produced secondary anemia with definite variation in the size of the red cells although no nucleated cells could be found. In two months the blood picture showed a marked change, (Table I-B), the number of red blood cells being 4,200,000, and hemoglobin 65 per cent., with much less variation in the size of the red cells, although the stippling appeared the same as before. At this last date the urine showed only a trace of albumin with an occasional hyaline cast.

The nephritis so clearly manifested at the first examination was exactly like that seen in cases due to lead, mercury, bismuth or any other metallic poisoning.

We have emphasized the destruction of red cells and the destruction of the parenchyma of the kidney since these have so often been considered as only incidents of metallic poisoning, while the discoloration of the skin and stippled line on the gum margin have been considered the more important if not the only pathognomonic signs.

In the case reported here the tonsils were removed by Dr. Waugh on November 2nd and chemical tests showed that the blue-gray color was due to silver deposits. In excised specimens, or at autopsy the presence of silver can be determined by the immediate disappearance of the color on the application of strong potassium cyanide and its reappearance on exposure to hydrogen sulphide gas.

The differential diagnosis of metallic poisoning can be made on the basis of discoloration of the gums and the so-called *lead line*, anemia,

nephritis, and stippling of the red blood cells. In the case of silver poisoning, the conspicuous discoloration of the face is sufficient evidence. A history of the employment of one of the metals in medication, or of contact with one of them in industry will add confirmation to the diagnosis.

Since every physician appreciates the difficulties in the treatment of metallic poisoning and in the case of silver poisoning the added distress suffered by the patient because of the discoloration of the skin, it behooves us to exercise extreme caution in the use of this metal in internal medication or as an external application.

#### REFERENCES

- Fromann, C.: Virchow's Path. Anat. u Physical, 1859, Vol. xvii, F. vii, p. 135.  
Myerson, A.: Jour. Medical Research, 1917, Vol. xxxv, p. 459.  
Olson, G. M.: Jour. A. M. A., 1917, Vol. lxi, p. 87.  
Phillips, John: Cleveland Medical Jour., 1917, Vol. xvi, p. 419.  
Sellers, A.: Industrial Hygiene, 1921, Vol. ii, p. 361.  
Steiner, O.: Cor.-Bf. f. schweiz, Aerzte, 1917, Vol. xlvii, p. 1192.

#### The Nursing Situation in Ohio

Clarence S. Ordway, M.D., and Charles Louy, M.D., Toledo, Ohio.

The question of eliminating the irrelevant part of the medical course which is at present demanded by hospitals and states from nurses to pass the examination necessary to secure a diploma to practice nursing, is being given serious consideration by many of the large hospitals and leading physicians and surgeons throughout the country.

The object of this sentiment is to make the course conform more logically with the mental training necessary to know how to nurse the sick, under a physician's supervision.

The present system of giving these students what is practically demanded by a medical college, to obtain a medical degree, is absurd and a gross imposition upon the time of those who have no intention to practice any branch of medicine.

This matter was brought before the Toledo Academy of Medicine at the meeting held April 10th, when resolutions were read suggesting a change in the present requirements from a three to a two-year course and a modification of the present literary demands of the applicants desiring to enter the nursing class. These resolutions were passed by an unanimous vote of the 160 doctors present at this meeting.

There is no logical reason why one who wishes to take up nursing, should be compelled to pass an examination embracing the numerous medical subjects which follow: Internal medicine, surgery, therapeutics, materia medica, anatomy, orthopedics, chemistry, bacteriology, gynecology, nervous and mental diseases, obstetrics, anesthetics, urology, public hygiene and other

branches which concern the medical graduate only.

If a degree of medicine is desired, it should be obtained by attending a college which is designed to train students to practice. A nurse's knowledge of surgery should stop at knowing how to prepare a patient for an operation and follow any directions the operator may give her if she assists him.

She is not preparing to practice surgery, internal medicine or any of its branches, therefore, the time she devotes to materia medica, therapeutics, surgery, symptomatology, etc., is not only wasted but an imposition upon her.

It is high time that a radical change be made in the character of the knowledge imparted to applicants for nursing.

The following questions were taken at random from books on nursing:

1. Classify foods according to chemical composition, giving function of each to the body. "Dietetics, Ohio State Board in Nursing, 1919."

2. Define materia medica, therapeutics, toxicology and pharmacopoeia. "Paul's Materia Medica for Nurses."

3. Complete instructions for general anesthesia, also nitrous oxide, "Stoney's Surgery for Nurses."

4. What important enzyme does the saliva contain? "Lewis' Anatomy for Nurses."

5. Define pathologic or abnormal pregnancy. Note: Make clear the difference between physiologic and pathologic pregnancy. "DeLee Obstetrics for Nurses."

They are entirely foreign to and have practically nothing to do with nursing the sick. No logical reason can be given why such information was ever required of one whose occupation concerns a nurses' work only. Let us hope that the hospital staffs will take early action in eliminating the great mass of unnecessary knowledge which is at present being given to applicants for the profession of nursing. Such action will give us better nurses from a practical point of view and will relieve the students from a very unnecessary and onerous burden which has a tendency to discourage ninety per cent. of the applicants who matriculate or make inquiries relative to same. It can be readily seen that the requirements as they now stand in Ohio will have to be lowered to relieve the now acute shortage of nurses in this state, which has created a hardship on the public and benefits but a very few.

## The Value of Spinal Fluid Examination\*

CHARLES E. KIELY, M.D., Cincinnati

*Editor's Note.*—In summarizing his subject Dr. Kiely maintains that lumbar puncture is a procedure of thirty years standing so extensively used in the last ten years as to make it a commonplace. It is without danger. It is indispensable for the differentiation of the common types of meningitis and equally so for certain types of syphilis. The colloidal gold test enables the physician to make a prognosis in the most hopeless form of nervous syphilis. The spinal fluid examination detects intracranial hemorrhage in many fractures and gives a pathognomonic appearance in constriction of the cord, which is almost synonymous with tumor. Spinal puncture affords the sole means of treating epidemic meningitis, as well as a successful method in certain cases of syphilis refractory to intravenous treatment. It gives startling results in many cases of delirium tremens and relieves migraine. It is an aid to surgical procedures and offers a method for anesthesia. It should be employed without fear.

IT IS THIRTY YEARS since Quinke introduced lumbar puncture for examination of the spinal fluid but it is only in the last ten that it has become a frequent procedure, the stimulus coming with the discovery of the possibility of Wassermann's test as previously done with blood serum. Lumbar puncture is theoretically formidable but practically easy and harmless. Less than six years ago a prominent surgeon of my acquaintance condemned it strongly for the specious reason that the insertion of a needle into the sub-arachnoid space could not but be dangerous—a logic tight argument. In those days hospitals carried lumbar puncture on their list of minor operations. Today we have all stopped counting the number we have done. A

prominent western internist is said to carry a spinal needle in the same pocket with his stethoscope—another extreme doubtless.

But, in fact, lumbar puncture has become a routine procedure and for good reason. It is entirely harmless. My personal experience covers about one thousand punctures. I have seen no fatalities, no single instance of damage to the cord or the nerve filaments and have never myself had a needle break off in the spine though almost every year we see this happen once or twice to inexperienced internes. Severe headache does occasionally follow, but almost invariably when patients are punctured in the sitting position or when in disobedience of orders they get out of bed too soon. Landon, of Pittsburgh, uses a needle of very fine bore, punctures patients in the office and allows them to go home after a

\*Read before the meeting of the Ohio Valley Medical Society, at Evansville, Ind., November 15, 1921.

short rest. He has no difficulty with headache and ascribes this to the fine caliber of the needle used. Personally I prefer the almost universal practice—puncture in the lateral recumbent position. The patient remains in bed twenty-four hours with one pillow, is allowed to lie on the side or back but not to raise the head. At the end of this time he sits up and if headache appears goes back to bed; if not he stays up. I have had but two really troublesome headaches. Both patients were punctured sitting and in both the headache lasted for a week and required opiates. In the treatment of syphilis by intraspinal injection only as much fluid is withdrawn as there is serum to inject and headaches are conspicuously few so I draw the inference that a loss of fluid is the cause of lumbar puncture headaches.

#### DIAGNOSTIC VALUE

The ordinary diagnostic value of lumbar puncture is known to you. The differentiation of various clinical types of acute meningitis and meningismus of infants is utterly uncertain without puncture, while examination of the fluid shows the meningococcus in practically all cases of the epidemic type, the tubercle bacillus in about 50 per cent. of that type and even in the remaining 50 per cent. the character of the fluid offers a most reliable diagnostic criterion.

In meningitis, by extension from the mastoid or other structures adjacent to the nervous system, we have a purulent fluid which either differentiates by the absence of meningococci or actually shows streptococci. Lumbar puncture has proved that a pneumococcal meningitis is not a rarity. In the various forms of encephalitis such as infantile paralysis, sleeping sickness (so-called) and influenzal infections abnormal spinal fluids are found but in spite of elaborate differentiations I feel that these fluids are not characteristic.

In cerebro-spinal syphilis lumbar puncture is indispensable. Even when a blood Wassermann test is negative the spinal fluid may be positive in as high as ten per cent. of cases and an otherwise doubtful diagnosis made certain.

Mrs. D— was referred to me some time ago following a thyroid operation; she showed mild mental symptoms,—a tendency to wander from home and a loss of memory. Fixed pupils and stumbling speech suggested paresis and while a blood Wassermann test was negative the spinal fluid was four plus.

Mrs. X—, a preacher's wife, was referred for tinnitus and dizziness. The blood test was negative, spinal fluid test two plus. Complete relief was secured by arsphenamine therapy.

Mrs. H—, now thirty-three, has had headaches since puberty. She was told ovariectomy would relieve them, but it did not. She was told marriage would relieve them, but it did not. She was told pregnancy would relieve them, but it did not. She suffered intensely throughout lac-

tation and had instant relief after weaning her baby. During a later recurrence a blood Wassermann test was negative. During the last recurrence in May, 1921, Dr. Brower, of Dayton, Ohio, did a lumbar puncture. The Wassermann test was negative but there was an excess of cells and globulin. Now in an afebrile condition lympho-cytosis and an excess of globulin mean syphilis with fair certainty. Arsphenamine has been given this patient and she had her first real relief in nineteen years.

Mrs. F—, divorced and with a history of one miscarriage and two hemiplegic strokes and intense headaches likewise had a negative Wassermann but lympho-cytosis. Anti-luetic treatment cleared her up promptly.

Further, the Lange colloidal gold test of the spinal fluid gives a reaction characteristic for *paresis alone*—a valuable aid as the prognosis in this form of syphilis is so much more hopeless than in others.

In *traumatic cases* indispensable information can often be obtained. In suspected skull fracture laked blood in the spinal fluid or broken-down blood pigment is almost pathognomonic, a most useful finding when circumstances forbid radiography or plates are doubtful.

It is not generally enough known that free blood in the sub-arachnoid space at the base of the brain will produce a rigidity of the neck which may be ascribed to meningitis. During my service in the A. E. F. I was asked to see a soldier evacuated from the battle lines with a provisional diagnosis of acute meningitis. On admission to our medical service he had a rigid neck but no elevation of temperature. Lumbar puncture had been done that day; the ward surgeon said the fluid was cloudy and for safety's sake had administered anti-meningococcal serum. It must be remembered that serum will produce purulence in even normal fluids so I was more interested in the first sample. This was luckily still obtainable at the laboratory. It was yellow and gave a decided chemical test for blood pigment. Radiographic examination showed an entirely unsuspected shrapnel fragment about two inches deep in the left parietal lobe of the brain.

Constriction of the spinal canal of considerable duration, more rarely by adhesions, more commonly by tumors, gives a very characteristic fluid—the so-called Froin's Syndrome—xanthochromia with coagulation *en masse*.

#### INTRA-CRANIAL PRESSURE

Lumbar puncture has equal value in *brain tumors* as a means of estimating intra-cranial pressure. Tumor is generally thought a contra-indication for puncture as sudden death may result from wedging the medulla into the foramen magnum. I have punctured some half dozen tumor cases without any trouble—removing only two or three c.c. of fluid and having at hand a reservoir of sterile salt solution to replace the

fluid in case of unfavorable symptoms but have so far not been obliged to use it.

The subject of intra-cranial pressure deserves greater attention. When Quinke invented lumbar puncture the Wassermann test was unknown, as was the serum treatment of acute meningitis. Quinke was interested in pressure, yet no part of spinal fluid examination has been so neglected. Manometers were occasionally employed but were adapted to the needle after withdrawal of the stylet. Depending on the amount of flow more or less fluid was lost and readings correspondingly varied. Punctures were not done consistently in any one position and it is a mere matter of high school physics that the erect position will increase the pressure by the weight of a column of water (for spinal fluid can be calculated as water) as great as the distance from the needle to the top of the patient's cerebral cortex. One is not surprised therefore to find the normal pressure put down as anything from 100 to 600 mm. of water, and in consequence manometers were abandoned for less accurate means. However reports that read "*fluid under great pressure, spurted freely*" and "*fluid under normal pressure, dropped slowly*" can be readily shown equally false.

A physician of my acquaintance was smugly satisfied with a dictum of some professor that a rate of more than ten drops per minute proved abnormal pressure which incited me to some practical contravention. To refer again to high school physics recall that the rate of flow through a tube is a function of its cross section and as cross section varies as the square of the diameter slight differences in the caliber of a needle lumen might be expected to make surprising difference in the cross section and the flow. A practical demonstration is simple to the point of banality. Take two lumbar puncture needles picked quite at random, one the type put up with a common meningitis out-fit, the other the sort one buys from the instrument maker. These are attached at the same level to a bottle and therefore under equal pressure of water (150mm.), which is about the normal human pressure in the prone position, and while one spurts the other drips. You will notice further that under normal pressure, one drips at a rate far in excess of ten drops per minute, so fast in fact that it cannot be counted with accuracy.

#### METHOD OF TAKING PRESSURE

With the hope of standardizing pressure records, I devised, in 1920, a lumbar puncture needle<sup>1</sup> which obviates some disadvantages of earlier models, first of all by its simplicity. This needle is the usual instrument but is furnished with a by-pass in the butt; the tip of the stylet is a little bulbous so that it cannot pass the collar screwing into the butt farther than will allow fluid to rise in the by-pass. In practice the needle is driven in as usual. I am sure that anyone who has done a dozen punctures can be sure if he is

in the canal by feel and without drawing out his stylet. At this stage the manometer tube is adapted and the stylet pulled out as far as the collar permits. Spinal fluid rises in the tube which should be calibrated. As this fluid contains only one in a thousand of solids the length of the column is the pressure in millimeters of water. For hospital work a *continuous* tube can be used and for convenience in carrying a *jointed* tube. The device, I believe, offers the following advantages; no fluid is lost so records are accurate and mercury manometers with consequent spilling are avoided. It has no complicated valves to leak or impair sterilization. The tube is narrow so that even in high pressure cases barely two cc. of fluid comes out into the instrument, an amount never dangerous even in tumor cases.

#### PRESSURES IN VARIOUS CONDITIONS

By the use of this needle it is hoped some consistent norm can be reached. From observations made to date I feel that 150 mm. of water is a fair average for normals. Observations on obviously pathological cases would justify the conclusion that pressure is not characteristic of any particular disease as most divergent readings are found under the same diagnosis. For instance two cases of tabes give reading of 150 and 260. Twelve cases of paresis give 63.5, 125, 130, 154, 155, 161, 176, 192, 218, 236, 240 and 393. Two cases of alcoholism vary from 110 to 210, with a case of delirium tremens falling between at 140. Only two cases of brain tumor are recorded. In one the pressure was only 160, a most surprising figure as opticoedema was marked. In the second the reading suited better *a priori* conceptions, overflowing the tube which was 400 mm. in length. A remarkable finding is the absence of readings in the three hundreds. In a tabulation of forty-seven cases four are over 400 mm. Forty are below three hundred and only three in three hundred. *This seems hardly a coincidence and may mean when pressure reaches three hundred or thereabout a controlling mechanism breaks down and the pressure rises excessively.* We have frequently been able to prove the fallacy of the drop counting method. Punctures done with this instrument showed high pressure after previous puncture had indicated the contrary as gauged in the old way. However not enough cases are now on record to draw conclusions. Pressure may prove to be of no great diagnostic value except when excessively high. At any rate the instrument, I hope, does something to put measurements on a reliable basis.

#### THERAPEUTIC VALUE

In conclusion I wish to return to lumbar puncture as a therapeutic measure. The treatment of acute meningitis demands it imperatively. Cases of syphilis resistant to intra-venous medication can often be successfully handled by intra-spinous medication. In June a physician brought me

a girl of twenty-two referred to him one year before for strabismus. The blood Wassermann test was four plus. He had given her twenty doses of neo-arsphenamine intra-venously in the year and her spinal fluid, drawn before the administration of the intra-spinous dose, was four plus. Spinal fluid drawn one week after first treatment was negative and also that drawn after the second. Her blood now became negative. After four months without treatment the fluid is again faintly plus and intra-spinous treatment will be resumed until the fluid remains negative over a long period.

In the treatment of tetanus injection of sterile 4 per cent. magnesium sulphate is of definite value.

Mere removal of fluid by lumbar puncture is indicated in some conditions. In certain cases of delirium tremens it will produce immediate and permanent disappearance of symptoms. To relieve tension in intra-cranial surgery it is often very helpful. Certain types of migraine get relief for periods of months.

Lastly spinal anesthesia is an appreciated substitute for general anesthetic in surgery of the pelvis or lower extremities.

## SUMMARY

To sum up then, lumbar puncture is a procedure of thirty years' standing so extensively used in the last ten years as to make it a commonplace. It is without danger. It is indispensable for the differentiation of the common types of meningitis and equally so for certain types of syphilis. The colloidal gold test enables us to make a prognosis in the most hopeless form of nervous syphilis. The spinal fluid examination detects intra-cranial hemorrhage in many fractures and gives a pathognomonic appearance in constriction of the cord, which is almost synonymous with tumor. Spinal puncture affords the sole means of treating epidemic meningitis as well as a successful method in certain cases of syphilis refractory to intra-venous treatment. It gives startling results in many cases of delirium tremens and relieves migraine: it is an aid to surgical procedures and offers a method for anesthesia. It should be employed without fear.

## BIBLIOGRAPHY

- (1) Kiely, C. E. and Caldwell J. A. A simple method of measuring intra-cranial pressure, J. A. M. A. 74:951 (April 3, 1920).  
628 ELM ST.

## Solving Mal-Nutrition Among School Children

ELMER W. SCHLEMMER, M.D., Cincinnati

*Editor's Note.*—Among the fundamental causes of mal-nutrition among school children, Dr. Schlemmer stresses the importance of physical defects, insufficient food and faulty food habits, lack of home control, bad health habits and over-fatigue. In Dr. Schlemmer's experience intensive methods of the nutrition classes seem to be the only answer to the solution of the problem. Mal-nutrition is due more to ignorance than to poverty; the remedy is education, not charity; the program followed in the nutrition classes, of fresh air, rest and simple diet which centers around milk, cereals and vegetables, plus the correction of physical defects, can overcome mal-nutrition among children, and probably reduce the tuberculosis death rate of the next generation.

**N**OT ONLY PHYSICIANS and nurses, but the people in general are beginning to realize the extent of mal-nutrition among school children. This has become of such vital importance that the Chief Medical School Inspector of the Cincinnati Board of Health, the Medical School Inspectors and nurses have made this a special field of endeavor, and are already making good progress. We have found that mal-nutrition is not merely dependent upon the food problem, but on a combination of factors; it may also mean that the child has some physical handicap, or that there is something wrong with the whole regime of life.

### FUNDAMENTAL CASES OF MAL-NUTRITION

We can safely group the fundamental causes of mal-nutrition as follows:

1. *Physical Defects.*—The chief causes are diseased tonsils and adenoids; some obstruction of the breathing passages; decayed teeth and tuberculosis.

2. *Insufficient Food and Faulty Food Habits.*—

It is astonishing how many children drink coffee and tea instead of milk. Their appetite for candies and tid-bits can scarcely be satisfied. They habitually eat between meals, overtaxing the digestive tract.

3. *Lack of Home Control.*—Parents often are very negligent in that they permit their children to remain up until ten or eleven o'clock after visiting a movie, and as most children select nothing but the exciting pictures, this is a common cause of sleeplessness, which is a great factor in mal-nutrition.

4. *Bad Health Habits.*—Sleeping in poorly ventilated rooms and over-crowding in the sleeping apartments. Failure to clean hands and face before eating. Not attending to nature's wants at the proper time, causing constipation.

5. *Over-Fatigue.*—Is a very important factor of mal-nutrition. A moderate amount of play is beneficial, but children now-a-days do not play. Their play becomes work, due to the strain it imposes upon the muscular system. For diversion they indulge in roller skating, skipping the rope,





Fig. 1. Open air class room in a Cincinnati school. The milk and cracker period.

*O'Leary* and probably a strenuous game of baseball or soccer football. Their overwrought nervous system cannot stand the strain of this continuous exertion; the result is chronic fatigue.

ORGANIZING MAL-NUTRITION CLASSES

In organizing mal-nutrition classes, weighing and measuring is essentially the first step, and scales are the indicators. No matter how well a child may seem to parent or teacher, if it is 10 per cent. or more underweight there is something radically wrong. All of the public schools of Cin-

cinnati are equipped with scales, (only the scales with bar and weights are used; spring scales get out of order too quickly). All children are weighed and measured, and this is made a part of their school record, and accompanies them from one grade to another, or when they are transferred from one school to another.

During the past year all the children of the public schools were weighed and measured. In October there were 8,811 children, or 20 per cent. that were 10 per cent. or more underweight. In June, of the same school year, 4,353 were still 10



Fig. 2. The school nurse lecturing to children on food values and personal hygiene.

per cent. underweight, showing that 50 per cent. had either returned to normal or had improved sufficiently to be taken out of the mal-nourished group.

PARENTAL CO-OPERATION

Realizing the causes of mal-nutrition, we are attempting to remove them by instructing the parents in the principles of child hygiene, correcting bad habits which retard growth and taking care of remediable physical defects.

A card is sent home the day before the child is to be examined, inviting the parent to be present at the examination. It is of greatest assistance to the doctor to have the parent present, so that a full history of the child may be obtained, and the parent be immediately informed of conditions found to be affecting the child's nutrition. The school nurse follows up all cases intensively and gives the necessary advice and instructions in the homes on personal hygiene, food values, and the correction of physical defects when indicated.

The relation of weight and height to age is significant as a starting point to determine a child's condition as regards nutrition, but his rate of gain in weight and height per month is very important as showing his progress. Therefore all children that are 10 per cent. or more underweight are weighed and measured monthly

by a brisk rub every morning. The temperature, pulse and respiration is taken before the bath in the morning, and in the afternoon before the child is dismissed. Any rise in temperature above 100° Fahrenheit, or any unusual symptoms are reported to the school physician. After the bath the children return to the open air class room and are given a glass of milk and crackers, and then their academic work is resumed the same as in the regular class rooms. At noon instead of going home to their lunch they are given their meal at school. This meal is prepared under the supervision of the teacher of dietetics, and nothing but the most nutritious foods are served. After the noon meal the children are permitted to play until one o'clock, then from one to two o'clock they take their rest period on cots. Visitors are excluded during rest periods. From two until three o'clock they resume their academic work, and before school is dismissed their pulse, respiration and temperature are taken. The children are weighed every Monday and Friday and a special record is maintained for each child. Children in open air class rooms are not permitted to take regular physical exercises; only those whose physical condition warrant it may take part in graded exercises, drills and simple dances. A brief resumé of the results secured in open air classes is as follows:

School	No. in Class during the year	Average gain per pupil per term. (Pounds)	Greatest gain per term. (Pounds)	Lost wt. during term.
Dyer .....	26	4.778	12	1
Sands .....	27	6.175	13	1
Guilford .....	29	6.31	12¾	0
Douglass .....	21	4.226	12¼	1
Rothenberg .....	25	4.1	8	1

and their percentage of underweight computed and noted on their chart. Children who are much below normal weight usually gain rapidly when the cause of the low weight can be removed. I have noticed that there are periods of a few months in which children gain in weight and height more rapidly than others. Usually the gain in weight and height is more rapid in spring and fall months, less rapid in winter and mid-summer.

OPEN AIR CLASS ROOMS AND ROUTINE

The Board of Education has established throughout the city five open air class rooms, for the children that are extremely mal-nourished. The number of children that are admitted is limited to twenty-five. Admission and discharge is based upon physical examination made by the School Inspector. All remediable defects are expected to be taken care of as soon as child is admitted to the class. The routine of class is as follows:—

Each child is given a cleansing bath followed

SUPPLEMENTARY FEEDING

As we have not enough open air class rooms for mal-nourished children, many of the schools are supplementing the home diet by means of opening lunch rooms, and in some schools that have no facilities for penny lunch rooms they are furnishing one-half pints of milk and crackers or rolls at cost price to the pupil. This is a great aid in a practical way to build up the mal-nourished child. The effect of the supplementary feeding on the school work of the children has been marked. The teachers tell me they can see results. The children work better, they play better and are less fretful. Their minds are keener and they grasp their studies more quickly. The attendance at classes has also improved.

CONCLUSIONS

Convinced that the problem of mal-nutrition is a serious and extensive one, I have come to the conclusion that the practical and intensive methods of the nutrition classes seem to be the only answer to the solution of the problem. Mal-nutrition is due more to ignorance than to pov-

erty; the remedy is education, not charity; the program followed in the nutrition classes, of fresh air, rest, and simple diet, which centers around milk, cereals and vegetables, plus the correction of physical defects can overcome mal-

nutrition among children. All authorities agree if we can reduce mal-nutrition among children we will reduce the tuberculosis death rate of the next generation, and I candidly believe we will.  
943 POPLAR ST.

## Personal Observations Regarding the Newer Roentgen Technique for the Treatment of Cancer\*

J. HENRY SCHROEDER, M.D., Cincinnati

*Editor's Note.*—In the opinion of Dr. Schroeder the newer Roentgen therapy of cancer is one of the finest examples of the intelligent application of pure science to the solution of a technical problem. By the use of practically homogeneous rays it is now possible to bring the entire biological therapeutic effect of Roentgen radiation to bear upon deep seated carcinomas without deleterious effects upon the overlying skin. To accomplish this, new apparatus, delivering approximately 300,000 volts maximum, is required and the measurement of the dosage is controlled by the ionto-quantimeter. This method of therapy does not preclude the use of radium and its effectiveness, in the presence of cachexia and anaemia, is enhanced by preliminary blood transfusions and intravenous injections of the newer arsenicals. Wintz accomplishes what he designates as the Roentgen-Wertheim operation in three Roentgen treatments; and in the University Gynecological Clinics at Erlangen and Freiburg no surgical operations for uterine cancer have been done during the past five or six years.

IT HAS RECENTLY been my privilege to make a rather careful study in large European clinics of one of the most interesting advances in therapy, namely the effective application of Roentgen rays in the treatment of deep seated cancer. This advance has been made possible through the production of very penetrating X-rays, and through methods that have been devised to allow these rays to reach deep tissues in large and sufficient quantities. The studies that led to a systematic development of the newer technique present one of the finest examples of intelligent procedure for the solution of a technical problem of which I am aware.

The world at large is mainly interested in the fact that progress has been made in the treatment of a disease that is not only the misfortune of the individual, but which has been recognized as one of the most important problems of public health. As physicians we not only share this interest but assume a new responsibility: to examine this newer method of Roentgen ray treatment and determine its merits, in order that its benefits may not be withheld from the afflicted. It speaks well for this new therapeutic procedure that its appeal for recognition and support need not be based alone upon its claims of success, but mainly upon a demonstration of the ways and means through which it has become possible to apply a recognized therapeutic agency effectively to its purpose.

Therefore it has been my aim to examine closely the advantages of the newer technique, as well as the clinical results of intensive deep Roentgen therapy. The progress can best be appreciated when we bear in mind the basic facts of radiotherapy and the limitations which, hereto-

fore, were imposed upon its application to deeper tissues.

### BIOLOGICAL EFFECTS OF RADIATION

Very soon after the discovery of the Roentgen rays their effect upon living tissue was recognized, and this effect is called the *biologic effect* of the rays. It is different upon different tissues. Depending upon the susceptibility of different cells and tissues, it varies strictly with the quantity of radiation *absorbed* by the tissues. This quantity is called a *dose*. A small dose may only be irritating and stimulating. Larger doses produce cell degeneration, and when the blood vessels are affected in the radiated field it may be followed by inflammation and necrosis. It is not surprising, therefore, that the devitalizing energy of radiation should have been directed to the destruction of malignant neoplasms. In this attempt we have obtained a large measure of success in certain types of skin cancer. As soon as an attempt was made to treat a cancer situated even slightly below the skin, by Roentgen radiation, difficulties were encountered that until recently could not be overcome. Whenever a temporary recession of the growth occurred it was accidental and could in no way be credited to a technique based upon scientific calculation, and the dose given was not known.

Aside from this want of technique there intervened the one effective barrier—the patient's skin. The therapeutic effort resolved itself into the problem—if it reached the dignity of a problem—not of what radiation dosage was being absorbed by the submerged neoplasm, but of how much dosage the overlying skin could tolerate without being destroyed. Inasmuch as the resistance of cancer cells to Roentgen radiation is practically identical with the overlying skin, and

\*Read before the Meeting of the Ohio Valley Medical Association, at Evansville, Indiana, November 16, 1921.

as in addition there is a progressive lessening of the rays as they pass through the layers of tissues, centimeter after centimeter, so that with our former technique only about ten to fifteen per cent. of total radiation effect reached a depth of ten cm. through one area of entry, the hopelessness of our former attempt of deep Roentgen therapy is explained.

The newer therapeutic effort did recognize the problem, and attacked it as a problem to be solved.

#### THE "PRACTICALLY HOMOGENEOUS RAYS"

Roentgen physicists removed in a systematic manner, by a process of filtration through layers of various metals, one component after another from the bundle of Roentgen rays as they issued from the tube, until only such rays were left that could pass through the various tissues with an equal percentage of absorption for each layer. These final components are called *end rays* or *practically homogeneous rays*. Only a small fraction of their quantity is absorbed by the skin and upper layers of tissues. The skin can, therefore, be subjected to the penetrating rays for a much longer time, allowing a correspondingly larger quantity of the rays to reach the seat of the disease. These ultra-hard rays generate in the tissues a maximum amount of secondary rays that may have a very important bearing upon the biologic effect of Roentgen radiation.

#### IMPROVED APPARATUS

The next step was the construction of apparatus capable of generating a larger quantity of Roentgen rays of the greatest penetrating power. During my stay in the clinics abroad the apparatus used was of the type that delivered about 200,000 volts maximum. I have since been informed that apparatus is being installed in the clinics delivering approximately 300,000 volts maximum. In accordance with the laws of physics the output of very penetrating, or ultra-hard, rays is thereby much increased when suitable tubes are used, and the time consumed for the administration of a carcinoma dose is within acceptable limits. Even so a treatment over a single area may extend over two to eight hours in one sitting.

#### THE IONTOQUANTIMETER

The basis of science is measurement. The measurement of the quantity of Roentgen rays that reaches the seat of the disease, and I mean by that the total radiation, is a prerequisite to a scientific application of Roentgen therapy. The only recognized method by which the quantity of radiation can be measured is the determination of the degree of ionization of a volume of air as recorded by an electrometer. This principle is embodied in the *Iontoquantimeter*. In the foreign clinics measurement of the Roentgen radiation

doses constitute the basis of all Roentgen treatments, and their results have been made possible only through the use of this dosimeter. After the Roentgen apparatus has once been calibrated by the Iontoquantimeter treatment may be timed accordingly.

To proceed without the Iontoquantimeter is comparable to a blind surgeon performing an operation. All this notwithstanding the assurance of the X-ray salesman that "all you need to know is voltage, amperage, time and distance." I would add with emphasis that even the selection of the most advantageous filter can only be made through the use of the Iontoquantimeter.

The dosimetric apparatus is primarily designed to measure the quantity of total radiation that reaches the seat of the disease at any given depth of tissue. It serves also as a direct measurement of the intensity of radiation upon a given surface. The instrument is reliable.

#### THERAPEUTIC APPLICATION

An understanding of the tools with which we work has enabled us to observe and interpret intelligently the effect of their use. As applied to the treatment of cancer it is the opinion of those most competent to judge that every cancer cell can be killed through a sufficient dose of Roentgen radiation. It is the problem of technique to see that this dose reaches every cancer cell *without destroying other tissue*. The protection of adjoining tissue is not only important in itself, but it is more than likely that the biologic effect upon the surrounding connective tissue is such that the latter becomes an important factor in the destruction of the malignant cells and tissues.

It has been demonstrated that when an insufficient dose, less than forty per cent. of the carcinoma radiation dose, reaches the cancer cells it stimulates the cancer to more vigorous growth. A larger dose may temporarily inhibit their development, but they will recover. Repeated large, but not lethal, doses are not as effective as one full carcinoma dose; therefore, if practicable, the treatment should be administered in one treatment.

When required, radium may be applied locally in a true cross-fire technique at the same time that Roentgen radiation is used, provided that the total dose of both agents is determined beforehand.

It is the practice abroad that the systemic condition of the patient be carefully improved. If hemorrhages have produced a severe anaemia, blood transfusions are used. Otherwise, and among other things, intravenous injections of arsenic preparations are employed.

The after-effects of intensive deep Roentgen radiation depend upon the dose given. They also differ with different individuals. The immediate after effects may consist of symptoms that suggest an intoxication. The patient is usually

nauseated and may vomit and is generally indisposed. This disturbance usually clears up in the course of a week. Seven or eight days after the treatment one expects to see a slight papular erythema of the radiated skin region, this in the course of a month gives rise to a slight browning of the area. When the abdomen is irradiated with a full dose there is apt to be some intestinal irritation a few days after the treatment, lasting for a day or two.

*It is to be expected that after a prolonged exposure of a large mass of tissue with its circulating blood to intensive deep radiation, that certain biologic effects upon the blood constituents may be noted. Without going into histologic details, I may summarize by saying that as a rule the normal blood condition is restored after six weeks. It has been observed that in patients, whose blood condition had been seriously impaired by a cachexia prior to the Roentgen radiation, this improvement may not take place, and the Roentgen therapists abroad see in this factor the principal reason for possible failure of the treatment in these cases.*

*It has also been observed that active haemato-poetic treatment, such as blood transfusion and the chemotherapy already mentioned, have a markedly beneficial influence upon the blood state and constitute an important part of the Roentgen treatment.*

#### RESULTS

Since nowhere else than in Germany intensive deep Roentgen therapy has been developed, results can only be observed there. I have had abundant opportunity to observe both the immediate results and to study the statistics. The best results have been obtained in the treatment of cancer of the uterus and pelvic organs. In the University Gynecological Clinics at Erlangen and Freiburg no surgical operations for uterine cancer have been done during the past five or six years. All cases are treated by Roentgen radiation, sometimes in conjunction with radium. Prof. Wintz accomplishes what he designates as the Roentgen-Wertheim operation in three Roentgen treatments. In the various surgical and gynecological clinics throughout Germany equipment for intensive deep Roentgen treatments is at hand. There are usually from two to four machines, often treating from four to eight patients at one time, running eight or ten hours a day.

For cancer in locations elsewhere than in the pelvis, though equally applicable, Roentgen therapy has not been as uniformly successful, whether less so than after surgical operations I am unable to say. An exception to this statement is found in cancer of the breast. Particularly good work in the Roentgen treatment of mammary cancer is being done at the cancer research institute of the University of Berlin. I saw there remarkably good immediate results.

From other German clinics that also challenge attention, the reports of the post-operative Roentgen treatment of cancer of the breast as a prophylactic method are less favorable, but competent critics have not hesitated to point out that improper technique is probably the cause of the failures.

#### PERSONAL EXPERIENCE

After my return from the European clinics I measured the depth dose of total radiation obtainable with the apparatus to which we had been accustomed, and which was as powerful as any then available. The largest dose obtainable at a depth of 10 cm. was twenty per cent. of the skin dose through one area of entrance. This dose could only be obtained at a great expense of time, and it proved impracticable to administer a full carcinoma dose at this depth with that apparatus.

Since then I have had an apparatus built for me with a capacity of 285,000 volts maximum, which is capable of delivering a depth dose at 10 cm. of over sixty-five per cent. of the skin dose through one area of entry, when filtered through heavy copper filters. The degree of penetration of these ultra-hard rays may be imaged when we bear in mind the fact that they are able to pass, in perceptible quantities, through 20 mm. of lead, whereas all rays formerly available were arrested by three mm. of lead. I have observed that even after five hours of exposure to the hard rays of this apparatus, administering a full carcinoma dose, the symptoms of Roentgen intoxication were milder than we are accustomed to observe when the softer rays are used. I have observed some surprising immediate effects after treatment with this new apparatus, but I cannot speak of final results at this time.

In order that results may be accomplished that are as good as the results obtained abroad, a large amount of painstaking work must be done with the same purposeful application. Intensive deep therapy must become a field of chief endeavor, and must not become an incident in the course of a radiographer's busy day.

11½ EAST EIGHTH STREET.

---

#### BOOKS RECEIVED

*Clinical Tuberculosis*, by Francis Marion Pottenger, A.M., M.D., LL.D., Medical Director, Pottenger Sanatorium for Diseases of the Lungs and Throat, Monrovia, California. With a chapter on Laboratory Methods by Joseph Elbert Pottenger, A.B., M.D., Assistant Medical Director, and Director of the Laboratory, Pottenger Sanatorium. Vol. I, Pathology, Anatomy, Pathological Physiology, Diagnosis and Prognosis, with 105 text illustrations and charts and six plates in colors. Vol. II, Complications and Treatment, with 65 text illustrations and charts, and four plates in colors. Second Edition. C. V. Mosby Company, St. Louis, Mo. Price \$15.00.

# Value of Tests for Renal Function in Clinical Medicine\*

HERMAN O. MOSENTHAL, M.D., New York City

*Editor's Note.*—Dr. Mosenthal outlines a method by means of which an estimation of renal function and the suitability of the patient's diet and habits to his needs may be carried out in the ambulant subject. The individual pursuing his routine life furnishes more valuable data to his physician than if he were placed in the artificial surroundings of an institution and tested out by an unaccustomed dietetic regime. It is obvious that by tests carried out under these circumstances the direct evidence, of what dietetic habits are not suited to the case, is developed and the required corrections may be made with a minimum of discomfort to the patient and with the most effective results.

**T**ODAY EVERY TEST for renal function ferrets out a particular portion of the kidney's activity. It is generally realized that the kidney does not accomplish its work as a unit, but that in forming urine it eliminates salt, water, uric acid, and urea by processes, which to a certain extent, accomplish their task independently of one another. This development of the laboratory side of urine and blood analysis has led to a more accurate and satisfactory therapeutics, prognosis and diagnosis. The estimation of renal function by such procedures as the phthalein test, that determine the excretory power of the kidney as a whole, are still to be recommended for special purposes or, where laboratory facilities are limited, but they can not hope to replace the more specific laboratory means of dissecting the physiological activity of the kidney into its component parts.

## RENAL FUNCTION AND METABOLISM

If such studies form the beginning of what may be considered to be a rational guide for dietetic therapy that is designed to adapt itself to the capacity of the chief excretory organ of the body, it becomes almost self-evident that they must yield information concerning certain aspects, at least, of the metabolism of the individual. The quantitative blood chemistry furnishes data that determine, how adequately the kidney is eliminating the end products of protein metabolism, whether the organism can satisfactorily digest the starches of the food, and whether the blood fats be within normal limits. (The significance of the last are not fully known and they are of doubtful clinical value at present). The examination of the urine provides results by which not only renal function may be determined but by which the amount of food consumed by the patient may be judged. An individual on his customary diet will eliminate quantities of nitrogen, water and salt in the 24 hour urinary specimen that are directly proportional to the amount taken in the food. From this the adequacy, insufficiency or excess of diet in any given case may be judged.

It is obvious that if the various phases of renal function are studied while the patient is following out his daily routine of working, playing,

eating and drinking, a more valuable estimate of how he should adjust his habits to his disease may be obtained than by carrying out set tests that impose artificial standards which may not be applicable to the individual under consideration. It has become almost a clinical habit to believe that the blood for chemical determinations must be obtained before breakfast in the morning. This furnishes data that do not reflect the reaction of the patient to his food and his habits; it may be the picture of the individual at his physiological level but it does not reflect the effect of dietetic and other habits which it is the task of the physician to correct. Therefore, from the clinician's standpoint, blood taken during the course of the day will provide results that have a very much broader and important significance.

A similar line of thought may be followed in regard to the artificial dietetic tests imposed, which are designed to determine the eliminative capacity of the kidney. The physician with unlimited resources usually scorns such tests unless they are carried out in a hospital under rigid conditions of rest, artificial environment and weighed diets. In doing so he defeats his own ends to a certain extent; when he is through with his patient he knows how such standard conditions should be modified to meet the needs of the case, but he does not know whether the habits of the individual do not already conform to such demands. *All these uncertainties are done away with and a more rational and certain therapy is introduced if the patient's daily routine is not interfered with while the necessary tests are carried out.* Furthermore, and this is very important, much less loss of time and inconvenience is imposed upon the patient when tests for renal function and metabolism are carried out in this way.

## TESTS EMPLOYED

A short resumé of the tests employed and their significance is as follows:

*Blood Chemistry.*—The most available tests to determine renal function are those for uric acid, urea and creatinine. V. C. Myers and his collaborators have shown that these substances are retained in the order named above as the power of the kidney becomes impaired. A useful table which approximates the relative values of these determinations is as follows:

\*An address delivered before the Meeting of the Northwestern Ohio Medical Association, Toledo, Ohio, October 7, 1921.

TABLE 1.  
BLOOD CHEMISTRY, AS A MEASURE OF RENAL FUNCTION

<i>Impairment renal function</i> .....	Normal	+	++	+++	++++
<i>Uric Acid</i> mg. per 100 c.c.....	3	3-5	6-8	9-10	11+
<i>Urea N</i> mg. per 100 c.c.....	15	15	15-40*	40-65	65+
<i>Creatinin</i> mg. per 100 c.c.....	3	3	3	3-5	5+

In addition to the substances mentioned above, it is worth considering the blood sugar. This in no way is a measure of renal efficiency, but it does act as a sign of the body's ability to digest the amount of starch taken in with the food. Overeating sometimes is the sole cause for a high blood sugar. For similar reasons the urea may rise in the blood because an excess of protein has been eaten. It is obvious that the interpretation of these figures must to a certain extent be left to the physician's judgment and can only be approximated in any table.

*Test Day for Renal Function.*—It was formerly thought that to elicit variations in the specific gravity of frequently voided urinary specimens it was necessary to administer a test diet containing diuretic substances such as tea, coffee, meats and salt. This has proved to be incorrect and it has been shown that even the blandest diet,

such as water only will result in such variations of specific gravity that will serve to test out the ability of the kidney to concentrate and vary the specific gravity of the urine produced. If no special dietary is necessary the patient may follow his routine habits and collect his urine at frequent intervals. An ordinary traveling bag containing compartments for eight, twenty ounce, wide-mouthed bottles provides a convenient means to collect the specimens while the subject is pursuing his routine occupation. The directions which have been found useful in this connection are those given in Table 2. The hours may be modified to suit the habits of the individual. The only possible deviation from the customary way of living is found in the order that no food or fluid is to be taken after the evening meal. The charting of the patient's diet for the day furnishes a valuable bit of information concerning his dietary habits.

TABLE 2.  
Directions for Test Day for Renal Function

Eat and drink what you are accustomed to but be sure that *neither food nor drink is taken after supper until the test is completed.* Note time and approximate amounts of food and fluid taken at each meal, on the back of this sheet.

- 8:00 A. M. Void urine and discard the urine.
- 8:00 A. M. Eat breakfast.
- 10:00 A. M. Void urine and place all in the labeled bottle.
- 12:00 Noon. Void urine and save as before.
- 1:00 P. M. Eat lunch.
- 2:00 P. M. Void urine and save as before.
- 4:00 P. M. Void urine and save as before.
- 7:00 P. M. Void urine and save as before.
- 7:00 P. M. Eat supper.
- 10:00 P. M. Void urine and save as before.  
All urine voided after 10:00 P. M. until 8:00 A. M. is to be placed in remaining one or two bottles and labeled 8:00 A. M.
- 8:00 A. M. Void urine and place in above bottle or bottles labeled 8:00 A. M.

TABLE 3.  
Normal Standard for Test Day for Renal Function

Maximum specific gravity	1020
Degrees Variation of specific gravity	9 (less if too little water is taken)
Volume c.c. of night urine usually	400 c.c. or less.
Volume c.c. of night urine doubtful	400 c.c. to 725 c.c.
Volume c.c. of night urine distinctly abnormal	750 c.c. or more.
Urea in any specimen	Normal if 2 per cent. or higher. Not necessarily abnormal if less.
NaCl. in any specimen	Normal if 1 per cent. or higher. Not necessarily abnormal if less.
Total Amount of urea and sodium chloride eliminated in 24 hours.*	A measure of the quantity of proteins and sodium chloride ingested. Insufficient elimination must be judged by the level of urea and sodium chloride in the blood and oedema.

\*The hypobromite method is satisfactory for the determination of urea; the results obtained with it are equivalent to the total nitrogen of the urine as most of the non-protein nitrogenous constituents of the urine yield their nitrogen in this procedure. The Volhard method has been employed for the determination of the sodium chloride.

The criteria by which the results of this procedure are to be interpreted are simple. They are contained in Table 3. Special attention is called to the fact that a concentration of urine at a high level may be due to the insufficient drinking of fluid; this fact serves to make the diagnosis of a faulty habit and leads to very useful therapeutic directions and does not militate against the usefulness of the test, as urged in some quarters, but rather enhances it.

*The following examples may serve to show the*

*usefulness of this method of valuing tests for renal function in their clinical application:*

Two marked instances of impairment of renal function are given in Tables 4 and 5. These as well as all the other cases cited were ambulant patients. Lesser grades of kidney disturbance would show correspondingly slighter changes of the tests from the normal.

Examples of the application of these tests to determining any disturbances in metabolism that may be corrected are to be found in tables 6, 7, 8, 9 and 10.

TABLE 4.

## Data From a Case of Secondary Contracted Kidney

K—, aged 20. B. P. 164/83 to 132/80.

*Blood:* Sugar .11%, Urea N. 86.2 mg., uric acid 8.3 mg., creatinin 5.0 mg.

*Urine:* Album. 2.5 gm. per L., a few r. b. c., occasional hyaline casts.

*Haemoglobin* 35%; R. B. C. 2,960,000.

*Test Day for Renal Function:*

Time	Urine c.c.	Sp. Gr.	%	NaCl gm.	%	Urea gm.
8-10 A. M.	200	1010				
10-12	95	10				
12-2 P. M.	100	10				
2-4	215	09				
4-6	135	08				
6-10	320	10				
Total day	1065		.29	3.09	.60	6.39
10 P. M.—8 A. M.	140	10	.40	1.64	.50	2.05
Total	1475			4.73		8.44

*Diagnosis:* Secondary contracted kidney, secondary anaemia.

*Renal Function:* Marked impairment, (high blood chemistry, low fixed sp. gr.)

*Metabolism:* No change from therapeutic standpoint possible; the diet is already so low in proteins that further curtailment cannot be considered. Transfusion may be resorted to. Marked retention of urinary excretory products, inability to concentrate urine.

TABLE 5.

## Data From a Case of Arteriosclerotic Kidney

J. W—, aged 32. B. P. 210/128.

*Blood:* Urea N. 105 mg., Creatinin 6.7 mg.

*Urine:* Albumin trace, few granular casts.

*Test Day for Renal Function.*

Time	Urine c.c.	Sp. Gr.	%	NaCl gm.	%	Urea gm.
8-10 A. M.	58	1011				
10-12	90	10				
12-2	92	11				
2-4	156	10				
4-6	86	11				
6-8	110	11				
Total day	592		.34	2.01	1.1	6.47
8-8 A. M.	1250	10	.49	6.18	.9	11.13
Total	1842			8.19		17.60

*Diagnosis:* Arteriosclerotic (primary contracted) kidney.

*Renal Function:* Maximal impairment (high blood chemistry, low fixed specific gravity, nocturnal polyuria).

*Metabolism:* Retention urinary excretory products, inability to concentrate urine. Curtailment of salt and proteins in diet indicated.



TABLE 6.

**Data From a Case of Obesity**

P. J. M—, aged 56. B. P. 146/88. Weight 215 lbs.

*Blood:* Sugar .16%, Urea N. 11.9 mg., Uric acid 2.8 mg., Creatinin 2.9 mg.

*Urine:* Albumin none, microscopic negative, sugar none.

*Test Day for Renal Function.*

Time	Urine c.c.	Sp. Gr.	%	NaCl gm.	%	Urea gm.
8-10	45	1025				
10-12	100	25				
12-2	140	21				
2-4	165	22				
4-6	128	25				
6-10	205	25				
Total day	783		1.10	8.61	2.3	18.0
10 P. M.—8 A. M.	475	26	.96	4.56	2.7	13.0
Total	1258			13.17		31.0

*Diagnosis:* Obesity, inability to metabolize amount of sugar and starch ingested properly.

*Renal Function:* Normal.

*Metabolism:* Too little fluid, excessive starch and protein intake. (Specific gravity high and fixed, high blood sugar, excessive amount of urea in the 24 hour urine).

TABLE 7.

**Data From a Case of Essential Hypertension**

Miss C—, aged 53. B. P. 225/125.

*Blood:* Sugar .12%, Urea N. 12.8 mg., Uric Acid 2.9 mg., Creatinin 1.4 mg.

*Urine:* Albumin none, microscopic examination negative.

*Haemoglobin* 80%.

*Test Day for Renal Function.*

Time	Urine c.c.	Sp. Gr.	%	NaCl gm.	%	Urea gm.
8-10	70	1015				
10-12	80	12				
12-2	80	18				
2-4	180	10				
4-6	100	20				
6-10.30	100	25				
Total day	610		.44	2.68	1.1	6.7
10.30 P. M.—8 A. M.	460	15	.49	3.25	1.0	4.6
Total	1070			5.93		11.3

TABLE 8.

**Data From a Case of Malnutrition**

*Renal Function:* Normal.

*Metabolism:* Living on a very low food intake, possibly ideal under the circumstances. The urea output in the 24 hour urine is very low, the haemoglobin indicates that at present the food supply is sufficient for maintenance.

DATA FROM A CASE OF MALNUTRITION.

Mrs. D—, aged 57. B. P. 128/73.

*Blood:* Sugar .08%, Urea N. 13.2 mg., Uric acid 1.6 mg., Creatinin 1.1 mg.

*Urine:* Normal.

*Haemoglobin:* 77%; R. B. C. 4,500,000.

*Test Day for Renal Function.*

Time	Urine c.c.	Sp. Gr.	%	NaCl gm.	%	Urea gm.
8-10	80	1019				
10-12	50	24				
12-2	45	23				
2-3	360	07				
3-6	260	10				
6-11	200	15				
Total day	995					
11 P. M.—8 A. M.	505	17				
Total	1500		0.40	6.0	0.55	8.2

*Diagnosis:* Secondary anaemia. Malnutrition.

*Renal Function:* Normal.

*Metabolism:* Low protein intake. (The amount of urea put out in the 24 hour specimen indicates that only about 30 grams of protein are ingested in the course of the day. A higher protein intake would be the rational remedy for the feeling of lassitied, the malnutrition and secondary anaemia).

TABLE 9.

## Data From a Case of Arteriosclerosis

E. J. H—, aged 52. B. P. 142/84.

*Blood:* Sugar .10%, Urea N. 12.8 mg., Uric Acid 2.2 mg., Creatinin 1.2 mg.*Urine:* Albumin none, microscopic examination negative.*Test Day for Renal Function.*

Time	Urine c.c.	Sp. Gr.	%	NaCl gm.	%	Urea gm.
8.00-10.20	85	1030				
10.20-12.40	100	29				
12.40-2.30	90	28				
2.30-4.25	70	34				
4.25-7.00	150	30				
7.00-10.00	170	31				
Total day	665		1.96	12.03	1.8	11.87
10.00—8.00	280	26	0.70	1.96	1.7	4.76
Total	945			13.99		16.63

*Diagnosis:* Arteriosclerosis.  
*Renal Function:* Normal.  
*Metabolism:* Low fluid intake. (High fixed specific gravity.)

TABLE 10.

## Data From a Case of Gout

H. S. P—, aged 60. B. P. 120/71.

*Blood:* Sugar .095%, Urea N. 15.47 mg., Uric acid 2.94 mg., Creatinin 1.43 mg., Chloride 5.97 gm.*Urine:* Normal.*Test Day for Renal Function.*

Time	Urine c.c.	Sp. Gr.	%	NaCl gm.	%	Urea gm.
8.00-10.45	140	1011				
10.45-12.15	270	08				
12.15-2.45	180	13				
2.45-4.10	60	21				
4.10-7.00	110	20				
7.00-10.00	110	23				
Total day	870		1.05	9.15	.7	6.09
10 P. M.—8 A. M.	1260	1010	.77	9.7	0.3	3.78
Total	2130			18.85		9.87

*Diagnosis:* Gout.  
*Renal Function:* Slight impairment (blood urea nitrogen high on a low protein diet, blood chlorides high, nocturnal polyuria).  
*Metabolism:* On a low protein diet suited to the gouty symptoms and the renal function (low excretion of urea in 24 hours). Marked excess of salt intake (very high excretion in the 24 hour specimen of urine and an excess of blood chlorides).

## SUMMARY

A method of procedure is outlined by means of which an estimation of renal function and the suitability of the patient's diet and habits to his needs may be carried out in the ambulant subject. The individual pursuing his routine life furnishes more valuable data to his physician than if he were placed in the artificial surround-

ings of an institution and tested out by an unaccustomed dietary regime. It is obvious that by tests carried out under these circumstances the direct evidence of what dietetic habits are not suited to the case is developed and the required corrections may be made with a minimum of discomfort to the patient and with the most effective results.

## PROPAGANDA FOR REFORM

*Hale's Epileptic Relief.*—According to advertisements in certain cheap weeklies, Hale's Epileptic Relief is "prescribed by the best New York specialists". These advertisements offer to send a \$1.50 bottle free. Those who answer the advertisement receive a 4 ounce (118.4 cubic centimeter) bottle of a brown liquid and a small package of tablets, also a sample box of

Hale's Liver Tablets. The American Medical Association Chemical Laboratory analyzed these preparations, and reported that the preparations give tests for ammonium, sodium, potassium and bromids, and that the bromid content is equivalent to 20.73 gm. of potassium bromid per hundred c.c. The tablets were found to contain emodin bearing (laxative) drugs—possibly aloes. (Jour. A. M. A., March 4, 1922, 672).

## District Councilors of the State Association Present Interesting Membership Reports for 1921 and 1922

The councilors of the State Association present as their annual reports a tabulation of the membership enrollments attained by the individual counties in their respective districts during the year 1921 and the year 1922 up to April 4. The total state membership for 1921 was 4,882, including 14 life members. The total 1922 state membership on April 4th was 4,469, including 13 life members.

While at this writing there is no appreciable

difference in this year's enrollment and that for last year at a similar date, at the time of the 1921 annual meeting the Association boasted a membership of 4,672. A little hustling will enable us to equal this figure by the time of the Cincinnati meeting. In fact the totals shown below in the district reports indicate that the majority of the ten districts are within easy reach of meeting their complete 1921 figures before the coming annual meeting.

### FIRST DISTRICT

W. D. Haines Cincinnati, Councilor

	1921	1922 to April 4th
Adams .....	14	13
Brown .....	11	14
Butler .....	74	80
Clermont .....	18	22
Clinton .....	24	19
Fayette .....	13	13
Hamilton .....	485	484
Highland .....	23	15
Warren .....	27	25
	689	685

### FOURTH DISTRICT

C. W. Waggoner, Toledo, Councilor

	1921	1922 to April 4th
Defiance .....	13	16
Fulton .....	28	24
Henry .....	26	21
Lucas .....	273	260
Ottawa .....	16	12
Paulding .....	21	19
Putnam .....	31	28
Sandusky .....	39	43
Williams .....	26	27
Wood .....	42	40
	515	490

### SECOND DISTRICT

M. F. Hussey, Sidney, Councilor

	1921	1922
Champaign .....	24	25
Clark .....	72	69
Darke .....	50	40
Greene .....	37	34
Miami .....	46	42
Montgomery .....	184	164
Preble .....	16	16
Shelby .....	22	21
	452	411

### FIFTH DISTRICT

R. K. Updegraff, Cleveland, Councilor

	1921	1922
Ashtabula .....	42	46
Cuyahoga .....	600	553
Erie .....	35	31
Geauga .....	9	9
Huron .....	25	18
Lake .....	26	17
Lorain .....	77	78
Medina .....	22	24
Trumbull .....	52	45
	891	821

### THIRD DISTRICT

R. R. Hendershott, Tiffin, Councilor

	1921	1922
Allen .....	88	82
Auglaize .....	31	29
Hancock .....	34	37
Hardin .....	23	21
Logan .....	38	36
Marion .....	58	55
Mercer .....	27	22
Seneca .....	31	27
Van Wert .....	24	25
Wyandot .....	8	6
	363	340

### SIXTH DISTRICT

D. W. Stevenson, Akron, Councilor

	1921	1922
Ashland .....	23	22
Holmes .....	13	13
Mahoning .....	126	107
Portage .....	24	25
Richland .....	55	53
Stark .....	135	121
Summit .....	251	182
Wayne .....	35	28
	664	551

**SEVENTH DISTRICT**

J. S. McClellan, Bellaire, Councilor

	1921	1922 to April 4th
Belmont .....	61	41
Carroll (with Stark Co.)..		
Columbiana .....	82	72
Coshocton .....	22	20
Harrison .....	12	9
Jefferson .....	49	42
Monroe .....	8	7
Tuscarawas .....	45	31
	<hr/>	<hr/>
	280	222

**EIGHTH DISTRICT**

E. R. Brush, Zanesville, Councilor

Athens .....	49	51
Fairfield .....	33	34
Guernsey .....	29	24
Licking .....	49	41
Morgan .....	15	14
Muskingum .....	58	58
Noble .....	8	9
Perry .....	21	19
Washington .....	38	36
	<hr/>	<hr/>
	304	286

**NINTH DISTRICT**

J. S. Rardin, Portsmouth, Councilor

Gallia .....	28	31
Hocking .....	11	8

1921  
1922  
to April 4th

Jackson .....	20	20
Lawrence .....	28	24
Meigs .....	13	12
Pike .....	9	8
Scioto .....	56	48
Vinton .....	8	6
	<hr/>	<hr/>
	171	157

**TENTH DISTRICT**

S. J. Goodman, Columbus, Councilor

Crawford .....	33	35
Delaware .....	18	16
Franklin .....	363	324
Knox .....	25	24
Madison .....	17	17
Morrow .....	11	10
Pickaway .....	25	24
Ross .....	39	39
Union .....	17	17
	<hr/>	<hr/>
	551	506

Membership Paid .....	4,868	4,456
Life Membership .....	14	13
	<hr/>	<hr/>
Total.....	4,882	4,469

**Some More Golf Insanity**

The following communication to members of the State Association is signed by the local committee for the golf tournament in Cincinnati on May 1, just preceding the annual meeting:

To the Members of The Ohio State Medical Association:

Salaams and Salutations!

The Cincinnati Committee of the Golf Association is tremendously eager to have all those doctors who have been inoculated with the golf bug to rally for their second injection at the Make-tawah Country Club (Hamilton County) on May 1st. Golf has been defined as the "hoof and mouth" disease (one "hoofs" it all day and "mouths" it all night), and that is what we propose to convivially do on May 1st. This golf debauch will afford us an inimitable opportunity to enjoy cordially and unrestrainedly our friends with whom we have more dignifiedly come into contact at medical conventions and in consultations. Therefore, "carp diem" with all your might, by notifying Secretary-Treasurer Earl Gaver, 327 E. State St., Columbus, of your desire to participate. Good fellowship and hilarity

will permeate the entire celebration. Furthermore, prizes will be abundant and desirable.

We must know the approximate number so as to provide caddies, food and prizes in abundance. For once be different—be business-like, so that the local committee of arrangements may make everybody comfortable and happy.

Luncheon at noon and the banquet in the evening will furnish opportunity for much fun-making. Breakfast may also be secured at the club on the morning of the play by those who expect to drive their machines to Cincinnati.

The Ohio Medical Golfing Association.

By The Local Committee,

R. E. WILKINSON	CLARENCE KING
HENRY STANBERRY	SAMUEL IGLAUER
OTTO P. GEIER	A. B. THRASHER

Marion—Dr. and Mrs. Fillmore Young will sail for Europe on the Lone Star State, April 29. Dr. Young will pursue post-graduate work in the larger medical centers for the next six months.



Hotel Sinton



Art Museum and Art Academy



Hotel Gibson

---

---

### Cincinnati, Host to the Annual Meeting

Guests at the annual meeting will find many points of interest to visit in Cincinnati, the second city in Ohio in population and rated as one of the most progressive in the country. The Hotel Sinton, (above) is the city's largest hostelry. The Hotel Gibson (right) has been designated as convention headquarters and will house all meetings and exhibits. To the upper right is shown the well-known Art Museum and Art Academy, and below the General Hospital, operated in connection with the Medical College of the University of Cincinnati.

---

---



General Hospital

# Report of Committee on Public Policy and Legislation

## COMMITTEE ON PUBLIC POLICY AND LEGISLATION

J. H. J. Upham, M. D., Chairman.....	Columbus
A. H. Freiberg, M. D.....	Cincinnati
J. B. Alcorn, M. D.....	Columbus
Wells Teachnor, M. D.....	Columbus
Robert Carothers, M. D.....	Cincinnati
Don K. Martin, Secretary.....	Columbus

In its effort to serve the medical profession of Ohio as a whole, your Committee on Public Policy and Legislation has made an exhaustive study not only of developments of a social and political nature which effect public health and medical practice, but of the underlying causes of such developments. We have likewise undertaken to consider the various problems not as detached issues but with a comprehensive perspective of their inter-relationship, of their effect upon each other and upon the fundamental status of the profession.

Your committee has found, sometimes accompanied by trying experiences, that its duties have included not only the analysis and guidance of laws in the making but have dealt to a constantly increasing degree with the governmental and departmental application of existing laws; the interpretation of legislative enactments; the promulgation of governmental rules and regulations and the formulation of official policies in administration.

The trend in public thought manifested in sudden and frequent changes in governmental functions affecting medical practice, directly influenced by the turmoil in public affairs—politically, economically and socially—has presented to us preplexing and difficult considerations.

In approaching all these problems your committee has recognized the fact that medical science touches and more nearly comprehends all phases of human conduct, social welfare and matters involving human life and happiness than any other function or group; and that we must establish a proper recognition, by the members of the medical profession and the public, of reciprocal, individual and collective obligations.

\* \* \*

As a fundamental principle we must realize that our attitude toward governmental functions must be determined in the light of practical, permanent public benefit and public service. At the same time we are thoroughly convinced that any proposition for the relief of present ills or for the adjustment to present conditions which would modify or interfere with the present and established relationship between the physician and his patient is unsound and impractical.

Any proposal which would lessen or destroy the full privilege or complete freedom of the individual in his choice of his physician is likewise unsound. Furthermore, no proposition,

which would even incidentally or ultimately result in less efficient medical service or in the deterioration of the standing of the medical profession in its relation to the public, can be countenanced. Any proposition to change present conditions which would importantly alter this relationship, which would make the medical profession one of lesser dignity and lesser importance, though it might temporarily appear to remedy the ills, would in the end defeat its own purpose and have a disastrous effect upon the public health and welfare.

Therefore excessive restrictions, over-burdensome regulations, state practice of medicine, health insurance, paternalism, in whatever guise or for whatever ostensible purpose, are wrong, should be opposed and must ultimately fail.

\* \* \*

The foresighted policy of establishing and maintaining contact and co-operation with allied professional groups interested in health problems and professional practice, as well as with civic, welfare and commercial groups directly or incidentally interested in these subjects, has been further developed and extended. This policy has been possible by adhering to the foregoing principle in the advocacy of proposals, and in opposition to all those which do not thoroughly meet this test.

In addition to close observation and contact with all federal functions as applied wholly to Ohio, and with all state functions, bureaus, departments and institutions concerned with or touching medical service, your committee through the executive headquarters of our State Association has followed 150 measures in the present federal Congress dealing with health, medical practice or licensure; with measures affecting and modifying the United States Public Health Service in its personnel, appropriations for quarantine stations, epidemic control methods and hospitalization. Through concerted action we helped to forestall a salary reduction for medical reserve officers in Public Health Service or a reduction to civilian status.

\* \* \*

Federal regulations, especially dealing with the prescribing and dispensing of narcotics and alcoholics should be simplified and made more uniform. The governmental attitude has been directed toward the social and criminal phases of these questions with too little consideration for scientific needs. In these and other aspects we are convinced of the necessity for maintaining in Washington a bureau of the A. M. A., well staffed and constantly in touch with various departments of the national government.

\* \* \*

As indicating probable measures in the next Ohio Legislature and showing the tendency in

legislative thought our committee has followed measures pending in the eleven state assemblies which are in session this year.

A few general, present issues in other states—examples of what may be anticipated as legislative issues in Ohio are:

**Health Insurance**—Pending in New York almost identical with the one merely introduced in Ohio in the 83rd Assembly.

**Workmen's Compensation Law Amendments**—To eliminate free choice of physicians by injured employes, similar to proposal mentioned here in Ohio.

**Medical Inspection in Schools**—To include "treatment" of all children of school age—state medicine unadulterated.

**Anti-Vivisection**—This is being made a religious issue in some states and being fostered by influential church organizations.

**Narcotic Regulations**—Further restrictions, complications and conflicts, instead of well considered and unified system of federal and state laws.

**Maternity and Infancy**—An interesting variety modeled after, supporting and even extending state supervision beyond the contemplated plan of the Sheppard-Towner Act.

**Public Health Centers**—Another name and approach to state medicine.

**School Laws**—That would eliminate text books on evolution and even biology and physiology.

**Witness to Examinations**—Compulsory attendance of another female whenever a female patient is examined by a male physician.

**Nurse Legislation**—Covering educational requirements, relation to medical profession, and creating more controversy.

**Prescriptions by Physicians only in English**—The source of this sort of proposal may be easily imagined.

**Christian Science Exemptions**—From medical practice, sanitary, health and even from criminal laws in manslaughter cases.

**Chiropractic**—And other special cult privileges.

The chiropractors of Ohio have already started a campaign to pledge public officials and prospective legislators to a bill providing for a separate licensing board on the misleading contention that it "would relieve the State Medical Board from supervision over a system of healing with which it has no direct concern."

Since the action of the United States Supreme Court, on March 27, in refusing to review the long pending injunction suit of the unlicensed chiropractors of Ohio against the State Medical Board, in which the Supreme Court of Ohio had previously upheld the constitutionality of the Medical and Limited Practice Acts and approved the rules, regulations and procedure of the State Medical Board, the state association of chiropractors has announced its intention to again attempt in the next legislature to secure the enactment of a bill for a separate chiropractic licensing board. The officers of the chiropractic association are quoted as saying that they "will rot in jail rather than to submit to examination by the State Medical Board." Their campaign of propaganda directed toward the legislature and the public is again founded on the usual

character of misrepresentation, which must be met by accurate information and education.

Likewise societies for anti-vaccination and cultists opposed to physical education and medical supervision in public schools have organized in a political way to further the candidacies of aspirants known to hold these views.

\* \* \*

Moreover the surplus energy created in wartime activities now largely headed by radical and irrational thought is directed toward the field of health and welfare, resulting in medical exploitation.

This is the day of multiplicity of health activities, the result without doubt of the efforts of the medical profession in recent years to arouse public interest in the importance of disease prevention and health preservation. On all sides one sees organizations, made up just as frequently of non-medical as well as medical members in addition to the various civic and state boards of health or health commissions, and allied activities as welfare bureaus and the like.

The task of protecting the public health is essentially the duty of the state, and the maximum results may be expected when its trained agencies, guided by and working with the organized medical profession, systematically attack the problem.

However, there is no question but that in addition to the ordinary, and we may call it commercial obligation for money paid by our individual patients, there is a moral obligation which impels us to advise our patients in such matters as may help them preserve their health, just as to help them regain it when sick. This attitude of the individual physician to his patient is merely what the attitude of the profession should be to the public at large. The general health of a community is too serious a matter to be placed upon an entirely commercial basis; no true physician welcomes such an epidemic as that of influenza which occurred so recently, nor even the lesser scourges. The duty to use our best endeavors to prevent such occurrences is plain. The health or illness of the public are not a gold mine to be exploited for our pecuniary advantage, and yet there would seem to be a few who seem to think so, evidently considering the attendance upon the sick the sum and substance of the practice of medicine.

\* \* \*

Certain legal obligations have been imposed upon our profession by the state or nation in return for the right to practice medicine. Some of these are not only irksome, but impose an unfair burden. There is, however, no question as to the right of the state to impose reasonable requirements and there is no other tenable position but acquiescence; at the same time the matter is clarified if the burden is properly distributed, and the reciprocal obligation of the public taken into consideration. In Ohio we have taken these various angles of the question into consideration

from time to time in our efforts to organize our State Association activities for public health service, and have sought, and we believe we have succeeded to some considerable degree in having a membership, which while maintaining its own self-respect, an active and just regard for its rights and privileges, has also an earnest appreciation of its obligations to the state and the public.

The second principle, and a very important one, is a sympathetic comprehension on the part of the state health officials of the problems of medical practice as well as those of the public health service. This is their obligation to the medical profession. Occasionally, fortunately but rarely, one meets a health official who seems to have forgotten the origin of his service; who seems to feel that state sanitation has sprung as it were, "full panoplied from the brow of Jove," rather than the evolved product of medical practice that it really is. One such individual, otherwise perhaps very efficient, can do more harm to harmonious health work in a state and more to disorganize systematic public health activities than can be overcome in a long time. We believe ourselves very fortunate in Ohio in having had in the past, and particularly at the present, a health service, the officials of which are keenly alive to the importance of these phases as well as skilled in the technical side of their work.

The questions of this inter-relationship, or proper definition and limitation of functions in the joint effort and mutual responsibility of the medical profession and the state; the latter represented in these functions by the public health administration have been given much thought and study.

Based on these efforts and activities we feel that a clearly stated, generally applicable principle of the state's relationship to medical practice has now been established in Ohio; by which can be measured, gauged and guided the ever-present question of "state medicine." If, as we feel, this principle is comprehensive and conclusive, the profession of Ohio through our State Association has again established a policy which should lead to solution of difficulties which have arisen so repeatedly in recent years.

In the definition finally evolved by our committee and approved by the State Department of Health, primarily through cordial co-operation of the State Director of Health, Dr. H. H. Snively, the existence of "state medicine" is recognized in certain particulars, but the "state practice of medicine" is disapproved and discountenanced as a function of public authority.

In arriving at such a policy it is realized that the various angles involved are not fixed or permanent and that doubtless different conditions will arise and readjustment will be necessary from time to time, but that in the present as well as in the future the recognition of certain

fundamental principles will still exist as the means of solution.

Based on the understanding that public health administration has for its purpose the prevention of disease, the promotion of health and the education of the public in these matters, and that private medical service concerns itself with and is essential to the treatment and cure of disease whenever presented as an individual problem, and with the additional inter-relationship and co-operation of both the official and private group, the following resolution defining and limiting the proper activities of the state in medicine may be said to represent the policy in this state at the present time.

Whereas, the conservation and promotion of public health is the object of the State Department of Health, and

Whereas, the public is constantly increasing its interest in and support of a comprehensive program to this end, and

Whereas, definite general policy in public health administration activities is desirable, therefore

Be it Resolved, that the State Department of Health of Ohio, endorses the policy of continuing and extending the educational program toward the prevention of disease and toward informing the public in fundamental health subjects; that it welcomes and needs the co-operation of scientific and educated practitioners; that it is interested in warning the public to discriminate against the dangerous, incompetent and unqualified practitioners, whose unsound and unscientific methods of practice exploit sickness for commercial gain;

Second, That the primary functions of the State Department of Health being Educational and Preventive, the actual treatment of disease is not a function of public officials nor to be provided from public funds except in the

(a) Institutional care of the wards of the state, delinquent, diseased and defective;

(b) The treatment of the indigent;

(c) The treatment of those whose treatment is directly essential to prevention; and

(d) The inspection, recognition, and recommending the correction of common defects of school children, as a primary feature in health education.

And that otherwise in the holding of public clinics under the auspices of public health officials they shall be so conducted that the purpose shall be purely educational and diagnostic.

Analysis of the foregoing resolution develops the principle that official health administration is concerned not only with the prevention of disease and the education of the public but that such public service is charged with the duty of protecting the public insofar as possible from incompetent and uneducated types of practitioners whose unscientific methods exploit sickness for commercial gain.

It will also be observed that the resolution fur-



ther states the principle that the actual treatment of disease is not a function of public officials or the state, nor should such treatment be provided from public funds. The exceptions to this latter fundamental are those principles and policies already established for the care of the wards of the state in the penal, correctional and charitable institutions; the treatment of the indigents with which the public authorities are charged under the laws long established; and finally the treatment only of those cases and classes of diseases where treatment is essential to prevention; and that in the holding of clinics which have been established as one of the newer activities, the policy of maintaining such efforts along purely educational and diagnostic lines is emphasized.

\* \* \*

Our committee has been impressed by the possibilities of state medicine through governmental policy and the establishment of new rules of procedure as attested by an idea under consideration by the State Director of Industrial Relations, for a reorganization of the medical department of the State Industrial Commission through which physicians and surgeons employed directly by the state would render medical and surgical service,

on a fixed salary, to those injured in industrial accidents or those who contract occupational diseases in the course of employment. The fallacies of any such system are only too readily apparent and if placed in effect would defeat the very purpose for which it was intended.

\* \* \*

And so we must be constantly on the alert. Our membership should give greater heed to the warnings of its officers and legislative committeemen who are in touch with developments through our executive headquarters. United support, prompt response are necessary.

Medical organization to stand forth as a powerful unit must not only be built on the solid rock of principle and service but with a deep foundation underneath the shifting sands of public sentiment. If we are to speak forcefully and effectively on behalf of the profession as a whole we must have the necessary foundation locally with interest by the local members in civic and political affairs and with proper direction over all local health and welfare agencies, in contact with all groups which are interested in many problems in which unity of medical thought must be the guiding spirit.

J. H. J. UPHAM, M. D., Chairman.

## Report of Committee on Crippled Children

### COMMITTEE ON CRIPPLED CHILDREN

B. G. Chollett, M. D., Chairman.....Toledo  
 A. H. Freiberg, M. D.....Cincinnati  
 A. M. Steinfield, M. D.....Columbus  
 Don K. Martin, Secretary.....Columbus

This committee has not initiated any special activity but has continued to function in an advisory capacity to existing agencies. Dr. Freiberg represents the Ohio State Medical Association on the State Council for the Handicapped, formed by the Ohio Institute for Public Efficiency, and this Council is composed of one member from each of the following departments: Ohio Medical Association, State Department of Health, Department of Public Welfare, Department of Education, State Board of Vocational Education, State Department of Industrial Relations, Ohio Society for Crippled Children, Ohio Hospital Association, American Red Cross, Ohio Public Health Association, and Ohio Institute for Public Efficiency. This Council has acted in an advisory capacity to all the activities having to do with the crippled child movement.

All three members—Dr. Freiberg, Dr. Steinfield, and Dr. Chollett—are members of the Professional Advisory Committee to the Department of Public Welfare, which department has supervision of all indigent cases. Dr. Chollett is also a member of an advisory committee to the Ohio Society for Crippled Children—a Rotary or-

ganization for the care and education of cripples.

The reports and advice of these advisory committees have been a great help to all the departments and the closest cooperation has been had so that the work of all the departments has been made most effective. The many phases of the work have been considered and an effort is being made to work out a general plan.

It may be of interest to know that during the past 19 months over 40 clinics for crippled children have been held and 2500 children examined. Over 250 children are in the process of cure as wards of the state. There are nine special day schools for crippled children with an attendance of 400; four hospital schools with an attendance of 120; and between 600 and 800 crippled children on the waiting list for ten schools which are being organized. There are about 700 beds available for crippled children in Ohio at present.

B. G. CHOLLETT, Chairman.

### OVER THE TOP

A total of \$227,604.60 was raised in the recent campaign for the endowment fund for the College of Medicine of the University of Cincinnati. The campaign was started with \$216,000 set as a goal, that amount being required to fulfill the requirements of large bequests made to the college by the Rockefeller and the Carnegie foundations.

## Report of Committee on Medical Defense

### COMMITTEE ON MEDICAL DEFENSE

J. E. Tuckerman, M. D., Chairman.....Cleveland  
 C. T. Souther, M. D.....Cincinnati  
 Walter H. Snyder, M. D.....Toledo  
 Don K. Martin, Secretary.....Columbus

The Committee on Medical Defense submits the following report for your information:

On January first, 1921, there were in the hands of the Association's Counsel five suits and one threat of suit. There were filed with the Committee during the year ending December 31, 1921, data on ten suits and ten threats of suits. Of these, four suits and two threats are being handled by the Association's Counsel. In one instance a member could not be defended because he had allowed his dues to lapse. Five suits and eight threats are in the hands of indemnity companies. Incidentally the bulk of the Committee's work has had to do with correspondence and conferences in connection with these latter cases, as well as upon similar cases holding over from previous years. A suit rarely comes to a final disposition under two years.

A yearly statistical statement of number of cases closed is misleading because the number of cases terminated is not proportional to the number instituted in any given year. Moreover one alleged malpractice may be the occasion of as many as three suits against the same physician. The year 1920 started with eight suits and seven threats in the hands of the Association's Counsel; the year 1921 with five suits and one threat; the year 1922 opens with nine physicians being sued in a total of fifteen suits, and two threats, but three of these have been terminated since January first and logically are due to appear in the 1923 report. Suffice it to say that in the six years since May 18, 1916, the date of the establishment of medical defense, no case has been decided against a member defended by our Counsel.

It seems appropriate at this time to direct attention to certain phases of the medical defense problem. This year is the first year in which there was not a marked increase in the number of suits and threats of suit. It must, however, be observed that this has been a slack year in the industries.

During the year companies writing indemnity insurance have quite generally made marked increases in their rates and physicians carrying policies have had their attention more than usually directed to the subject. This has occasioned considerable agitation, and resulted in many inquiries to the Executive Secretary covering the whole field of medical defense. Most of the questions raised have been answered at length in previous issues of the *Journal* of the Ohio State Medical Association.

Vid. Annual Report of Committee on Medical Defense for 1916, (*Jour. O. S. M. A.*, May, 1917, page 348). Takes up the purpose of medical defense, its operation, detailed reasons for the various rules.

Annual Report of Committee on Medical Defense for 1920. (*Jour. O. S. M. A.*, May, 1921, page 343). Discusses the procedure to be followed by members in need of medical defense.

Editorial Article: "Medical Defense, What it is. What it means to the members of the Ohio State Medical Association." (*Jour. O. S. M. A.*, December, 1920, page 928.)

It is apparent that the decrease in the commodity exchange value of the dollar has not been sufficient to account for the amount of increase in indemnity rates. The size of the increase and the fact that some companies have quit writing malpractice insurance may be taken to indicate that in the immediate past, insurance companies have found this type of risk unusually unsatisfactory, troublesome, and expensive. The situation is succinctly stated by one of the companies in a notification of increase in rates.

"The experience of the Company in this line of business has been very bad, due largely we believe, to the strife during the past several years of many people making an effort to get all they can from someone else without paying for it. "This class of people is led by Attorneys who are not particular in their practice so long as they can force a payment from which they can extract a fee."

As anticipated at the time of its passage, the institution by the State of Ohio of Workmen's Compensation made matters in the malpractice field acute. By closing the industrial accident field as a source of profitable exploitation, the attention of lawyers specializing in damage suits was perforce turned to the instigation of suits for malpractice against physicians, who alone of those affected by the Compensation Act seemed to have been left unprotected by it.

None-the-less, it seems probable that the unsatisfactory situation arose largely, not from the increase in suits, but from the fact that until lately insuring companies have considered each case as a matter affecting only the individuals immediately concerned, rather than an incident in a general problem. Failing to realize that the implications involved in a suit for malpractice are entirely different from those in the ordinary damage suit, the disposition of these cases was often such as to encourage rather than discourage those who are looking for easy money.

Experience with the defense problem presented by malpractice suits warrants stating the following observations as fundamental axioms:

1. Nominal settlements are an invitation to more suits and threats of suits.

2. Compromise of damage suits is generally detrimental to the interest of the insurance company, the physician, and the profession.

3. To lose a suit because of inadequate preparation, no matter what the occasion of that inadequacy, is worse than a blunder,—it is a calamity.

The chief reason why a physician who does not carry indemnity insurance consents to compromise settlements, often barefaced blackmail, is usually because he lacks means to stand the expense of litigation. And although it must be said that too often physicians have been willing to settle where the expense was borne by an indemnity insurance company, unmindful of the fact that they do neither themselves, the profession, nor the insurance company a kindness by so-doing, the chief reasons in our opinion why in the past the insuring companies have been led to make compromise settlements are that:

1. They have had difficulty in getting the very physicians whose experience warrants the expression of an authoritative opinion to appear in court as expert witnesses.

2. They have had to rely on the so-called "expert medical witness" whose chief attribute is that he will testify for a fee, a sort of intellectual prostitute the nature of whose calling makes him distrusted even by those who employ him, and whose effectiveness is destroyed if the jury suspects that his opinion is for sale.

3. They have failed to appreciate the very great importance of having access to trustworthy medical opinion for guidance and suggestion in the preparation of defense.

4. There has not been, until the establishment of Medical Defense by the Association, any agency which could marshal the expert opinion of the profession to bear upon a given problem.

The foregoing handicaps are obviated both for the individual physician and for the insuring companies through the agency of the State Association's Medical Defense. No physician need settle because embarrassed by lack of means to stand suit. The insurance company can know from an authoritative source whether a suit is or is not a "hold-up". The Committee is able to direct the legal representative to the proper source for an opinion on any question in any branch of medical science or practice. Insuring companies will defend suits, rather than settle if only the physicians are willing to inconvenience themselves to the amount absolutely necessary to assure the companies' representatives the requisite advice in the preparation of the case and adequate support at the trial. An encouraging development of the year is that the indemnity companies are coming to consider it cheaper to fight these cases than to settle.

The medical defense provision of the Ohio State Medical Association was instituted for the distinct purpose of making malpractice suits not only unpopular, but more particularly to make them unprofitable. To this end the Association provides that every member who has paid his dues and complied with the rules governing

medical defense shall be entitled to full defense. The Association's Counsel follows every case where a principle of law effecting the whole profession might be established. Where a member does not carry indemnity insurance his defense is conducted entirely under the direction of the Counsel for the State Association. Where a member carries indemnity insurance, the State Association protects him in the letter of his contract. If for any reason the contract has lapsed, or does not protect him for the period in which action arose, the Association assumes his defense exactly as though he carried no indemnity. In every case, whether conducted by Counsel for the State Association or by representatives of an insurance company, the Association, through its central committee and the local committeemen, facilitates in every way possible the preparation of the defense. Whatever antagonism may have existed in some quarters toward the defense plan of the State Association is disappearing. The opinion of the Committee has been repeatedly sought by the major indemnity companies, and the Committee has been able to be of much greater service than formerly in facilitating the defense of members insured in these companies.

Early in the year the Association's Counsel participated in the argument on the cases of *Amstutz vs. King et al.* pending before the Supreme Court of Ohio. These cases involving the interpretation of the Statute of Limitations were first brought to the attention of the Committee in November of 1920. The cause for action occurred March 7, 1916. Suit was brought by the plaintiffs April 30, 1918. Both lower courts decided against the plaintiffs who then carried the case to the Supreme Court. An oral hearing was had in November, 1919, but because of a change in personnel of the court before a decision was rendered, a rehearing was set for March 16, 1921. The defense was in the hands of the Medical Protective Company of Fort Wayne whose attorneys on behalf of the defendants on January 17, 1921, formally requested that the Association be represented at the hearing.

After investigation as to the question at issue the Association's counsel decided that the matter was of "great importance to the entire medical profession, and indeed to the members of all professions." Therefore on behalf of the Ohio State Medical Association, a member of the firm Smith, Baker, Effler, Allen & Eastman appeared, *Amici Curiae*, in oral argument before the Supreme Court and later filed a brief.

The decision of the court, rendered in June, 1921, shortly after the last annual meeting of the Ohio State Medical Association, is of particular importance, as it is in effect a reaffirmation of the interpretation that the one year Statute of Limitations runs from the termination of the relation between physician and patient.

Had the contention of the plaintiff prevailed there would have been no certainty as to the period from which the Statute of Limitations runs. Suit could be brought against a physician a number of years after the service was rendered. It is not necessary to point out the importance of this decision to every member, nor to comment on the good fortune of the Association in having the interest of the profession in the hands of able counsel.

While it is always a hazardous undertaking to estimate those intangible factors variously classed as "moral forces", the six years during which the plan has been in force shows beyond question that the Association's Medical Defense Plan is correct in principle and that it is materially changing for the better the malpractice situation in Ohio.

Respectfully submitted,  
J. E. TUCKERMAN, Chairman.

## Report of Committee on Auditing and Appropriations

### COMMITTEE ON AUDITING AND APPROPRIATIONS

S. J. Goodman, M. D., Chairman.....Columbus  
J. S. McClellan, M. D.....Bellaire  
J. S. Rardin, M. D.....Portsmouth  
Don K. Martin, Secretary.....Columbus

Your committee submits for its report for the year ending December 31, 1921, the official statement of Mr. H. A. Keller, certified public accountant, who is employed to audit the books of the Association and *The Journal*.

#### Auditor's Statement

Dr. S. J. Goodman,  
Chairman, Auditing Committee,  
Ohio State Medical Association,  
Columbus, Ohio.

Dear Sir:—

In accordance with your instructions I have audited the books and accounts of the Ohio State Medical Association for the year ended December 31, 1921, and submit herewith report including as a part thereof the following Exhibits, viz:

Exhibit A: Statement of Cash Receipts and Disbursements for the year ended December 31, 1921.

Exhibit B: Statement of Cash Reconciliation with the books at December 31, 1921.

AUDIT—All recorded cash has been traced to the depositories and no discrepancies were found. All disbursements were verified by examination of cancelled checks supported by invoices properly approved.

Cash as shown on hand by the books at December 31, 1921, was reconciled with the balance as shown by the bank at that date. Certificates of deposits were verified by actual inspection.

I therefore certify that the statements herein correctly state the Receipts and Disbursements of the Ohio State Medical Association for the year ended December 31, 1921, and the resultant cash balance at that date.

Respectfully submitted,  
HARRY A. KELLER,  
Certified Public Accountant.

### THE OHIO STATE MEDICAL ASSOCIATION

#### EXHIBIT A—STATEMENT OF CASH RECEIPTS AND DISBURSEMENTS FOR YEAR ENDED DECEMBER 31, 1921.

Cash on hand and on Deposit		
January 1, 1921.....	3,339.65	
Certificates of Deposit.....	8,000.00	
Total .....		11,339.65
<i>Receipts:</i>		
Membership Dues .....	24,256.00	
Annual Meeting .....	4,485.00	
Interest .....	25.00	
Refund Telegram .....	98	
Total Receipts.....		28,766.98
Total to be Accounted for.....		40,106.63

<i>Disbursements:</i>		
Ohio State Medical Journal....	8,000.00	
Executive Secretary's Salary	5,000.00	
Annual Meeting .....	3,855.33	
Medical Defense .....	1,607.84	
Legislative .....	790.82	
Postage and Telegraph.....	684.94	
Stationery and Supplies.....	567.70	
Executive Secretary's Expense	379.38	
Council .....	364.71	
Secretary-Treasurer—		
Salary .....	300.00	
Medical Education .....	268.94	
Anesthesia Committee .....	103.80	
Auditing .....	100.00	
President .....	74.74	
Premium on Bonds:		
Don K. Martin.....	10.00	
H. M. Platter.....	10.00	
A. B. Haney.....	5.00	25.00
Total Disbursements Ac-		
counted for .....		22,123.20

Balance on hand and deposit at December 31, 1921..... 17,983.43

#### EXHIBIT B—STATEMENT OF CASH RECONCILIATION AT DECEMBER 31, 1921.

<i>The Huntington National Bank:</i>	
Balance as per bank statement .....	1,316.93
Less Outstanding Checks:	
#145 Ohio State Medical Journal.....	50.15
146 Stoneman Press..	3.75
147 Ritter Multi-graphing Bureau ....	3.40

148 Dr. R. K. Upde- graft .....	265.20	
149 Don K. Martin.....	11.00	333.50
Balance as shown by books .....		983.43
Certificates of Deposit		17,000.00
Balance on deposit at December 31, 1921..		17,983.43

**Budget for 1922**

At a meeting held on January 8, 1921, the Committee on Auditing and Appropriations estimated the receipts from membership dues during the coming year, and after careful consideration of the needs of the Association made the following apportionment of funds, which has been approved by Council, and is herewith presented to the House of Delegates for official indorsement:

Journal .....	\$10,000.00
Annual Meeting .....	500.00
Treasurer, Salary .....	300.00
Executive, Salary .....	5,000.00
Executive Secretary, Expense.....	500.00
President, Expense .....	200.00
Council, Expense .....	400.00
Legislative Committee .....	1,000.00
Auditing and Appropriations Com.....	200.00
Medical Education Committee.....	500.00
Committee on Medical Defense.....	5,000.00
Other Miscellaneous Com. Expense.....	400.00
Stationery and Supplies.....	700.00
Postage and Telegraph.....	700.00

**Report for The Journal**

To the Committee on Auditing of the Ohio State Medical Journal, Columbus, Ohio.

Gentlemen:—

In Accordance with your instructions I have audited the books and accounts of the *Ohio State Medical Journal* for the year ended December 31, 1921, and submit herewith report including as a part thereof the following, Schedules, viz.:

Schedule A: Statement of Assets and Liabilities at December 31, 1921.

Schedule B: Statement of Profit and Loss for the year ended December 31, 1921.

These Schedules are supported by Exhibits Nos. 1 to 4, inclusive, showing detail of various accounts incorporated therein.

*Financial Condition:*

The financial condition of the Ohio State Medical Journal at December 31, 1921, (as shown in detail in Schedule A) was as follows:—

Cash on hand and on deposit....	\$381.50
Accounts Receivable .....	747.68
Liberty Bonds .....	300.00
Total Current Assets.....	1,429.18
Less Current Liabilities.....	26.50

Net Current Assets.....	1,402.68
Furniture and Fixtures.....	551.78
Total Net Assets.....	1,954.46

The above is represented by:—  
Surplus .....

AUDIT—All receipts were verified by examination and proof of records. All recorded cash was traced to the depositories and no discrepancies were found.

Disbursements were verified by examination of cancelled checks supported by properly approved invoices.

Cash as shown in bank by bank pass book at December 31, 1921, was reconciled with the balance as shown by the books at that date. Petty cash was verified by actual count. Liberty Bonds were verified by actual examination.

I therefore certify that the statements herein correctly state the financial condition of the *Ohio State Medical Journal* at December 31, 1921, and the resultant surplus at that date.

Respectfully submitted,  
HARRY A. KELLER,  
Certified Public Accountant.

**SCHEDULE A—STATEMENT OF ASSETS AND LIABILITIES AT DECEMBER 31, 1921**

ASSETS	
<i>Current:</i>	
Exhibit No. 1:	
Cash—City National Bank.....	356.50
Cash—Petty .....	25.00
Total Cash .....	381.50
Exhibit No. 2:	
Accounts Receivable .....	747.68
Liberty Bonds .....	300.00

Total Current Assets..... 1,429.18

*Property:*  
Furniture and Fixtures..... 551.78

Total Assets .....

LIABILITIES

Subscriptions Prepaid .....

SURPLUS  
Surplus at December 31, 1920.... 1,866.02  
Net Profit—for the year ended  
December 31, 1921..... 88.44

Surplus at December 31, 1921.... 1,954.46

Total Liabilities and Surplus... 1,980.96

**SCHEDULE B—STATEMENT OF PROFIT AND LOSS FOR THE YEAR ENDED DECEMBER 31, 1921**

REVENUE	
Advertising .....	9,912.87
Less Commission .....	631.85
Less Cash Dis- count .....	242.99
	874.84
	9,038.03
Circulation—	
O. S. M. A.....	8,000.00
Miscellaneous	
Subscriptions .....	104.62
Interest .....	79.11
Total Revenue .....	17,221.76

EXPENSES			
Exhibit No. 3:		Mimeograph Supplies .....	26.00
Journal Printing .....	9,592.48	Overhauling Mimeograph Machine .....	25.00
Office Salaries .....	5,253.50	Typewriter Supplies .....	20.50
Rent .....	600.00	Stencils .....	19.50
Journal Postage .....	373.45	Office Supplies .....	18.65
Journal Envelopes .....	236.17	Towel Service .....	16.25
Telephone and Telegraph .....	212.25	Dues and Donations .....	13.00
Traveling Expense .....	151.78	American Medical Directory.....	12.00
News Clipping Service.....	126.50	Cleaning Office Rugs.....	10.16
Journal Illustrations .....	114.66	Fire Insurance .....	5.45
Exhibit No. 4:		Unclassified .....	40.86
Bad Debts Written Off.....	103.01		
Depreciation .....	47.98	Total Expenses.....	17,133.32
Subscriptions to Newspapers, Magazines, etc.....	45.67		
Printing .....	35.20	Net Profit—For year ended	
Stationery .....	33.30	December 31, 1921.....	88.44

## Report of Committee on Hospital Standardization

### COMMITTEE ON HOSPITAL STANDARDIZATION

Clarence D. Selby, M. D., Chairman.....Toledo  
 S. S. Halderman, M. D.....Portsmouth  
 John C. Tritch, M. D.....Findlay  
 Don K. Martin, Secretary.....Columbus

The practice of medicine is a profession. Its object is to serve humanity. This service is of a very personal nature. It requires a relationship between physician and patient of a most intimate character. To safeguard so delicate a relationship is the duty of all physicians. It is necessary that they comport themselves as gentlemen, uphold the dignity and honor of their vocation, and its ancient altruistic principles. It is also necessary that they extend its field of usefulness in order that they may the more effectively alleviate human suffering.

It is to the credit of physicians that they have long since recognized these duties and have perceived their responsibilities as a profession toward them. They have created, out of years of experience, certain rules of professional conduct, known as medical ethics. They have organized medical societies which exemplify, through collective action, the ideals of medicine and promote the advancement of the medical sciences. They have elevated the standards of medical education, first in the colleges and more recently in the hospitals. In all of these their object has been the development of a profession of good character and ability, one that is capable of rendering service that is creditable to the profession and in harmony with its idealistic traditions.

Obviously the organized bodies of medicine are the proper agencies to carry on a work of this kind, and certainly the parent body is the one to assume the leadership in it. This the American Medical Association has done, and it has done so in a manner that upholds the honor and dignity of the profession.

The work of the American Medical Association in the field of medical education, referring particularly to that, is in the hands of the Coun-

cil on Medical Education and Hospitals. This has applied itself chiefly to (1) the elevation of the standards of medical colleges and (2) the improvement of hospital methods, personnel and facilities for the instruction of interns. It has inspected and rated the medical colleges and published a classified list of them. It has inspected hospitals and has published a list of those that have been recognized. Both of these lists are being revised from time to time.

The field work in connection with the hospitals, their actual inspection, is being done by the component state societies. In our own Ohio State Medical Association the president appoints annually a committee of three members for this purpose. This committee is known as the Ohio Committee on Hospitals. Its principle function is to obtain information for the Council of the A. M. A. concerning Ohio hospitals, especially those which apply for recognition by that body. In doing this, the committee acts only as an agent of the Council; the Council reserves the right to decide which hospitals merit recognition.

A list of the Ohio hospitals that have obtained this recognition and are deemed qualified to furnish instruction to interns may be found in the *Journal of the American Medical Association*.

The present committee, which was appointed after the last meeting of the State Association, has applied its energies thus far to the study of hospitals requesting recognition, but it has given thought to certain important correlated problems as well. These are as follows:

- 1.—The fifth or intern year.
- 2.—The difficulties unrecognized hospitals have in obtaining interns.
- 3.—The tendency of recent graduates to go directly into the practice of the special branches.
- 4.—The growing scarcity of physicians in the rural communities.
- 5.—The practicability of utilizing hospitals as continuation schools for general practitioners.
- 6.—The evolution of hospitals into health centers.

7.—The recent decision of the supreme court in the Flower Hospital case.

#### THE FIFTH YEAR

A few medical colleges now require an internship in a hospital approved by them before the issuance of a diploma. The licensing boards of several states demand one year of intern service in a qualified hospital as a requisite to licensure. Such a requirement confirms the need of a list of qualified or recognized hospitals as issued by the Council on Medical Education and Hospitals. The fifth year is meeting with favor among authorities on medical education and will likely become a universal requirement eventually. Practically all graduates now seek internships. The adoption of the requirement by the state will only be a confirmation of the judgment of far more than a majority of all students. The fact that there are sufficient internships in the already recognized hospitals to provide opportunities for graduates of all medical colleges introduces a collateral problem.

#### INTERNS FOR UNRECOGNIZED HOSPITALS

How will unrecognized hospitals obtain interns? It is apparent that small and obviously unqualified hospitals must give up the idea of obtaining interns on the basis of educational advantages. Such hospitals must concede that interns are more essential to them than they are to interns. They must secure their interns, or more properly resident physicians, on the basis of employment rather than educational advantages. It is better for them to employ physicians with experience as interns in recognized hospitals. If the fifth year becomes compulsory, unrecognized hospitals will have no alternative.

#### EARLY SPECIALIZATION

The tendency of recent graduates to go directly into the practice of special branches, particularly surgery, should be viewed with anxiety. The benefit of a few years in general practice is obvious. The need of more general practitioners is also evident. The problem is to induce graduates to take up, for a few years at least, the family type of practice. Authorities on medical education are considering this problem thoughtfully, but no conclusion has yet been reached. There appears, however, to be a rather well-defined impression that the curriculum of the medical schools must be modified and that intern service should be broad enough to provide experience in all of the fundamental branches of practice.

Of course your committee does not have the presumption to act on this problem in advance of authoritative conclusion, but it does crave the opportunity of making this suggestion: (1) That some recognized authority, such as the Ohio State Board of Medical Registration, set up standards of proficiency in the specialties,

particularly in surgery, and offer those who desire to obtain recognition as specialists the privilege of voluntarily qualifying by examination, provided applicants for recognition shall have practiced in general medicine for a period of not less than five years. Upon qualifying, the applicant should be given a certificate of proficiency in his special branch. (2) That Ohio hospitals limit their privileges, so far as practice in the specialties is concerned, to those who are able to show certificates of proficiency.

#### SCARCITY OF PHYSICIANS IN RURAL COMMUNITIES

There is said to be a shortage of physicians in the rural districts, but there is some dispute as to its extent. Certainly there are some localities that are insufficiently supplied, and the condition appears to be getting worse. It is attributed to a number of causes such as the war, limited income and lack of hospital facilities. Your committee is not functionally concerned with the major problem, but the lack of hospital facilities, if that has any influence, does command attention. It is easy to believe that a community which lacks opportunities for the practice of scientific medicine will fail to attract present graduates schooled in the use of modern hospital methods and more or less dependent on them. If this be the determining cause, the committee is faced with the duty of fostering the development of good hospitals in the rural districts. No conclusion has been reached, however, and the committee is not now prepared to promulgate a policy.

#### HOSPITALS AS CONTINUATION SCHOOLS

The primary function of hospitals is to care for sick and injured people; that is probably all that many hospitals can hope to do; but there is a secondary function of great importance to humanity, and that is to enhance medical and nursing knowledge and disseminate it among physicians and nurses. By helping hospitals to meet the requirements of the American Medical Association and other organizations that are striving to better the hospital situation, your committee is attempting, somewhat successfully, to elevate the standards of service. By encouraging the pursuit of research in hospitals, it is endeavoring to promote the increase of medical knowledge; the nursing phases of this development, the committee has not considered. By studying the practicability of hospitals as continuation schools, it hopes to advance a plan for the dissemination of medical knowledge among general practitioners. (The fifth year provides for the intern and the postgraduate school the special practitioner.)

In this connection the thought which your committee has is this: (1) that there is a vast amount of unutilized clinical and pathological material in the hospitals, which can be made available for teaching purposes; and (2) that

there are many practitioners who would be pleased to modernize their general medical knowledge if the effort, time and cost were not too great—if, for example, they could do so in their nearby hospitals.

#### HOSPITALS AS HEALTH CENTERS

Before discussing this problem, your committee wishes to say that it is in harmony with the motive which causes the medical profession to contribute to the betterment of society and to serve gratuitously those indigents who need medical aid; these are acknowledged as obligations of the profession. On the other hand, the committee wishes to oppose with equal emphasis the exploitation of physicians by the public.

With this introductory understanding, your attention is directed to the fact that this is an age of organization, in which society after society is being created for welfare purposes, in which free dispensaries and part-pay clinics are appearing in localities that never seemed to need them before, in which health agencies of all kinds, councils and federations are endeavoring to find means and methods for rendering public service. All of these need medical advice and assistance, and they usually approach the profession with very frank requests for gratuitous aid. Is there any reason why all of this work should be done at the expense of the medical profession?

One of the members of the committee happens to be the president of a luncheon club and in that capacity was approached by an earnest, intelligent woman with the following suggestion: "Don't you think your club ought to do more welfare work? The Rotarians are helping crippled children. The Exchange Club is doing nutrition work among the school children. Now, there are lots of children here who need their tonsils and adenoids out. Your club could make it possible for these to have operations. You could pay the hospital expense. I am sure the doctors would be glad to operate for nothing?"

The above is not an extreme example. It shows the tendency and indicates how readily people with impulses to do good seek to do their good works at the expense of physicians. Among the most recent development of this character is that of health centers, diagnostic clinics, et cetera, in connection with hospitals.

Again your committee reaffirms the altruistic principles of the medical profession. At the same time, it feels compelled to warn the profession against the menace of too much gratuitous service, the inevitable consequences of which can not be otherwise than directly disastrous to medicine and indirectly disastrous to the public. The organized bodies of the profession must, in the interest of the public, assume the leadership in the solution of those problems affecting social welfare which involve the practice of medicine.

#### THE FLOWER HOSPITAL DECISION

This case need not be recited in detail. It is sufficient to say that the hospital was successfully sued for damages because of burns resulting from the injection of a hot water enema by a special nurse. This case was carried to the supreme court of this state and affirmed by it in such rulings as to make all Ohio hospitals liable for the acts of its employes and nurses. The fact that they are eleemosinary institutions no longer protects them. What the eventful outcome of this ruling will be, no one can venture to say. Already another Toledo hospital has been sued on the alleged grounds of having permitted a patient to get out of bed when he should have been restrained.

The object of this report is to have given you a conception of the scope of the hospital field, as your committee views it from the standpoint of the medical profession, rather than to have enumerated its accomplishments. The committee frankly confesses that the problems projected are too vital to warrant immature action. At this time it prefers to set forth these problems in the form of a program for your thoughtful consideration, its own guidance, and as an heritage to its successors.

C. D. SELBY, Chairman.

#### Ideal Facilities for A. M. A. Meeting

The arrangements of the St. Louis profession for the meeting places for the session of the A. M. A., which is to be held in their city May 22-26 next, are singularly fortunate and convenient; never has the Association been so well favored in this respect. The district in which the meeting is to take place is at the west edge of the business section of the city, easily accessible from all directions, by street cars or otherwise, and not more than fifteen minutes' street-car ride from the most distant hotel. The grouping of the meeting places is so compact that should one walk from the registration building (Moolah Temple) to the farthest hall, it can be done in ten minutes or less; from section to section is a matter of from one to five minutes. The convenience of the location and arrangements of the different halls is more outstanding than in any other city in which the Association has met, and a decided improvement over the accommodations which were had at the meeting in St. Louis in 1910.

Those who have not yet made hotel reservations for the meeting would do well to look after this matter at once. A list of the St. Louis hotels designated as section headquarters was published on page 221 of the March issue of *The Ohio State Medical Journal*.

The American Proctologic Society has announced a splendid program for its twenty-third annual meeting, to be held at the Hotel Claridge, St. Louis, May 23 and 24.



## Report of the Committee on Medical Education

### COMMITTEE ON MEDICAL EDUCATION

E. F. McCampbell, M. D., Chairman.....Columbus  
 Martin Fischer, M. D.....Cincinnati  
 Don K. Martin, Secretary.....Columbus

Believing that the activities provided through the function of our committee should be of service and benefit to the greatest possible number in our membership, we undertook to select a subject for discussion which would have a wide appeal and be of interest to the profession at large, particularly to the general practitioners. With this thought in mind the series of lectures for post graduate study arranged under the auspices of our committee were devoted to "Routine Physical Diagnosis."

To further carry out our original purpose the group meetings held during the past season were arranged in centers of population different in most instances from the cities and towns in which similar meetings were held in previous years. In order to further widen the field of our activity most of the places selected for meetings were places of less population than have been chosen heretofore. A view to accessibility by railroad, traction and highways was, however, constantly borne in mind.

In order to distribute the burden of the lecture work three members, especially well qualified on the subject selected, were secured as speakers, also making possible the holding of a greater number of meetings. On the whole, the response, interest and approval by the members indicated the wisdom of such course.

On behalf of the Association, our committee desires to express most cordial appreciation to the lecturers who sacrificed their time, energy and convenience in carrying out the program; the only reward to them being the degree of good accomplished and the satisfaction of work well done.

There were seventeen meetings held between September 7 and November 30. The lecturers were Dr. J. H. J. Upham, of Columbus, professor of Medicine, Ohio State University College of Medicine, and staff consultant for several Columbus hospitals; Dr. R. K. Updegraff, of Cleveland, who for ten years was connected with the faculty of Western Reserve University School of Medicine, and who is at present staff consultant for a number of Cleveland hospitals; and Dr. Roger S. Morris, of Cincinnati, professor of Medicine, University of Cincinnati, Medical Department, and staff consultant for several Cincinnati hospitals.

The schedule of meetings, including places, counties from which physicians were included in the respective meetings, the lecturer and approximate attendance was as follows:

*Alliance*, Tuesday, October 4.—For members

in Stark, Mahoning, Carroll, Columbiana and Wayne counties, Dr. Updegraff, lecturer. Attendance 120.

*Athens*, Tuesday, September 13.—Athens, Meigs, Hocking, Vinton and Gallia counties, and Wood County, West Virginia. Dr. Upham, lecturer. Attendance 60.

*Bowling Green*, Thursday, September 15.—Wood, Ottawa, Henry, Defiance, Williams, Fulton and Lucas counties. Dr. Updegraff, lecturer. Attendance 100.

*Elyria*, Tuesday, October 11.—Lorain, Erie, Huron and Medina counties. Dr. Updegraff, lecturer. Attendance 65.

*Galion*, Thursday, October 13.—Crawford, Wyandot, Marion and Morrow counties. Dr. Updegraff, lecturer. Attendance 50.

*Hamilton*, Wednesday, November 2.—Butler, Clermont, Warren and Preble counties. Dr. Morris, lecturer. Attendance 50.

*Kent*, Thursday, October 6.—Portage, Summit and Trumbull counties. Dr. Updegraff, lecturer. Attendance 85.

*Lancaster*, Thursday, September 29.—Fayette, Fairfield, Licking, Muskingum, Perry and Pickaway counties. Dr. Upham, lecturer. Attendance 90.

*Lima*, Tuesday, October 18.—Allen, Auglaize, Hardin, Putnam, Van Wert, Mercer and Paulding counties. Dr. Upham, lecturer. Attendance 160.

*Mt. Vernon*, Tuesday, September 27.—Knox, Holmes, Ashland, Richland and Delaware counties. Dr. Upham, lecturer. Attendance 60.

*Painesville*, Monday, September 12.—Lake, Ashtabula and Geauga counties. Dr. Updegraff, lecturer. Attendance 45.

*Piqua*, Thursday, September 8.—Miami, Darke, Shelby, Logan and Champaign counties. Dr. Upham, lecturer. Attendance 100.

*Portsmouth*, Wednesday, October 19.—Scioto, Adams, Brown, Highland, Lawrence, Pike and Ross counties. Dr. Morris, lecturer. Attendance 75.

*Tiffin*, Tuesday, October 18.—Seneca, Hancock and Sandusky counties. Dr. Updegraff, lecturer. Attendance 50.

*Uhrichsville*, Thursday, September 22.—Tuscarawas, Harrison, Jefferson, Belmont, Guernsey and Coshocton counties. Dr. Upham, lecturer. Attendance 50.

*Xenia*, Wednesday, September 7.—Greene, Clarke, Madison, Clinton, Warren, Montgomery and Preble counties. Dr. Upham, lecturer. Attendance 120.

*Youngstown*, Wednesday, November 30.—Mahoning, Columbiana, Trumbull and Portage counties. Dr. Morris, lecturer. Attendance 100.

In addition to the group meetings, Dr. Upham addressed the Ninth District Society at its meet-

ing in Jackson on October 6th, and the Columbus Academy of Medicine on November 7.

In conclusion the committee desires to recommend that the idea of post graduate lectures be developed, in as far as practical, into extension courses each year from Ohio's three medical

schools, as centers of medical teaching; with the possibility later of a limited period of time each summer for resident post graduate courses with a variety of lectures, clinical material and hospital demonstrations.

E. F. McCAMPBELL, Chairman.

## Report of the Publication Committee

### PUBLICATION COMMITTEE

L. L. Bigelow, M. D., Chairman.....Columbus  
 D. V. Courtright, M. D.....Circleville  
 Otto P. Geier, M. D.....Cincinnati  
 Don K. Martin, Secretary.....Columbus

On the groundwork so well established in recent years the Publication Committee has undertaken to build *The Journal* into an institution of unexcelled value to our membership. While *The Journal* from month to month has constituted its own best and most accurate report our committee has undertaken to extend its field of service; not only as the official medium of expression for the Association, reflecting and recording its purposes, objects and activities; advancing scientific medicine and promoting the general interest of our professional group; but also as an accurate and consecutive record of events and developments of direct interest to every member.

After careful comparison we are convinced that your *Journal* has contained more valuable and pertinent information of a practical nature; including transactions, projects and movements of allied groups interested in similar questions; matters of economic value to the profession; activities and policies of governmental agencies; legislative developments, state and federal laws and regulations, statutory interpretations, court decisions; bureau and departmental procedure, affecting medical practice, than any other medium devoted to a similar field.

It is perhaps with pardonable pride that your committee refers to the fact that *The Ohio State Medical Journal* has repeatedly been followed as a model and emphasized as an example, both in form, appearance and contents.

In this latter connection, your committee has systematized its efforts during the past year so that as your elective representatives, it has been possible to see that material submitted for publication has been doubly edited and carefully checked. This system has applied not only to scientific material but included thorough supervision of news, discussions and policies.

To complete such policy your committee with the sanction and approval of the Council of the State Association, after months of careful consideration, undertook to raise the advertising

standards until at the present time we feel that such requirements and supervision are second to none in America, even including the finest examples in publications of national scope.

This policy includes a strict adherence to a definite group of classifications in *The Journal* directory of "professional cards" which are limited to the particular specialty, name, address, office hours and telephone numbers of the specialist.

Acknowledgement should be made to the Council which, with farsightedness has made adequate appropriation for *The Journal* so that a steady improvement has been made in the appearance, art work and size of the publication.

*The Journal* has undertaken to reflect, support and chronicle the function and activities of your Council, committees, bureaus and departments of your Association, to promote unanimity of sentiment on those issues in which the profession is directly concerned. *The Journal* has reviewed and presented developments of a social, economic and political nature, not only in Ohio but in other states, experience from which has been and should continue to be of inestimable benefit in dealing with problems in the future. New and constantly changing regulations have been followed and presented for your information. Indeed so complete has been *The Journal* as a record that a large proportion of the scores and hundreds of inquiries received at the executive headquarters can be answered by reference to certain numbers of *The Journal*.

Judging by the number and character of commendations we feel that *The Journal* has, to a large degree at least, conformed to your ideas and met your wishes. Our committee realizes, however, that there is always room for improvement and as we have attempted, as your elective representatives, to carry out your desires we also welcome your comments, suggestions and criticisms which should result in further advancement in your *Journal*, in developing its value and service to you. *The Journal's* function and service can and should be enhanced by a constant increase in membership enrollment.

Not included herein but really a part of this report is the auditor's report, including costs and appropriations, published elsewhere in this issue.

L. L. BIGELOW, M. D., Chairman.

## Report of Committee on Medical Economics

### COMMITTEE ON MEDICAL ECONOMICS

H. L. Sanford, M.D., Chairman.....Cleveland  
 Webster Smith, M.D.....Dayton  
 J. S. Cherrington, M.D.....Logan  
 Don K. Martin, Secretary.....Columbus

There are so many phases to the general subject of medical economics that it is practically impossible to correlate and summarize the situation from a single viewpoint. First of all in the realm of this general problem are found the economic factors in medical education; secondly the economic factors in actual practice, the fees charged and the manner of collecting, the professional overhead, business routine and still further complications in group practice, hospital connections and industrial relations; and thirdly are found the vast number of economic equations between the profession and the public, the problem of economic loss occasioned by disease, accidents and loss of earning capacity; the economic provisions by the public and the state for public health administration, workmen's compensation laws, inter-related and independent movements in health and welfare, and a host of new problems constantly developed through the application of modern thought and new demands upon the profession, individually and collectively.

Speaking on the subject of medical education at the recent Congress on Medical Education, Licensure, Public Health and Hospitals, at Chicago, Dr. N. P. Colwell, secretary of the Council on Hospitals and Medical Education of the American Medical Association, summarized some of the problems as follows:

"(a) The cost of furnishing a medical education has been greatly increased; (b) medical schools are finding it necessary to limit the enrollment of students; (c) there is a rapid trend toward specialization in the practice of medicine; (d) there is an increasing development of group clinics; (e) there is a growing demand for hospitals, and the number is rapidly increasing; (f) there is an increasing demand for interns, and (g) there is an increasing shortage of physicians in the smaller towns and rural communities."

He then proceeded to discuss at length the expense of conducting medical schools, the limitation of students, specialization, group clinics, hospitals, internships, and shortage of physicians, as published in the March 11 issue of the *A. M. A. Journal*.

From this angle it is safe to assume that there is a direct economic phase to all these questions, that the public is gradually being educated to demand and appreciate the scientific products of our medical schools, that when if ever through complete education of the public, scientific medical service is fully appreciated it will be adequately rewarded, that the uneven distribution

of physicians is to an appreciable extent an economic problem, and that when the public sees and demands proper hospital facilities as well as scientific training the approach to a solution will be found.

An approach to the subject from the individual angle presupposes the necessity for adequate remuneration for service rendered; therefore the physician should be more of a business man. However, the physician must continue to measure his success by the quality of service rendered rather than by the standard of monetary return. Thus while profit is necessary it is the reward rather than the real purpose of professional practice.

It has been said that the basis of any prosperity is a desire to attain, a wish to create or make available something that humanity needs. In other words, a worthy motive which meets a public demand; and that the foundation upon which the physician erects the structure of successful practice is the desire to prevent disease, alleviate suffering and to effect cures of such bodily ailments as are possible.

Professional service as well as commercial endeavor must be systematized. Efficient management is necessary. This, of course, includes necessary knowledge and experience, equipment and facilities, hospital connections, and systematized records, book-keeping, collections and investments.

The business side of the practice of medicine has been summarized by Dr. C. D. Selby in a recent paper published in *The Ohio State Medical Journal* in the following admonitions:

- "(1) Organize your resources, physical, mental and material;
- "(2) Deputize minor duties as rapidly as the demands of your practice warrant;
- "(3) Supervise all activities; you are personally responsible;
- "(4) Charge what your service is worth; no more;
- "(5) Limit the cost of your expense and maintenance to 25 per cent. of your gross income;
- "(6) Invest 25 per cent. of your net income in government and municipal bonds;
- "(7) Re-invest all interest returns;
- "(8) And finally, bear always in mind that even though yours is a noble profession, it has certain business phases that must be respected as such and treated with business sense. Otherwise you may fail as a doctor and provider for your family."

On the third and vastly important relationship of the profession to the public, we must realize that health from one broad aspect, that of the public, includes a public function; that the profession can protest and advance its own interests only as the welfare of society is considered.

This does not mean "state medicine" or "socialized medicine" but merely that professional service must advance so as to always meet the best interest of the public. In this connection Dr. Frederick R. Green, secretary of the Council on Health and Public Instruction of the A. M. A., says that there are two tasks that must be accomplished if the medical profession wishes to maintain its leadership. "These are, first our medical organizations must be made effective working machines instead of paper organizations, and second, there must be devised some plan by which the public can be effectively organized as allies of the medical profession."

To these suggestions we may well reply that in Ohio at least, through medical organization, these needs are realized and are being met to a real degree which can and should be increased through an extension and expansion of our present local and state organization machinery.

Also the various economic phases of public relations and legislation are being constantly taken into account through our state Committee on Public Policy and Legislation and through our officers, Council and executive headquarters. In somewhat similar fashion the first two main divisions of the subject of medical economics are approached through our state Committee on Hospitals and Medical Education and our other administrative and executive functions. So must the inter-related angles of the whole subject be taken into account in approaching any of its phases.

Having in mind that public service in the field of medical practice and in preventive medicine cannot rise higher than its source, we must broaden our viewpoint, correlate our thought and coordinate our efforts to the end that whatever failures there are in imagination, scope, technic, standards and results may be gradually overcome.

Because of the particular interest which your committee chairman has had in a special problem in health administration identified with law enforcement, detection of crime, relation to policy and court procedure, a recommendation is made here for modification in the Ohio law governing the office of county coroners.

Several years ago a report of an investigation made by the Coroner's Committee of the Municipal Association of Cleveland declared that "The office of coroner has long been a subject of comment and unfavorable criticism in this country. Physicians and medical societies have made frequent efforts to secure a more efficient administration of the duties devolving upon this office. Laws have been enacted establishing other offices as well as state boards and commissions which have gradually taken away many of the duties formerly belonging to the coroner. The importance of the office has so decreased that little attention is given by the political parties or by the voters to the candidates who seek elec-

tion to the position. And even less attention is given by the public to the actual administration of the office by the men elected."

The recent survey of the Cleveland Foundation on the subject of "Medical Science and Criminal Justice" again analyzed this problem and in its summary of recommendations, your committee concurs as follows:

"1. The office of coroner should be abolished.

"2. A law similar to the New York or Massachusetts law creating a medical examiner should be enacted.

"3. The medical examiner should be a physician, expert in pathology and in medico-legal investigations.

"4. The Board of County Commissioners should appoint from a civil service list a medical examiner, and in counties having more than 100,000 inhabitants should appoint a chief medical examiner.

"5. The chief medical examiner should have the power to appoint and to remove such deputies, assistant medical examiners, scientific experts, officers, and employes as may be provided for by law.

"6. The medical examiner or his deputy or assistant should take charge of the body of any person who has died from criminal violence, or by a casualty, or by suicide, or suddenly when in apparent health or when unattended by a physician, or in prison, or in any suspicious or unusual manner.

"7. If in the opinion of the medical examiner, an autopsy is necessary, it should be performed by the medical examiner or his deputy or assistants.

"8. The medical examiner should be in charge of the morgue.

"9. Suitable laboratories, autopsy rooms, record rooms, and vaults, properly equipped for the performance of whatever investigations may be required in the course of the medical examiner's work, should be provided at the morgue.

"10. A budget should be drawn up for the office of medical examiner each year, based upon the total amount of work to be done and not upon any proportionate relation to other public expenditures."

H. L. SANFORD, Chairman.

#### Ohioans Elected to A. C. S. Fellowship

Since the publication of the 1922 Roll of Fellows of the American College of Surgeons, issued in January, Drs. Edward O. Bauer, Middletown; Edmund R. Brush, Zanesville; Ivor Gordon Clark, Columbus; and Oliver S. Steiner, Lima, have been elected to Fellowship in the College. The Fellowship degrees will be formally conferred at the convocation to be held in October.

## Report of Committee on Control of Cancer

### COMMITTEE OF CONTROL OF CANCER

Andre Crotti, M. D., Chairman.....	Columbus
F. E. Bunts, M. D.....	Cleveland
C. W. Moots, M. D.....	Toledo
J. Louis Ransohoff, M. D.....	Cincinnati
Don K. Martin, Secretary.....	Columbus

In carrying out the campaign for cancer education during the year 1921, the committee followed the same general outline as used in the previous year, enlarging upon it to some extent, and making greater effort to reach the people in districts which had not been as extensively canvassed last year, or not reached at all. To do this effectively it was again necessary to enlist the help not only of the medical profession, but also of the press, school and church.

Under the auspices of the American Society of the Control of Cancer a national "Cancer Week" was set aside for an intensive campaign among the profession and the laity, and this was held October 30 to November 5. The campaign in Ohio took place at the same time. Numerous meetings were held during the week and the speakers were chosen from among those members of the profession well qualified to speak upon the subject. In most cases the meetings were well attended, and in the larger centers really reached a very high mark.

In Cleveland, for instance, there was an attendance of 10,000 and in Marietta, 4,000. Literature sent out by the American Society for the Control of Cancer was distributed as well as pamphlets and circulars that were provided at private expense by many of the physicians in charge of districts. Membership cards in the American Society for the Control of Cancer were also given out, thus affording the people an opportunity to become members of this organization and to go upon the mailing list for all literature published by the society. Both doctors and nurses have given their support to this work enthusiastically and generously and are to be highly commended for it.

Dr. J. Louis Ransohoff of Cincinnati, must be highly commended for his especially interesting and effective way of carrying on the campaign in his own city. The exhibit held in his city under the auspices of the Cincinnati Council of Cancer Control at the Cincinnati Health Exposition attracted a great deal of attention.

The distinguishing feature of the campaign in the city of Columbus was the opening of the Cancer Clinic in the same building as the Tuberculosis Dispensary. Mrs. Samuel L. Black, chairman, Mr. Wilson Carlile, vice-chairman, Mr. F. O. Schoedinger, second vice-chairman, Mr. Joseph Schonthal, third vice-chairman, Mr. George T. Spahr, treasurer, and Miss Mary Scarlett, nurse

in charge, are greatly responsible for the success of the clinic. The medical personnel is made up of men of the highest professional standing, enlisting the services of Drs. J. F. Baldwin, C. S. Hamilton and Wells Teachnor, Sr., consulting surgeons; Dr. Wells Teachnor, Jr., assistant consulting surgeon; Drs. C. F. Bowen and W. H. Miller, roentgenologists; Milton Jones, genito-urinary diseases; J. J. Coons, J. H. J. Upham, C. W. MacGavran, H. B. Blakey, R. A. Ramsey, and J. Forman, internists; Drs. H. G. Beatty and C. H. Hoffhine, laryngologists, and Dr. Andre Crotti, medical director. Two afternoons each week are devoted to the clinic, Dr. J. F. Baldwin in charge on Tuesdays and Dr. Andre Crotti in charge on Fridays. Thus far the clinic has been a decided success. It teaches the public to seek medical advice for anything that looks suspicious of cancer. The cases that come under the jurisdiction of the clinic are followed up by Miss Scarlett, nurse in charge.

The measure of success that has been attained in Ohio in bringing to the people a sense of realization of the menace that cancer means to the human race is due in great part to the splendid cooperation given by members of the profession in charge of the various districts, and to the effective, painstaking and thorough work that has been done by my fellow members of the State Committee. I feel that to them I am much indebted for their service. In my own district it seemed logical to call upon the Health Commissioners to take charge of the work in their respective counties and they have responded in a most enthusiastic and generous way, and have obtained most excellent results.

To Dr. F. M. McMechan, medical editor of *The Ohio State Medical Journal*, and to the Publication Committee we are much indebted for their courtesy in throwing open to our use the columns of *The Journal*, and we appreciate this opportunity very much.

A word of commendation is justly due Mr. Martin, secretary of the committee, for his faithful and efficient service in behalf of this committee and the campaign.

The work of the committee is by no means finished, and the only way to obtain permanent results will be to continue the campaign on still broader and more far-reaching lines.

ANDRE CROTTI, Chairman.

### BOOKS RECEIVED

*The Physician Himself*, from Graduation to Old Age, by D. W. Cathell, M. D. 360 pages. Published by the author, Emerson Hotel, Baltimore, Md. Price \$3.00.

## PUBLIC HEALTH NOTES

In Summit County a unique combination of four health departments has been effected which should permit an advantageous coordination of health activities. The combined departments are those of Akron, Cuyahoga Falls, Kenmore and the Summit County general health district, with Dr. Donald D. Shira, health commissioner for each. Dr. Shira has previously been health commissioner for Akron and the Summit County district. In Cuyahoga Falls, an additional interesting feature is the fact that the nursing association, Red Cross, welfare association and the health department have completed a liason whereby work done by these agencies will be coordinated, duplication of effort eliminated, and all reports cleared through one central office which will serve as headquarters for all.

—In the operation of a children's clinic recently established at St. Joseph's Hospital, Lorain, local physicians have arranged to devote portions of their time to the various services and the local Kiwanis Club has agreed to raise by popular subscription the necessary funds for maintenance of the clinic.

—Dr. C. M. Peters, health commissioner for the Stark County health district; Dr. J. D. Boylan, Mahoning County, and John H. Williams, Massillon commissioner, are members of a legislative committee appointed by the association of northeastern Ohio health commissioners to study the state health laws and report to the next meeting of the organization in Salem in May.

—Directors of the Dayton public health league have pledged their assistance to the mental hygiene clinics conducted by Dr. E. A. Baber, superintendent of the Dayton State Hospital, and have voted to issue literature on the subject of mental hygiene.

—Physicians' reports on tuberculosis clinics held by the state and local health departments and the county medical societies in 15 counties are being rapidly received by the State Department of Health. The records show that the great majority of patients diagnosed as positive or suspects have followed the advice of the diagnosticians to consult their physicians for advice and treatment and a considerable number have been placed in tuberculosis hospital or sanatoria for education as to prevention and proper living.

—Dr. W. S. Chase has resigned as chairman of the Akron city health commission, giving as his reason the fact that while appreciating the necessity for the recent reduction in the health budget he could not sympathize with the curtailment of the department's activities. As part of the retrenchment program the venereal disease clinic has been placed on a part-time basis.

—The Ohio Trained Nurses' Association will

hold a convention at the Miami Hotel, Dayton, April 26-28. Part of the delegates' time will be spent in the two Dayton hospitals inspecting methods of those institutions.

—The largest of the diagnostic clinics which the State Department of Health has conducted in Ohio took place at Warren, March 16, when nearly 200 cripples, mostly children, were examined. Drs. R. R. Morrall, Youngstown, and A. M. Steinfeld, Columbus, were the consulting diagnosticians. Eighty per cent. of the cases were found to be caused by infantile paralysis, a large number of whom can be benefited by proper treatment.

### Results of Tuberculosis Inquiry

Southern Ohio has a higher tuberculosis death rate than northern Ohio, and Ohio cities have a higher rate than the Ohio countryside.

These facts stand out from an inquiry recently concluded by C. E. Lively, professor of Rural Sociology at the Ohio State University, who has taken vital statistics for twelve years, and calculated the tuberculosis death rate of each Ohio city and county.

In the average Ohio city with a population of more than 5,000 tuberculosis has killed 122 out of every 100,000 people every year during the past twelve years. In the average Ohio county, including its cities, the death rate from tuberculosis has been 106.

Tuberculosis death rates of the larger cities of the state Professor Lively found as follows: Cincinnati, 239; Toledo, 180; Columbus, 164; Dayton, 150; Cleveland, 138; Springfield, 126; Sandusky, 106; Akron, 100; Canton, 85. For purposes of comparison the tuberculosis death rates of New York from 1911 to 1919 ran 191, and for St. Louis, the figure was 150.

The rate in a few other cities follows: Chillicothe 165; Circleville 165; Lancaster 130; Portsmouth 206; Gallipolis 225; Ironton 183; Marietta 135; Athens 76; Jackson 215; Wellston 142.

### Small Advertisements

*For Sale*—Good location for doctor in city of 30,000, established practice of 17 years in same location. One block from the largest grade school and on the main street to the largest manufacturing plant in the city. Large house with office and garage. Plenty of bearing fruit on lot. Dr. R. R. Barrett, 394 Bowman Street, Mansfield.

*Civil Service*—The U. S. Civil Service Commission announces an open competitive examination for Junior Medical Officer. Vacancies in the position of physicians in the Indian Service and in the position of surgeon in the Coast and Geodetic Survey. Applicants should at once apply for Form 1312, stating the title of the examination desired, to the Civil Service Commission, Washington, D. C., or the Post Office, Cincinnati, Ohio.

### Premedicated Alcohol

(Continued from page 332)

that the druggist and the manufacturer of high-grade pharmaceuticals would be under no obligation to use the "premedicated" (and tax free) alcohol; it would merely be permissible. It is obvious however, that the operation of natural economic forces—competition—would assert itself here as inevitably as in all other fields of commercial enterprise. The use of tax free alcohol, which would cost about 85 per cent. less than the taxed product, would supersede the use of the higher priced, pure (unmedicated) alcohol. Of course, the makers of alcohol "patent medicine" would profit primarily and the distillers secondarily. It seems doubtful to those familiar with the methods of nostrum exploiters that the saving would be passed on to the public.

It seems that the only one who would benefit by "free" and "premedicated alcohol" of this kind would be the manufacturer of such preparations as S. S. S., Tanlac, and Lydia Pinkham's Compound. The price to the doctor and his patient would not be greatly affected, while the character of the preparations which he uses would be seriously endangered. Incidentally, the government would lose about \$20,000,000 of revenue annually.

### Advertising vs. Education

The time worn arguments relative to professional advertising seem to have been revived to an unusual degree recently, judging by comments and controversies not only in medical publications but in the lay press.

Much of the argument on this whole question not only loses sight of the traditional and inherent reticence on the part of an individual physician for his achievements, but of the fact that the public itself through its official agencies for health administration is charged with the duty and responsibility of educational efforts in health promotion and in exposing the fallacies of cults, quacks and incompetents.

Even though the public has a duty to itself, however, the medical profession is not relieved of its responsibility in leading the way in health matters. Numerous local and some state medical organizations have arranged for a series of public lectures throughout the communities to be given by leading physicians and conducted by literary clubs, granges, men's clubs, church clubs, luncheon clubs, lodges, etc. But this again is entirely aside from the question of "advertising".

At a recent meeting of the General Practitioners' Society held in Columbus and devoted to the subject of medical advertising, the comments by Dr. L. L. Bigelow, chairman of the State Association's Publication Committee, were so

## IODALBIN

a Protein-Iodine Compound  
for Internal Administration

THE therapeutic effects for which you prescribe iodides are produced most readily by those iodine compounds that are easily split up in the body. It is the available iodine that does the work.

In the case of Iodalbin, contact with the intestinal juice severs the loose bonds that unite the iodine with the protein base.

That's what makes Iodalbin rapidly effective.

And besides being effective, its blandness makes it acceptable to sensitive patients. It is especially gratifying to those who object to the taste and nauseating effect of sodium or potassium iodide.

**PARKE, DAVIS  
& COMPANY**

pertinent and conclusive that they are here reproduced:

It has been the traditional policy of the medical profession to regard advertising of the kind here referred to as dishonorable. The physician's standing before the public is based on his knowledge of disease gained through education and experience. The possession on his part of a certain minimum knowledge of disease, and skill in combatting it, is guaranteed to the public by legally constituted examining boards. The evils that would result from a recognition of the propriety of an individual doctor's proclaiming to the public through the medium of paid advertisements the superiority of his own knowledge and skill over that of any of his fellows, is at once apparent and requires no analysis. Under such a method a large practice would in many instances be built up, based not on knowledge and skill and ability to render service, but on the ability to pay for conspicuous, persuasive, persistent advertising. The public is able in some degree to weigh and judge more or less accurately the claims of the merchant for the commodity he advertises; it lacks ability to gauge with any degree of accuracy the claims of the man who has only service to sell. This being so, it is apparent that under a system which condones personal advertising, the rewards would be for those who were bold, conceited, unscrupulous and unhampered by the restraints imposed by honesty or good taste. Incidentally, of course, the honest doctor would suffer by such practice, but chiefly the penalty would be paid by the public.

Here parenthetically it may be asserted that the restrictions imposed by professional ethics, often so hard for the layman to understand, are rooted in the necessity for safeguarding the public welfare—however much these ethics may be held up to ridicule by the unthinking.

Now if we propose a departure from our traditional attitude of repugnance to advertising, seeking to justify it on the grounds of necessity and investing it with an air of respectability because it is sponsored by a group instead of an individual, it is the part of wisdom to look a little ahead, to see where this new step will lead us and what may be reasonably hoped from it. Is it proposed to exalt the medical profession by a series of attacks on our competitors, pointing out the absurdities of their pretensions and claims I hope not—such a procedure would be undignified and of doubtful good effect. It would probably only gain adherents for those attacked; and who shall say there are no vulnerable points in our armor? Is it proposed in brief, terse, epigrammatic sentences to tell the public what the medical profession is, what it stands for, what its accomplishments have been? Shall we discuss disease, pathological changes, difficulties of diagnosis, etc., etc.? Where shall we find the man with the genius to write these advertise-

ments, a new one each day, couching them in language with due regard to dignity, sobriety and truth? How can he expect to make a popular appeal against the flamboyant, extravagant statements of the well paid professional advertising man who writes the daily copy for the cults, the isms and the quacks?

One full page brief for the medical profession will not do. That is only a flash in the pan. The first page sensation of today is forgotten tomorrow. Advertising, to be effective, must be conducted with regard to the physiological principle of the summation of afferent stimuli. It must be kept up, be insistent and persistent. Have we an Aurelius, a Franklin or an Eliot among us with time to do this service for us? Has any secret been made of the achievements of medicine that these achievements must be related to the public through paid advertisements?

Thirty years ago the doctor walked into his wards at the South Department of the City Hospital in Boston and saw one hundred children sick with diphtheria. He knew that in spite of everything he could do for them, fifty-five of these children were going to die, and many of them were going to die the most horrible known death—by choking. Today less than five of these children will die, and none should choke to death.

Twenty-four years ago during the Spanish American war, out of every 100 deaths, 80 were due to typhoid fever. In the vast army drawn together during the great war, typhoid fever was practically unknown. If typhoid fever had not been brought under control, and had killed its victims during the World war in the same ratio to deaths from other causes that obtained in the Spanish American war, the number of deaths would have been multiplied by five. Reference has already been made to the building of the Panama Canal made possible by the application of medical science, which has converted an area of pestilence and death into one of the health resorts of the world. A few years ago epidemic cerebro-spinal meningitis killed 80% of its victims, leaving many of the remaining 20% in a condition that might be characterized as a living death. Now 80 get well where formerly 80 died.

Smallpox, formerly one of the world's great scourges that periodically decimated populations, has practically disappeared from enlightened communities where vaccination is extensively practiced, and is unknown in large armies where vaccination is required.

This list of important contributions to the welfare of mankind might readily be extended. Can anyone of them be credited to the school of chiropractic, osteopathy, Christian Science, or any other cult or ism? Can any of these healing cults bring forward names to match with Pasteur, Lister, Morton, Ehrlich, Mechnikoff and Osler?



The public is familiar with these contributions of medical science. Its appreciation is shown by its recognition of medicine as a high minded, learned profession, membership in which confers at once upon the individual a certain, prized social standing. Will any lustre be added to the above mentioned achievements by recounting them in paid advertisements to "stimulate business?" Will we not jeopardize the high esteem in which our profession has always been held by the thinking public if we throw aside the traditional respect we have had for our high calling and adopt the methods of the corner tradesmen? These are questions to be weighed and pondered before endorsement is lent a scheme which seems at first glance to promise so much.

Furthermore, recognition of the principle that a group may do with propriety what its component members may not do, is bad, and may involve awkward consequences. Germany set up as a standard of national morality the rule of expediency and selfish interest, which it would not for a moment have countenanced among its individual citizens, and came ultimately to grief. The inconsistency of a practice held proper for a group but not for its members cannot expect for long to withstand the eager insistence of some ambitious member who wants at first to insert only his professional card in the paper. From that innocent beginning the next step is a display ad with propaganda more and more pointed and boasts of special equipment or superior training for the treatment of this or that. What then to differentiate us from the advertising quack? *Facilis descensus avernia.*

In my humble opinion the medical profession has very little to gain and a very great deal to lose if it should attempt to better itself in public esteem by advertising.

---

#### Reciprocal Duty

The mutual obligation between individual members of the medical profession and the reciprocal duty of the profession to the public and of the public to the profession, together with practical means for attaining a relationship of mutual confidence and cooperation, are set forth in a splendid manner by Dr. Charles T. Souther of Cincinnati in his recent annual address as president of the Ohio Valley Medical Association, published in the February Bulletin of the Cincinnati Academy of Medicine.

"We owe to the public the best that is in us, and our return from the public is in proportion to what we give. In other words, we receive for our compensation respect, confidence, growth, progress, actual clinical results, social position, wonderful friendships, personal satisfaction and professional cooperation in large or small degree in proportion to what we give to the public in these various lines. It is just as much our duty to contribute to the things in our community that are of a social, religious and political character

## Years Ago---

Malpractice insurance was considered an aid if the Doctor happened to have it. If not, he quit practice or moved to another location.

## Today---

Professional protection is considered a necessity; the Doctor may own property in his own name and practice successfully without worry or loss.

*The performance of Specialized Service in Professional Protection exclusively, during these years, is largely responsible for this recognition.*

*It is interesting to observe that the personnel who guided Medical Protective Service to moral integrity and financial power, continue to labor unceasingly that the Company shall maintain its reputation in fuller measure.*

---

### The Medical Protective Co.

of

Fort Wayne, Indiana

---

as it is for us to contribute to those of a medical character," says Dr. Souther.

Other high points taken from his address follow:

"Medical societies and associations have manifold advantages. They are great schools for the promulgation of clinical facts in medicine; they are the open forums to which we can bring our conclusions and have them passed on by the great and impartial jury. They keep the public from having some unscrupulous brother take unfair advantage of them. No man can long propagate or promulgate any foolish fancy to the detriment of the public on account of organized medicine.

"Any man of good moral character and a graduate of medicine of a reputable school has the privilege of membership. Any man in the society can be one of the leaders if he will work. Any man who does not like the way things are being conducted can make them better or worse, depending on his own ability, personal worth and following.

"It is often said that medical societies are run by cliques and clans. About this there is no question. It is so—it always has been and it will always be. But this does not mean that there is anything wrong in the conduct of the society. Cliques are for good as well as bad. It means only one thing, and that is that a group of men co-operate for what they think is to the best interest of the society. When you say the Government does this or that, it means you and me, because we are the Government; we are responsible for the sending of the men who form Congress, the Senate and occupy the President's chair. The same holds true of societies, and when one clique is beaten it only means that a stronger clique has been formed or the old one would not have been beaten.

"While it is every man's privilege and duty to be active in a cooperative way with medical societies, there are those who prefer to work alone in their laboratories, with their books, to read and study. Some of these men are rare examples of advanced thought, progress and production for good in their community, but it has always seemed to me that they were robbing the society of a good mind and themselves of the greatest of all stimulants for the progress of medical science—that of mental competition."

\* \* \*

"My advice to medical students going out into the world is this:

1. Prepare yourself to do the work well.
2. Locate in a community of which you are proud and where you will want to rear your family.
3. Get acquainted with the best doctors and the busiest doctors and court their friendship and association.
4. Be an active member of all your component medical societies.
5. Give excellent service to all the cases that come under your care.
6. Be really industrious, honorable and true to yourself.

"7. You will soon be busy if you do what you can toward repair of all the physical defects of your clientele."

"\* \* \* The family physician represents as a class the greatest benefactor to the public. He is and should be the confidant of his clientele; he is the one to whom they should go for advice. His advice should be asked when medical and surgical consultations are wanted. He has the

best interest of his family at heart and will give honest advice."

\* \* \*

"The duty of the public to the profession may be stated as being first. Doctors should be thought of and recognized as public-spirited citizens. The doctor should be required to render a quality of service that is up to the very high present day standard. The public should be mindful of the rather rare situation maintained by doctors of medicine, in that the constant effort of the medical man is to prevent sickness, promote hygiene and sanitation, and in every way protect the public, all of which tends to reduce the income of the doctor.

"The public should see to it that no law is placed upon the state or national statute books by vote of the people that will prevent carefully controlled scientific vivisection. They should be ever mindful of the great benefit they have derived from antitoxin for diphtheria, for smallpox, for tetanus, and all the anti-blood-poison serums and vaccines that we have at our command today. There are so many reasons why we should have carefully controlled vivisection and experimental animal surgical teaching, that they need only be enumerated where a debate is on. Advanced teaching in present day medical schools demands experimental laboratories in many departments where vivisection must be permitted.

"The layman should know that the problem of diagnosis in medicine is not simple. He should know that even after the doctor has exhausted every known scientific means to arrive at a correct diagnosis in a case, that he may still be in doubt, that it frequently takes a long time to analyze a case, that diagnoses are not made in one or two visits except in the simpler cases or those that are distinct and not complicated. He should know that two or more diseases may occur in the same patient at the same time. That even great expense is at times essential to arrive at a diagnosis, and many consultations may be necessary. And while it is seldom practiced, a retainer fee in advance is just as much deserved and earned by the physician as by the lawyer. Health is the most precious of all possessions."

#### Cured (?) Chiropractically

A repetition of the publicity methods through which chiropractic was acclaimed in the now famous Reubin case of Waukegan, Illinois, was seen recently when two of the Columbus newspapers carried impressive accounts of chiropractic adjustments causing the cessation of "talking sickness" in a local case.

Not only was the name of the chiropractor in this instance set forth in complimentary terms but the occasion was taken for favorable comment on the cult itself. Two days later, however, very brief news items appeared in the same papers to the effect that Mrs. (Blank) had died from talking sickness but that the attending "physicians" were unable to establish the exact cause of death, no mention being made in these latter accounts of the fact that the victim had been subjected to chiropractic adjustments.

The conclusion thus may be drawn that while an individual may be "cured" chiropractically, resultant death itself is merely an incident which does not detract from the wonders of this "miraculous" cult.

PATIENTS REQUIRING HOSPITALIZATION ARE TREATED AT MT. CARMEL, GRANT, PROTESTANT, ST. FRANCIS, OR MCKINLEY HOSPITALS AT THE OPTION OF THE PHYSICIAN OR SURGEON REFERRING THE PATIENT.

## RADIUM THERAPY

BEN R. KIRKENDALL, M. D.  
137 EAST STATE STREET,  
COLUMBUS, OHIO.

## ACADEMIES AND COUNTY SOCIETIES

### TOLEDO

E. J. McCormick, M.D., Secretary

At a general meeting of the Toledo Academy, March 3, the following resolutions were adopted:

**WHEREAS:** The diagnosis of disease by laboratory methods, instead of being confined to physicians trained in medicine, is being exploited by lay technicians and commercial houses; and,

**WHEREAS:** There is danger of this specialty in medicine becoming degraded by unseemly and blatant advertisements of commercial laboratories now appearing in certain medical journals, therefore, be it

**RESOLVED,** That the status of the clinical pathologist is on a par with that of the internist, surgeon or other specialist in medicine, and conformable to the same code of ethics and high moral standards.

**RESOLVED,** That the publication of advertisements calling attention to the merits of a particular laboratory and announcing prices of various laboratory examinations are contrary to good taste and subversive of the ethics of the practice of medicine.

**RESOLVED,** That the Journal of the American Medical Association, the official journal of the various state medical associations, and other reputable medical periodicals, be requested to bar the advertisements of commercial laboratories from their advertising pages, permitting only licensed graduates of medicine an insertion of their professional cards, giving but name, specialty, and address.

**RESOLVED,** That in the interest of the patient and for the advancement of scientific medicine, encouragement should be given to the establishment of resident clinical pathologists in all communities where the population and number of physicians warrant specialization in this field of medicine.

**RESOLVED,** That any system whereby a group of practitioners have a large amount of laboratory work done at a monthly rate far below the established fees is unethical, working a grave injustice upon the pathologist who is led to take up the plan, as well as upon his fellow specialists and upon all concerned.

**RESOLVED,** That the various municipal and state laboratories confine their work as far as possible to charity patients only.—From *The Bulletin*, Academy of Medicine of Toledo and Lucas County, April, 1922.

#### THIRD DISTRICT

*Auglaize County* Medical Society held a large meeting on March 16 in Wapakoneta. The meeting was held in the Vaudette Theatre and the main feature was the showing of the Wertheim Obstetrical Clinic in moving pictures. Over 90 doctors were present from adjacent counties and all were well pleased with the pictures. Before the showing of the films the secretary explained that several features of the pictures might seem unusual, but these were intentionally arranged to make the pictures more striking. The operators in the pictures do not wear rubber gloves which might strike the observer as a disregard of aseptic technique. Photography records black and white only, and as blood, iodine and rubber all recorded deep black in the first pictures taken in the Wertheim Clinic, the hands of the operators could not be discerned from the blood, and therefore in order to make the manipulations of the hands of the operator plain to the observer gloves were disregarded for the later pictures. The hands were so thoroughly sterilized that during the two years while these pictures were taken not one case of infection occurred in the Wertheim Clinic in a case which had been manipulated before the camera without rubber gloves. Episiotomy was demonstrated in several cases and the indication for it was self-explanatory

for any physician familiar with obstetric manipulation as it will prevent a tear in the perineum where a tear is uncontrollable and will frequently tear into the rectum. Craniotomy was performed on two dead fetus. During one Cesarean section there was shown evolution of the uterus, which, as the secretary explained, was done in this picture for demonstration but was not done in the regular routine, as Cesarean section was performed in Europe the same as in America. The pictures were not provided with lengthy explanations as they were made with the purpose of being shown to men with a full theoretical knowledge of obstetrics and as most all of our visitors had this knowledge they were well pleased. A man with only a very superficial knowledge of obstetrics but not familiar with details and obstetric diagnosis will not understand these pictures but it is not intended to teach obstetrics by these pictures to a doctor who is lacking in knowledge of obstetrical diagnosis and technique.

After the Wertheim pictures, which by request were shown twice, Dr. C. A. Coleman, Dayton, gave a very interesting and instructive lecture on "Surgery of the Uro-Genital Tract with Special Reference to the Kidney", which lecture was illustrated with a large number of lantern-slides.

After these lectures three operations of Dr. J. L. DeCourcy, Cincinnati, were shown in moving pictures. Dr. DeCourcy was unable to be present, due to illness, but he sent the films of one herniotomy and two thyroidectomies which were highly appreciated by the assembled physicians.—C. L. Mueller, Secretary.

*Marion County* Medical Society enjoyed a formal dinner dance at Marion, March 29. Dentists of the city and their families as well as the society members and their families were invited and the event proved to be the leading social event of the season. Among the guests were Dr. B. Merrill Ricketts, Cincinnati, who spoke on "Don'ts", and Dr. E. M. Baehr, Columbus, on "Children's Welfare Work". At the regular meeting of the society on April 4th, Dr. Clifford G. Smith, Marion, read a splendid paper on "Retropositions of the Uterus".—D. O. Weeks, Secretary.

#### FIFTH DISTRICT

*Lake County* Medical Society met in regular monthly session at the Parmly Hotel, Painesville, April 3rd. After the routine business, Dr. John G. Frey, superintendent of the Cleveland Tuberculosis Sanatorium, Warrensville, gave an address on "Artificial Pneumothorax", first giving the indications, contra-indications, the select case (unilateral), stating the benefit to the infected lung, in stopping the hemorrhage, lowering the temperature, preventing further involvement, and finally putting the lung at rest, by gradually collapsing it. He stated just how often nitrogen gas should be introduced into

*X-Ray,  
Radium,  
Removal of  
Foreign  
Bodies*

CHAS. F. BOWEN, M. D.  
344 East State Street  
Columbus, O.

the pleural cavity, and the initial amount, first every other day for the first and second week, then gradually extending the time to twice a week, etc. This should be kept up for a long time, for two or three years or longer. The initial gas introduced should be about 200 cc., and the readings on the manometer -15 to -5, the first reading; the second reading, or when the gas has been given, not less than -0. It is not unusual to have positive readings for the second reading, after several gasings have been done. This was an unusual address, very interesting and instructive, and listened to with much interest. Many questions were asked Dr. Frey at the close of his address and all fully explained. Splendid plates of the chest were exhibited and interpreted in detail by the speaker. These plates showed just the results of artificial pneumothorax by nitrogen gas. A vote of thanks was extended Dr. Frey for his splendid address.—West Montgomery, Secretary.

*Trumbull County* held its regular meeting on March 16th at Warren, following the diagnostic clinic conducted by the State Department of Health. Dr. A. M. Steinfeld, Columbus, one of the consulting diagnosticians at the clinic, discussed "Infantile Paralysis", giving points to assist in making early diagnoses and outlining treatment of acute cases, emphasizing the use of the serum prepared by Dr. Rosenow. Dr. P. M. Wright followed this paper with films on the diagnosis and treatment of venereal diseases. The meeting was well attended by the county membership and a number of guests. Dr. Steinfeld continued his discussion and answered numerous questions at the six o'clock dinner which closed the meeting.—J. D. Knox, Secretary.

#### SIXTH DISTRICT

*Summit County* Medical Society had a very interesting meeting at Akron, March 7, with an attendance of 65 from Canton, Cleveland, Akron and San Jose, Costa Rica. Two new members, Drs. L. L. Hobbs, Barberton, and W. D. Lyon, Akron, were admitted. Guests of the evening were Dr. W. E. Bruner, Cleveland, professor of ophthalmology, Western Reserve University, and president of the Cleveland Medical Library Association, and Dr. J. P. DeWitt, Canton, president of the Sixth District Medical Association, who joined in discussing "A Medical Library". The remainder of the program was discarded and a free-for-all discussion spent upon proposed improvements in various departments of the society.

At the meeting of April 4th, Dr. R. V. Luce presented a paper on "Fractures of the Femur", which was discussed by Drs. W. A. Parks, J. D. Smith and H. R. Conn. "Public Health and the Medical Profession", was the subject of an address by Dr. D. D. Shira and discussed by Drs. W. S. Chase and J. N. Weller and Mr. W. S. Bixby of the Department of Charity and Mr. E.

C. McQueeney, secretary of the Catholic Service League. Dr. C. M. Daugherty was admitted to membership. Attendance 106.—A. S. McCormick, Secretary.

#### SEVENTH DIVISION

*Tuscarawas County* Medical Society and dentists of that county met in joint session at New Philadelphia, March 9, for seven o'clock dinner. Following the dinner papers were presented by Dr. Willard Stoner, Cleveland, on "Practical Consideration of Modern Medicine from the Standpoint of an Internist", and Dr. E. L. Pettibone on "Good Teeth and Good Health". Both papers were very instructive and were discussed freely.—P. J. Alspaugh, Secretary.

#### EIGHTH DISTRICT

*Licking County* Medical Society had an enthusiastic meeting in Newark, March 30. Twenty-five members were present for six o'clock dinner, after which Dr. A. G. Helmick gave an instructive address on "The Relation of Bacteria to Intestinal Disturbances in Infancy and Early Childhood", which was much appreciated. In a talk on "Should a Mother Nurse Her Baby", Dr. J. P. Stedem stressed some valuable points. Officers of the society for 1922 are Drs. T. L. Baxter, Newark, president; E. J. Johnson, Alexandria, vice-president; and W. E. Shrontz, Newark, secretary.—W. E. Shrontz, Secretary.

#### NINTH DISTRICT

*Pike County* Medical Society's program for its regular meeting in Waverly, April 3, was devoted to case reports and an interesting clinic on the heart, in which the different phases and positions it may assume were shown, with hypertrophy of either and both sides. The next meeting will be held on May 15 in the office of Dr. O. C. Andre, on May 15, when Drs. Andre and C. H. Willson will present papers.—I. P. Seiler, Secretary.

### Resolutions Adopted

Fulton, Hancock, Hardin, Henry, Morrow and Pike County Medical Societies and the Academy of Medicine of Toledo and Lucas County have adopted the following resolutions:

#### RESOLUTIONS TO MODIFY THE LAWS AFFECTING TRAINED NURSES AND STUDENTS FOR NURSES' TRAINING SCHOOLS OF OHIO

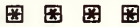
*Whereas*, The present State law requiring a three-year training course for nurses before they are granted certificates tends to create a monopoly in the profession by making the period of training too long, thus keeping out many desirable young women who would take the course; and,

*Whereas*, The medical profession are all agreed that a two years' course is amply sufficient for the average young woman to become a competent trained nurse; and,

*Whereas*, The present state law also requires

# Radium Laboratory

350 East State St., Cor. Grant Ave.  
Columbus, Ohio



Edward Reinert, Ph. G., M. D.  
R. R. Kahle, Ph. B., M. D.

Citz. 9215

Bell, M. 7417



## The Holzer Hospital Gallipolis, Ohio

*Radium for all  
therapeutic  
uses*

# Radium Service

By the Physicians Radium Association of Chicago (Inc.)

Radium loaned to physicians at moderate rental fees. Patients may be referred to us for treatment if preferred.

Careful consideration will be given inquiries concerning cases in which the use of Radium is indicated.

### BOARD OF DIRECTORS

- William L. Baum, M. D.
- N. Sproat Heaney, M. D.
- Frederick Menge, M. D.
- Thomas J. Watkins, M. D.

## The Physicians Radium Association

1110 Tower Bldg., 6 N. Michigan Ave.  
CHICAGO

Telephones: | Manager:  
Randolph 6897-6898 | William L. Brown, M. D.

that applicants desiring to enter training schools must have completed one full year in High School or its equivalent, thus tending to debar young women who would otherwise be eligible and be desirable as students in the training schools; therefore, be it

*Resolved*, That this Society unanimously urges the modification of the said laws and recommends that the period of training for nurses be reduced to two years, and the entrance requirements be modified so that applicants shall not be required to have the first year's high school certificates, thus permitting young women who have completed the ordinary eighth grade school

training to become eligible for entrance as students in the Nurses' Training Schools of Ohio and, be it

*Further Resolved*, That every member of this Society is hereby urged to use his personal influence, with his representatives in the State Legislature to have the aforesaid laws modified as hereinbefore suggested, and that a copy of these resolutions be forwarded to every member of the State Legislature, requesting him to give his respectful consideration and support to these changes in our present State laws regarding Trained Nurses and Nurses' Training Schools.



## HOSPITAL NOTES

—Following a dinner given by the medical staff of Warren City Hospital, recently, in honor of the trustees of the institution, Dr. George E. Follansbee of Cleveland spoke on "Hospital Problems", discussing the many problems encountered in organization of a staff.

—Announcement has been made that 20 applicants, who took part in competitive examinations, have been awarded internships at Cincinnati General Hospital, beginning June 1. Four of the successful applicants are women.

—Formal approval of a tract of land south of Canton as a site for a Stark County tuberculosis hospital has been given by the State Department of Health.

—A bequest of real estate valued at \$101,416 is made to the City Hospital of Akron under the will of a former Akron resident.

—Effective April 1, the rate for caring for city patients treated at the Youngstown City Hospital rate increased from \$3.50 to \$4.00 per day.

—Dr. W. W. Young has been added to the staff of Massillon State Hospital. He was formerly connected with the medical department at Emory University, Atlanta, Georgia.

—Demand that the citizenry of Hamilton County immediately insist that the county commissioners take steps to transfer Longview Hospital for the insane, to the state of Ohio was made by one of the directors of the institution before the Cincinnati Chamber of Commerce recently. He pointed out that under an act of the legislature the state has authority to take over the institution but that the county commissioners have never acted to transfer it. Longview Hospital is the only one of its kind in the state exclusively owned and operated by a county, the others being operated by state money. Hamilton

County is said to have paid \$1,500,000 for buildings and about \$5,700,000 for maintenance of the institution since 1861.

—The staff of the Hospital Clinic of Cleveland has announced the opening of a general hospital and clinic at 8803 Euclid Avenue, Cleveland. The staff is organized into eight separate departments, with 16 physicians, as follows: surgical, Paul E. Beach, A. A. Southwick, A. B. and A. F. Spurney; medical—J. Anderson, J. G. Wilmore, E. Rosenberg; oral surgery—C. K. Teter; ophthalmology and oto-laryngology—Myron Metzbaum, James and A. L. Stotter; orthopedic surgery—R. S. Reich; obstetrics—P. M. Spurney; pediatrics—W. D. C. Millhoff; urology—E. H. Harsh. In addition, the laboratory and radiology departments are in charge of Drs. C. E. Swanbeck and R. G. May, respectively.

### Second Annual National Hospital Day

So popular and generally satisfactory was the observance of National Hospital Day last year that the repetition of this event this year on Friday, May 12, the anniversary of the birth of Florence Nightingale, founder of modern nursing, is meeting with much approval. On that day the public will be again invited to visit the hospitals in their vicinity as guests and to familiarize themselves with their atmosphere, methods and aims.

About 1,500 hospitals throughout the United States and Canada took part in the 1921 observance and approximately 250,000 people visited the hospitals and showed their interest in many practical ways. Many applicants for nurses' schools were interested through National Hospital Day, and a number of hospitals reported donations of supplies and equipment.

This year many more hospitals are planning programs for the day and England and Australia are taking an interest in the movement.

Hospitals desiring suggestions for programs or additional information concerning National Hospital Day may obtain same from Matthew O. Foley, Executive Secretary, National Hospital Day Committee, 537 S. Dearborn St., Chicago.



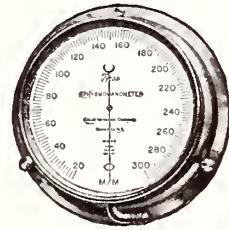
# Cincinnati Radium Laboratory

22 West Seventh Street

Needle, Tube and Plaque  
Applicators



CHARLES GOOSMANN, M. D.  
X-Ray Treatment When Indicated.



*Tycos*

(OFFICE TYPE)

## SPHYGMOMANOMETER

Its use obtains continuously accurate information during the most delicate operations.

Your postal card request brings complete information.

*Taylor Instrument Companies*  
ROCHESTER, N. Y.

Fever Thermometers—Urinary Glassware. S-213

### The Management of an Infant's Diet

## Constipation

Protein indigestion or the failure to take care of the casein of cow's milk may result in delayed bowel movements.

When constipation in infancy is due to casein curds it is readily overcome by employing some means of preventing the firm coagulation of the casein.

## Mellin's Food

acts upon the casein of milk in such a manner that the coagulated casein is presented in a most favorable condition for the action of the digestive fluids; therefore, Mellin's Food is especially indicated in constipation due to faulty protein digestion, and results will at once be apparent if Mellin's Food is used in sufficient amount to thoroughly attenuate the milk casein.

Mellin's Food Company, Boston, Mass.

### Terms Defined to Facilitate Work of Hospital Bureau

After a study of the hospital and dispensary facilities of the state provided for by action of the 83rd Assembly, 1919, the director of health for Ohio has recently announced the following definitions of hospitals and dispensaries:

#### HOSPITAL

Any institution or establishment, public or private, for the reception and care of persons for a continuous period longer than twenty-four hours, for the purpose of giving advice, diagnosis or treatment bearing upon the physical or mental health of such persons, shall be considered a hospital.

#### DISPENSARY

Any institution or establishment, public or private, for the purpose of giving advice, diagnosis or treatment bearing upon the physical or mental health of an individual shall be considered a dispensary; provided that a hospital and the quarters of a licensed practitioner of medicine used for his private practice shall not be deemed to come within the meaning of this definition.

Although the inclusions and exclusions of such a definition may appear at first to be somewhat arbitrary, attention is called to the fact that it is very essential that there be some definite line

of demarkation in order that hospitals and dispensaries may be classified for the purpose of studying present performance and making recommendations for perfecting hospital and dispensary service.

It is said that hospitals have reacted favorably to the changes in forms and to the requests for an increased amount of data incident to the evolution of the system of registration and annual reports. Each year the material is becoming more accurate and the State Department of Health feels gratified over the cooperation of the Ohio Hospital Association and that of the individual hospitals and dispensaries that have assisted in the promotion of this work.

Dr. R. A. Brintnall who was until recently the assistant director of health service for Lake Division, American Red Cross, has just been appointed as chief of the Bureau of Hospitals to fill the vacancy caused by the resignation of H. J. Southmayd, who is now associate director of Mt. Sinai Hospital, Cleveland.

#### Correction

In the publication of Dr. P. F. Southwick's paper on "Simplified Infant Feeding" in the February, 1921, issue of *The Journal*, credit due to Dr. Dennett for his original contributions on this subject, was inadvertently omitted.

# THE SEXUAL LIFE OF OUR TIME

By IWAN BLOCH, M.D.

"A veritable encyclopaedia of the sexual sciences."

PHYSICIAN FOR DISEASES OF THE SKIN, AND FOR DISEASES OF THE SEXUAL SYSTEM, IN CHARLOTTENBURG, BERLIN  
AUTHOR OF "THE ORIGIN OF SYPHILIS," ETC.  
TRANSLATED BY M. EDEN PAUL, M.D

"The best book on sexology ever published in any language in the world."—Wm. J. Robinson, M.D.

#### A LITERARY AS WELL AS SCIENTIFIC ACHIEVEMENT

Dr. Bloch is a master of style. His book is so well written, so colorful, so vitally absorbing, yet without so simply told that it would be of immense profit to the layman—BUT FOR ETHICAL REASONS IT IS RESTRICTED TO THE MEDICAL AND LEGAL PROFESSIONS.

The price of the book is \$7.00. However, we are allowing physicians 10% discount, making the price \$6.30. WE ARE THE SOLE DISTRIBUTORS OF THIS BOOK AT THIS DISCOUNT. Remittance by check, money order, cash or stamp; or sent C. O. D. if desired.

#### 5 DAYS' TRIAL

If not satisfied, return book within 5 days and money will be refunded.

It is invaluable to both specialist and general practitioner because, in addition to throwing new light on the well-defined problems of the former, it strips many baffling cases met with in every-day practice of their deceptive characteristics and reveals the hidden roots of sexual disorder or irregularity.

An investigation of sex and sex manifestations, both normal and pathologic, which not only marks a new epoch in the treatment of patients, but which will be regarded as an authority for countless years to come. From its appearance this book has had a remarkable popularity. In Europe during a recent nine months' period, the sales necessitated six reprintings.

#### 33 Chapters

#### Only Part of Contents

#### 600 Pages

I. The Elementary Phenomena of Human Love . . . . .	7	XIII. Prostitution—Appendix: the Half-World . . . . .	303	XXII. Sexual Fetishism . . . . .	609
II The Secondary Phenomena of Human Love (Brain and Senses) . . . . .	19	XIV Venereal Diseases—Appendix: Venereal Diseases in the Homo-sexual . . . . .	349	XXIII. Acts of Fornication with Children, Incest, Acts of Fornication with Corpses (Necrophilia) and Animals (Bestiality), Exhibitionism, and other Sexual Perversities—Appendix: The Treatment of Sexual Perversities . . . . .	631
III. The Secondary Phenomena of Human Love (Reproductive Organs, Sexual Impulse, Sexual Act) . . . . .	37	XV Prophylaxis, Treatment, and Suppression of Venereal Diseases . . . . .	371	XXIV Offenses Against Morality from the Forensic Standpoint . . . . .	659
XIX. The Riddle of Homosexuality—Appendix: Theory of Homosexuality. 487		XVI. States of Sexual Irritability and Sexual Weakness (Auto-Erotism, Masturbation, Sexual Hyperaesthesia and Sexual Anaesthesia, Seminal Emissions, Impotence, and Sexual Neuraesthesia) . . . . .	407	XXV The Question of Sexual Abstinence . . . . .	671
XX. Pseudo-Homosexuality (Greek and Oriental Paederasty, Hermaphroditism, Bisexual Varieties) . . . . .	537	XVII The Anthropological Aspect of Psychopathic Sexuals—Appendix: Sexual Perversions Due to Disease . . . . .	453	XXVI Sexual Education . . . . .	681
XXI. Alcolagnis (Sadism and Masochism)—Appendix: A Contribution to the Psychology of the Russian Revolution (History of the Development of an Alcolagnistic Revolutionist). 555		XII. Seduction, the Sensual Life, and Wild Love . . . . .	279	XXVII Neo-Malthusianism, the Prevention of Conception, Artificial Sterility and Artificial Abortion . . . . .	693
				XXVIII. Sexual Hygiene . . . . .	709

TO OBTAIN THE SPECIAL \$6.30 PRICE AND 5 DAYS TRIAL ORDERS MUST BE SENT DIRECT TO—  
COUNSEL SERVICE—Med. Dept. Distributors of Scientific Medical Works 267 West 71st St., New York

# Artificial Pneumothorax

in  
Pulmonary Tuberculosis



**LOUIS MARK, M. D.**

327 East State Street  
Columbus, Ohio

## Rent This TYCOS Nine Months Then It's Yours

**\$2.50 Monthly Brings It**

The new 1922 model celebrated Blood Pressure Apparatus, Dr. Rogers' Sphygmomanometer is very accurately made and registers both systolic and diastolic pressures. The cash price of the Tycoseverywhere is \$25.00. We will send it to you on receipt of only \$2.50 and, if after ten days' trial, you wish to keep it, simply pay the balance—\$22.50—the same as rent—in nine monthly payments of \$2.50 each. You pay only the cash price (no interest—no extras) and have nine full months in which to make it pay for itself.

### Leather Case and Booklet Free

With every Tycos is included Free a genuine morocco leather case. You can put your Tycos into this case and carry the entire instrument in your pocket. Besides the case, we give you Free, a 44-page booklet which explains accurately, thoroughly and plainly just how and why the Sphygmomanometer is essential to the intelligent practice of medicine.

### Ten Days' Trial—Money Back

Send today. Just sign and mail the coupon below—enclose \$2.50 for first month's rent and we will immediately send you the instrument and you will only have to pay \$2.50 each month until the cash price, \$25.00, is paid in full. Send that \$2.50 today. Remember, we give ten days' trial and return your money if you are not satisfied. The price for all cash with order is just the same, \$25.00.

SIGN AND MAIL COUPON

**A. S. ALOE CO. Factory Distributors, 570 Olive St., St. Louis, Mo.**

I enclose first payment, \$2.50, for which send me Dr. Rogers' TYCOS and Outfit on ten days' trial as per your offer. I agree that the title is to remain in you until paid in full.

Name .....  
Address .....

## MEAD'S

### DIARRHOEA IN INFANTS

Summer Diarrhoea, Fermentative Diarrhoea, etc.

PROTEIN MILK is used in a large number of hospitals and by pediatricians in their private practice to correct diarrhoea in infants. Its value has been fully demonstrated by its use over a period of years. Formerly the preparation of Protein Milk in the home was complicated as well as expensive, which interfered with the doctor's orders being carried out.

### MEAD'S CASEC

A new preparation, known as CASEC, has been perfected by MEAD which makes it possible to do away with the complicated side of preparing Protein Milk. The ease with which Protein Milk can be prepared with Casec has made it practical and widened its use, and now physicians, nurses and mothers may prepare Protein Milk with Casec with the same ease and accuracy as the preparation of any other milk modification in the home.

MEAD'S CASEC is a calcium-caseinate product prepared from the casein of fresh skimmed milk. Full description, analysis and directions for use will be furnished upon request.

MEAD'S DEXTRI-MALTOSE for average infant feeding.

**THE MEAD JOHNSON POLICY**

Mead's Infant Diet Materials are advertised only to physicians. No feeding directions accompany trade packages. Information regarding their use reaches the mother only by written instructions from her doctor on his private prescription blank. Literature furnished only to physicians.

MEAD'S CASEC for babies with diarrhoea.

## MEAD JOHNSON & COMPANY

## Evansville, Indiana

## DEATHS IN OHIO

*Charles Clinton Agin, M. D.*, Miami Medical College, Cincinnati, 1875; aged 70; member of the Ohio State Medical Association and Fellow of the American Medical Association; died at his home in Cincinnati, March 22, after a month's illness. Dr. Agin practiced his profession in the West End of Cincinnati for more than 45 years. He was instrumental in the founding of the West End Medical Society and had served as its president since its organization, more than 20 years ago. Surviving are his widow, two sons and a daughter.

*John V. Chambers, M. D.*, Western Reserve University School of Medicine, 1895; age 58; died in Sanford, Florida, March 19. Dr. Chambers was a resident of Mahoning County practically his entire life, residing and practicing his profession at North Lima for 30 years. He leaves his wife, two brothers and two sisters.

*Ida Clarke, M. D.*, Woman's Medical College of Pennsylvania, 1878; aged 68; member of the Ohio State Medical Association and Fellow of the American Medical Association; died in Atlantic City, New Jersey, March 3, from heart disease. Dr. Clarke's home was at Youngstown, where she was widely known for her interest in public and charitable affairs. She is survived by one brother, Justice John H. Clarke of the United States Court.

*Isaac Thomas Evans, M. D.*, Eclectic Medical College of Pennsylvania, Philadelphia, 1869; aged 80; died at his home in Columbus, March 14. Dr. Evans was a veteran of the Civil War. He practiced his profession in Columbus for 25 years but had been retired for years prior to his death. Surviving are his wife and three sons.

*Augustus Lee Falor, M. D.*, Eclectic Medical College, Cincinnati, 1905; aged 49; former member of the Ohio State Medical Association; died at his home in Buckland, Auglaize County, March 17, from complications following influenza. He leaves a widow and two small daughters.

*Wilbur G. Hamlin, M. D.*, Jenner Medical College, Chicago, 1906; aged 52; died at the home of his parents in Cass Township, Hancock County, March 4, after an illness of six years' duration. Dr. Hamlin formerly practiced in Warsaw, Indiana, and Chicago. Surviving are his widow, parents, and one brother.

*Leroy S. Hennen, M. D.*, University of Nashville, Medical Department, 1899; aged 65; member of the Ohio State Medical Association and Fellow of the American Medical Association; died suddenly in Toledo, March 18. Dr. Hennen had practiced in Wellsville, Leetonia and

Alliance, but had recently taken up residence in Rootstown.

*Llewellyn G. Klepinger, M. D.*, Medical College of Ohio, Cincinnati, 1901; aged 52; member of the Ohio State Medical Association; died at his home in Dayton, March 11, after a brief illness. Dr. Klepinger had practiced medicine in Dayton for 20 years and at one time served as health officer of Montgomery County. He leaves a widow and one son.

*James Matthews Knowlton, M. D.*, Boston University School of Medicine, Boston, 1893; aged 55; member of the Medical Society of the State of Pennsylvania and Fellow of the American

**THE OLD WAY | THE NEW WAY**



**OUR TUBE**

**Better Ocular Therapeutics**

Can be obtained by the use of "M-E-S-Co" brand of Ophthalmic Ointments. Reasons: Selected Chemicals, Thorough Trituration, Perfect Incorporation, Sterilized Tubes, Boiled and Strained Petroleum, Excellent Service, No Waste, No Dirty Salve Jar, Right Prices. Write for complete information

**MANHATTAN EYE SALVE CO., Inc.**  
Louisville, Ky.

## Easily Adapted to Individual Infant Feeding

In both normal and  
abnormal conditions

# "Horlick's"

### The Original Malted Milk

Always clean, safe and reliable.  
Well balanced, a complete food.  
Very convenient. Used successfully  
over one-third of a century.

For the prescribed feeding also of  
all ages — anaemic, sick and con-  
valescent.

*Samples Prepaid*

AVOID IMITATIONS

*An excellent  
X-Ray vehicle*

**HORLICK'S**  
Racine, Wis.



*Here's where genuine Atophan is manufactured by a special process completely precluding the possibility of unpleasant empyreumatic admixtures.*

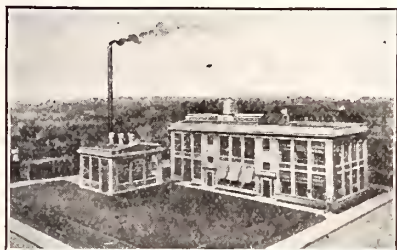
This means a still further improved Atophan for your cases of Rheumatism, Gout, Neuralgia, Neuritis, Sciatica, Lumbago and "Retention" Headaches.

*Ample trial quantity and literature from*

**SCHERING & GLATZ, Inc.**

150-152 Maiden Lane

- NEW YORK



Our Manufacturing Laboratories at Bloomfield, N. J.

**T**HE products of The Ohio Medical Products Company are manufactured on a basis of refined accuracy and are honestly made.

Each label is an assured guarantee of purity.

We give fair play. We give fair value. We value honesty and we expect it.



1104-1108 North High Street,

COLUMBUS, OHIO

Medical Association; died at his home in Youngstown, February 28, from a poison taken by mistake. Dr. Knowlton came to Youngstown four years ago after having practiced in Texas and Pennsylvania. His wife and one daughter survive.

*Lowell Thomas Mahon, M. D.*, Rush Medical College, Chicago, 1886; aged 60; resident of Toledo; was found dead in his room at a hotel in Sandusky, March 12, from acute alcoholism and opium poisoning.

*Wilson Marshall McClellan, M. D.*, Baltimore Medical College, 1895; aged 57; member of the Ohio State Medical Association, Fellow of the American Medical Association and Fellow of the American College of Surgeons; died at his home in Ashland, March 22, after an illness of more than two years. Dr. McClellan was the dean of Ashland physicians, and was for many years secretary of the Ashland County Medical Society, in which capacity he rendered invaluable service in the interest of medical organization. Dr. McClellan was also a graduate pharmacist and first practiced that profession in Ashland. He had taken post-graduate work in the east and was studying abroad when the World War started. Returning home, he became surgeon for the Ashland County selective draft board and his strenuous services in that work are believed to have been responsible for the illness which eventually caused death. Besides his widow he is survived by two daughters.

*Earl Rodney Mellott, M. D.*, Toledo Medical College, Toledo, 1912; aged 34; member of the Ohio State Medical Association and Fellow of the American Medical Association; died at his home in Toledo, March 23, from acute indigestion. Dr. Mellott had been a practicing physician in Toledo for 10 years. He leaves a widow and two small sons.

*John Clinton Shuman, M. D.*, College of Physicians and Surgeons, Keokuk, Iowa, 1877; Jefferson Medical College of Philadelphia, 1890; aged 70; former member of the Ohio State Medical Association; died at his home in Akron, March 5, from apoplexy. Dr. Shuman was a native of Pennsylvania, but had practiced his profession in Akron for 32 years. Surviving are his widow and two daughters.

*Charles W. Tangeman, M. D.*, Medical College of Ohio, Cincinnati, 1879; aged 65; member of the Ohio State Medical Association, the American Academy of Ophthalmology and Oto-Laryngology, and Fellow of the American Medical Association; died at his home in Cincinnati, April 2. Dr. Tangeman was a lifelong resident of Cincinnati. Soon after his graduation from medical school he became associated with Dr. W. W. Seely in the eye and ear clinic of the hospital, and later became clinical professor of ophthalmology at the University of Cincinnati, which

URINE  
BLOOD  
SPUTUM  
EFFUSIONS  
STOMACH  
CONTENTS  
WASSERMANN &  
NOGUCHI  
REACTIONS  
GONORRHEAL  
COMPLEMENT  
FIXATION TEST  
BLOOD CHEMISTRY  
PROTEIN  
SENSITIZATION  
TESTS

BASAL METABOLISM  
AUTOGENOUS  
VACCINES  
FAECES  
GENITO-URINARY  
SURGICAL and  
GYNECOLOGICAL  
PATHOLOGY  
DARK FIELD  
ILLUMINATING  
FOR  
SPIROCHETA  
PALLIDA  
MEDICO-LEGAL  
POST MORTEM  
X-RAY

# LABORATORY

## Clinical and Pathological

COLUMBUS, OHIO 370 East Town Street

J. J. Coons, B. S., M. D., D. Sc.  
H. M. Brundage, M. D.  
Dorris Coss, B. S., M. S.  
Ruth Miller, B. S.

PROMPT SERVICE

Immediate Report on Frozen Sections of all Tumors.

# To Prevent Hydrophobia

Use

## Pasteur Treatment

With a

Potent Product and Prompt Service.

PRICE \$25.00

Order from

**James McIlvaine Phillips, M. D.**

2057 N. High St.

Columbus,

Ohio

# LOESER'S INTRAVENOUS SOLUTIONS



EVERY  
PHYSICIAN  
SHOULD  
READ

## THE JOURNAL OF INTRAVENOUS THERAPY

A sixty-four page Journal, containing original articles, reprints and abstracts relative to Intravenous Medication from foreign and domestic medical journals.

The most comprehensive compilation on the subject, including laboratory and clinical reports.

Copy mailed on request.

**New York Intravenous Laboratory**  
100 West 21st Street  
New York, N. Y.

*Producing Ethical Intravenous Solutions  
for the Medical Profession Exclusively.*



post he held until 1918, when he was appointed professor emeritus. For more than 20 years Dr. Tangeman was a member of the staffs of Christ and St. Mary's Hospitals. As oculist for the Big Four Railroad Dr. Tangeman initiated and standardized the visual tests and qualifications for railway employes, which are now in common practice on roads throughout the country. He is survived by his widow, one daughter and one son, Dr. H. F. Tangeman, Cincinnati. Dr. Otto P. Geier, Cincinnati, is a brother-in-law.

*Cyrus M. Thurston, M. D.*, University of Michigan Homeopathic Medical School, Ann Arbor, 1892; aged 56; died in Toledo, March 12. Dr. Thurston lived in Cleveland until a year ago when illness forced him to retire.

*Alexander W. Wheeler, M. D.*, Bellevue Hospital Medical College, New York City, 1863; aged 80; died, January 28. Dr. Wheeler's home was in Cleveland.

### Cincinnatian Heard on Public Health

"Place physicians in industry, in stores and banks to watch over the health of the employes, thus making health a part of the work-a-day life. While this will add to the cost of doing business it will put the highly important factor of health on a business basis."

This was the advice given by Dr. Otto P. Geier of Cincinnati in an address before the Conference on Public Health held in Washington recently at the call of Surgeon General Ireland of the United States Army, and attended by health authorities from Ohio and other parts of the country.

"Our purpose is to lengthen the span of life by assuring positive health and increased bodily and mental vigor so as to increase the pleasure in work," said Dr. Geier. "We must improve the environment of work and of living. To increase the comforts and conveniences of the average man we must increase production, for after all, society greatly depends on those who work with their hands. Instructions as to maintenance of health can best be given during working hours through a system of industrial medicine."

Dr. Geier pointed out how periodic health examinations had reduced by 67 per cent. the mortality among the policy holders of a certain large insurance company.

"Industrial medicine," said Dr. Geier, "is the one safe stop-gap between whatever is unsatisfactory in the present system of medicine and the much heralded state medicine. It supplies the economic advantages of the organized treatment of large groups, but preserves the real values of the individualistic competitive system of practice."

## SAVE MONEY ON YOUR X-RAY SUPPLIES

Get Our Price List and Discounts on  
Quantities Before You Purchase  
**HUNDREDS OF DOCTORS FIND WE SAVE  
THEM FROM 10% TO 25% ON X-RAY  
LABORATORY COSTS**

### Among the Many Articles Sold Are

- X-RAY PLATES.** These brands in stock for quick shipment, PARAGON Brand, for finest work; UNIVERSAL Brand, where price is important.
- X-RAY FILMS.** Duplitized or Dental—all standard sizes. Eastman, Ilford or X-ograph metal backed. Fast or slow emulsion.
- BARIUM SULPHATE.** For stomach work. Finest grade. Low price.
- COOLIDGE X-RAY TUBES.** 5 Styles. 10 or 30 millamp.—Radiator (small bulb), or broad, medium or fine focus, large bulb. Lead Glass Shields for Radiator type.
- DEVELOPING TANKS.** 4 or 6 compartment stone, will end your dark room troubles. 5 sizes of Enameled Steel Tanks.
- DENTAL FILM MOUNTS.** Black or gray cardboard with celluloid window or all celluloid type, one to eleven film openings. Special list and samples on request. Price includes your name and address.
- DEVELOPER CHEMICALS.** Metol, Hydroquinone, Hypt, etc.
- INTENSIFYING SCREENS.** Patterson TE, or celloloid-backed screens. Reduce exposure to one-fourth or less. Double screens for film. All-metal Cassettes.
- LEADED GLOVES AND APRONS.** (New type glove, lower priced).
- FILING ENVELOPES** with printed X-Ray form. (For used plates). Order direct or through your dealer.

If You Have a Machine Get Your Name on Our Mailing List



**GEO. W. BRADY & CO**

771 So. Western Ave.,  
Chicago

## Dares Haemoglobinometer

Candle lighted, or Electric lighted.  
We are accepting orders for prompt delivery.  
Write for booklet and prices.

## Tycos Office Sphygmomanometer

With 6 inch silvered dial.  
A distinct advance over the pocket type.  
Immediate delivery. Price \$37.50.

Surgical Instruments—Dressings,  
Pharmaceuticals, Biologicals

Your orders will receive prompt attention—  
"You will do better in Toledo."

**The Rupp and Bowman Co.**

319 Superior St.

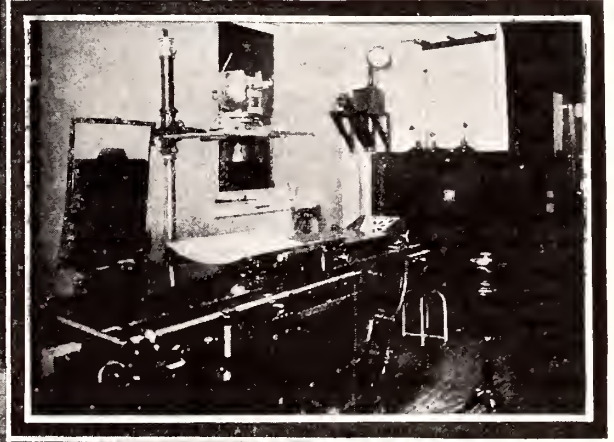
TOLEDO.

OHIO





Reconstruction Hospital  
for the Treatment of  
Industrial Accidents  
and Diseases  
New York City  
—  
Insert shows X-Ray  
Laboratory, Victor  
Equipped



## WHAT X-RAY OUTFIT SHALL BE INSTALLED?

IN THE last twenty years X-Rays have found an ever-widening application in the practice of medicine. X-Rays are now applied in ways undreamed of ten years ago. The result has been that machines of different types have been developed for different diagnostic and therapeutic purposes.

The most important developments in recent years have been the result of the work done in the Research Laboratories at Schenectady, N. Y., which stand behind the Victor X-Ray Corporation and which conduct never-ending investigations to the end that Victor apparatus will always evolve from something that is the best of its time to something still better.

The ranges of service of X-Ray machines that have been developed to meet the needs of

physicians and surgeons are so varied that the practitioner is often at a loss to know what particular machine it would be advisable to install. To assist him, the Victor X-Ray Corporation maintains Branch Sales and Service Stations in the principal cities. Any physician or surgeon may call upon these Stations for advice and guidance. A technically informed representative will be sent on request—a representative who studies the practitioner's needs and then recommends the type of machine that will meet them best.

It is the duty of Victor Service Stations, when called upon, to give technical advice to users of Victor machines, so that the desired results are obtained. They also keep the apparatus in good order.

**VICTOR X-RAY CORPORATION, Jackson Blvd. at Robey St., Chicago**  
Territorial Sales and Service Stations:  
Columbus: 145 E. State St.



## EXTENSION PROGRAM FOR STATE HOSPITALS MAPPED OUT BY WELFARE DEPARTMENT

An extensive program contemplating enlargement of facilities and increased service is taking definite shape in the headquarters of the State Department of Welfare which will go a long way toward relieving the present congested condition of state institutions and permit the care of many others who should be wards of the state.

Expenditure of \$500,000 in the erection of new buildings will be started at the Orient branch of the Columbus State Hospital for Feeble Minded soon, and when proposed additions are completed the institution will be the largest of its kind in the world.

The Orient farm contains 1800 acres, and at the present time has a capacity of 600 patients. Every building is filled to its capacity, while the same condition prevails at the main institution in Columbus. When the enlargement is complete at Orient the institution will have a capacity between 2000 and 2500.

Five cottages with a capacity of 50 children each are now being completed at the farm. Others will be ready by fall. Plans call for the erection of 18 additional cottages to the five now under construction so that in all 23 new cottages will be started or completed during the coming year.

Establishment of two state institutions near Cleveland is also under consideration by the Department of Welfare. One of these will be a branch of the present Cleveland State Hospital at Newburg, and the other will be a new institution for the feeble-minded. According to Welfare Director MacAyeal, a surprisingly large percentage of the feeble-minded are being sent in from Cuyahoga, Mahoning, Summit and Stark Counties, making the establishment of another institution in northeastern Ohio absolutely necessary.

The Newburg hospital, at Cleveland, has for years been considered inadequate. A farm of at least 500 acres will be purchased and a colony from the main hospital established. The site under consideration is in Lorain County, near the Cuyahoga line.

For the new institution for feeble-minded, sites in Geauga, Trumbull, Portage and Medina counties are being considered. It is planned to make this a \$2,000,000 institution with accommodations for 2,000 wards when completed.

Dr. A. G. Hyde, superintendent of the Massillon State Hospital, recently announced that one entire cottage at that institution had been turned over to the forty-nine ex-service men quartered there. Dr. Hyde has petitioned the

### Our Business

is confined exclusively to the manufacture of Strictly High Grade Medicines and Pharmaceuticals for Physicians, Dispensing and Prescribing.



Our Offices and Laboratories are now located in our New Building, 330-336 Oak Street, one square north of Grant Hospital.

NO GOODS SOLD AT RETAIL

**The COLUMBUS PHARMACAL Co.**  
COLUMBUS, OHIO

### Every Physician

Is Interested In

### Physician's Supplies

In dispensing, he requires a great variety in his office—in prescribing he uses the **PRESCRIPTION DEPARTMENT** that is **UP-TO-DATE**.

If you are unacquainted with our plan of handling the physician's requirements, you may profit by giving us an opportunity to show you what we can do.

**The Wendt Bristol Co.**

47 South High St., Columbus, Ohio

**FINE PHARMACEUTICAL SPECIALTIES**



# Hay Fever

## Mulford Pollen Extracts

mean more to the medical profession than a mere seasonal remedy for Hay Fever, to be obtained at a certain price.

They are the only pollen extracts, or so-called antigens, which are standardized according to protein nitrogen content.

They include only the acetone-insoluble portion of the pollen protein—the specific protein in refined form

The salts, resins, gums, carbohydrates and other extractives are eliminated, and the resultant product is more stable, and less subject to chemical changes.

It requires Mulford resources and standards to prepare products of the specificity, purity and desensitizing value of Mulford Pollen Extracts.

### *For Diagnosis*

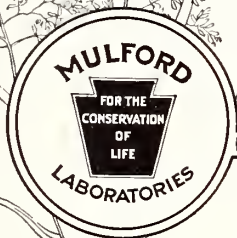
Pollen Extracts in Intra-dermic Syringes and Cutaneous Outfits.

### *For Treatment*

Pollen Extracts in Hypo-dermic Syringes, Vials and Mulford Hypo-Units.

SEND FOR NEW LITERATURE

495450



# H. K. Mulford Company

## Philadelphia

government to send a vocational instructor to Massillon to teach the veterans who are able to work, useful vocations.

The federal government has investigated facilities at the State Hospital for Epileptics, Gallipolis, and conferred with the State Department of Welfare to determine the practicability and possibility of placing 300 epileptic ex-service men there for treatment. Of the 300 epileptics which the government is attempting to place, 108 are said to be from Ohio, while the others are natives of Kentucky or Indiana, neither of which have facilities for their care. The Gallia County institution is now filled to capacity and the housing of the ex-service men would require the erection of special cottages.

#### What is "Skin"?

A request by the State Industrial Commission directed to the Attorney General for a legal construction of Section 1465-68 of the General Code, (part of schedule of diseases compensable under occupational diseases amendments to the Workmen's Compensation law) was the result of two cases filed as application for award from the state fund.

The syllabus of the Attorney General's opinion, rendered in March, reads:

"The term 'skin' as used in Section 1465-68a G. C., in item 11 of the schedule thereof, is used in its common, ordinary and general sense to mean the outer covering of the body, as distinguished from the mucous membrane lining the passages connected with the alimentary tract and respiratory organs."

The section of law under consideration, as a part of the schedule of diseases reads: "11. Infection or inflammation of the skin on contact surfaces due to oils, cutting compounds or lubricants, dust, liquids, fumes, gases or vapors."

The proof in both of the claims shows that the claimants were suffering from inflammation of the mucous lining of the throat and bronchial tubes which undoubtedly was caused from inhaling fumes by them while in the course of employment.

The legal opinion on the wording of the law, however, states that "It is unescapable from the above facts and reasons that 'skin,' as used in the statute, means the outer covering of the body in its common, ordinary or venacular sense, in contradistinction to the mucous membrane or lining of the alimentary or respiratory openings of the body, such as the nasal passages, throat, trachea, and bronchial tubes.

"It is therefore the opinion of this department that 'skin' as employed in the law intends to refer to the outer covering of the body only and is used in its ordinary or common meaning, not referring to the mucous membrane lining the passages of the nose, throat or bronchial tubes."

Bacteriological Laboratories of

**G. H. SHERMAN, M. D.**

DETROIT, U. S. A.



**D**o you believe that the fitting of trusses is a part of the Practice of Medicine? If so, send your patients needing trusses to

**The Columbus Truss & Optical Co.**

PARKER W. PHENEGER, M. D., Mgr.

We Specialize in  
Elastic Stockings Made to Measure

Office and Fitting Rooms  
Suite 303-309 Rowlands Bldg., Broad and Third Sts.  
COLUMBUS, OHIO



Fig. 1058

**SUPREMACY**  
in Galvanism and Sinusoidalization attained by the

**NEW MODEL 1058  
POLYSINE GENERATOR**  
Generates Galvanic, Sinusoidal, and all the Practical Wave Currents.

It will enable you to increase the scope of your service.

**McIntosh  
Electrical  
Corporation**  
223-233 N.  
California  
Avenue  
Successors to  
McIntosh  
Battery &  
Optical Co.,  
Est. 1879  
CHICAGO



# S. M. A. in a new form

S.M.A.\* has been used in the Babies' Dispensary and Hospital of Cleveland for seven years, and by Cleveland physicians in general practice for over two years. This "Food to Keep Babies Well" has been available in powder form to the entire medical profession since November, 1921. It can be obtained and used with the same good results in the new concentrated sterilized liquid form.

## Concentrated Sterilized Liquid S.M.A.

Either powder S.M.A. or concentrated liquid S.M.A. may be used under any circumstances. But the concentrated sterilized liquid form is much the simpler, inasmuch as it requires only the addition of a definite amount of cold, boiled water. It should be used:

- (a) When the family has an ice box.
- (b) When the infant is taking in 24 hours an amount of S.M.A. which practically equals the quantity that can be made up from the different packages—a quart or 12 oz.

## Powder S. M. A.

S. M. A. in powder form is preferable:

- (a) When the family has no ice box.
- (b) When each feeding should be made up fresh, as in traveling.
- (c) When economic use cannot be made of the concentrated sterilized liquid form.

Write for the new bulletin for physicians which gives the complete history of S. M. A., together with directions for using both the powder and the concentrated sterilized liquid form.

\*H. J. Gerstenberger et al. I. Studies in the Adaptation of an Artificial Food to Human Milk. Am. J. Dis. Child. Vol. X, Pg. 249-265.

H. J. Gerstenberger et al. II. Studies in the Adaptation of an Artificial Food to Human Milk. (A Report of Three Years' Clinical Experience with the Feeding of S. M. A.) Am. J. Dis. Child. Vol. XVII, Pg. 1.

## THE LABORATORY PRODUCTS COMPANY

3829 CEDAR AVENUE

CLEVELAND, OHIO

### Distributing Agents

**CLEVELAND**  
The Telling-Belle Vernon Co.

**AKRON**  
The Akron Pure Milk Co.

**PHILADELPHIA**  
Abbott's Alderney Dairies Inc.  
Supplee-Wills-Jones Co.

**DENVER**  
Windsor Farm Dairy Company

**GREATER NEW YORK**  
Sheffield Farms Co., Inc.

**DETROIT**  
Detroit Creamery Co.

**INDIANAPOLIS**  
The Polk Sanitary Milk Co.

**GREATER BOSTON**  
H. P. Hood's Sons Co.

**PITTSBURGH**  
Rieck-McJunkin Dairy Co.

**LOUISVILLE**  
D. H. Ewing's Sons

**MILWAUKEE**  
Gridley Dairy Co.

**MONTREAL**  
The Guaranteed Pure Milk Co., Limited

**WINNIPEG**  
Crescent Creamery Co.

## CORRECTED ROLL OF DISTRICT AND COUNTY SOCIETIES

Societies	President	Secretary	
<b>First District.</b>	G. D. Lummis, Middletown.....	Eric Twachtman, Cincinnati....	
Adams.....	G. E. Neal, Manchester.....	O. T. Sproull, West Union.....	3d Wednesday in April, June, Aug., Oct.
Brown.....	R. B. Hannah, Georgetown.....	Geo. P. Tyler, Jr., Ripley.....	4th Wednesday in Feb., May, and Nov.
Butler.....	James G. Grafft, Trenton.....	F. M. Flitton, Hamilton.....	2d Wednesday, monthly
Clermont.....	T. A. Mitchell, Owensville.....	O. C. Davison, Bethel.....	3d Wednesday, monthly
Clinton.....	F. A. Peele, Wilmington.....	Elizabeth Shrieves, Wilmington.....	2d Tuesday, monthly
Fayette.....	E. F. Todhunter.....	Lucy Pine, Washington, C. H.....	1st Thurs., March, June, Sept. Dec.
Hamilton.....	Gordon McKim, Cincinnati.....	Ralph Carothers, Cincinnati.....	Monday evening of each week
Highland.....	J. C. Bohl, Hillsboro.....	H. H. Lowe, Leesburg.....	1st Wednesday in Jan., April, July, and Oct.
Warren.....	T. E. Keelor, Lebanon.....	Herschel Fisher, Lebanon.....	1st Tuesday in May, June, July, Sept., Oct. and Nov.
<b>Second District</b>	C. I. Stephen, Ansonia.....	D. B. Conklin, Dayton.....	Dayton
Champaign.....	David H. Moore, Urbana.....	J. F. Stultz, Urbana.....	2d Thursday, monthly
Clark.....	A. R. Kent, Springfield.....	C. E. M. Finney, Springfield.....	2d and 4th Monday each month
Darke.....	G. W. Burnett, Greenville.....	A. F. Sarver, Greenville.....	2d Tuesday each month
Greene.....	W. A. Galloway, Xenia.....	H. C. Messenger, Xenia.....	1st Thursday each month except July and August
Miami.....	H. E. Shilling, Troy.....	G. J. Hance, Troy.....	1st Thursday each month
Montgomery.....	C. N. Chrisman, Dayton.....	A. W. Carley, Dayton.....	1st and 3d Friday each month
Preble.....	S. P. Carter, W. Manchester.....	H. Z. Silver, Eaton.....	3d Thursday, monthly
Shelby.....	V. W. LeMaster, Sidney.....	C. C. Hussey, Sidney.....	1st Thursday, monthly
<b>Third District.</b>	C. H. Clark, Lima.....	Norris Gillette, Toledo.....	Lima
Allen.....	A. F. Basinger, Lima.....	A. N. Wiseley, Lima.....	1st and 3d Tuesdays
Auglaize.....	W. S. Stuckey, Wapakoneta.....	C. L. Mueller, Wapakoneta.....	3d Thursday, monthly
Hancock.....	W. J. Zopfi, Findlay.....	Nelia B. Kennedy, Findlay.....	1st Wednesday, monthly
Hardin.....	LeRoy L. Belt, Kenton.....	W. A. Belt, Kenton.....	1st Thursday, monthly
Logan.....	C. K. Startzman, Bellefontaine.....	M. L. Pratt, Bellefontaine.....	1st Friday, monthly
Marion.....	R. C. M. Lewis, Marion.....	D. O. Weeks, Marion.....	1st Tuesday, monthly
Mercer.....	J. E. Hattery, Celina.....	D. H. Richardson, Celina.....	2d Tuesday, monthly
Seneca.....	V. L. Magers, Tiffin.....	E. H. Porter, Tiffin.....	3d Thursday, monthly
Van Wert.....	L. A. Ellis, Van Wert.....	C. R. Keyser, Van Wert.....	2d and 4th Monday, monthly
Wyandot.....	Frederick Kenan, U. Sandusky.....	B. A. Moloney, U. Sandusky.....	1st Thursday, monthly
<b>Fourth District. (With Third District in Northwestern Ohio District)</b>			
Defiance.....	W. S. Powell, Defiance.....	F. W. Watkins, Defiance.....	2d Tuesday, Feb., April, June, Aug., Oct., Dec.
Fulton.....	C. F. Murbach, Archbold.....	Geo. McGuffin, Pettisville.....	Semi-monthly
Henry.....	I. H. Boesel, McClure.....	C. H. Skeen, Napoleon.....	3d Wednesday, monthly
Lucas.....	J. F. Wright, Toledo.....	E. J. McCormick, Toledo.....	Friday, each week
Ottawa.....	A. A. Brindley, Pt. Clinton.....	S. T. Dromgold, Elmore.....	2d Thursday, monthly
Paulding.....	F. F. DeMuth, Cecil.....	R. J. Dillery, Paulding.....	3d Wednesday, monthly
Putnam.....	Frank Light, Ottawa.....	J. A. Harold, Ottawa.....	1st Thursday, monthly
Sandusky.....	M. O. Phillips, Fremont.....	C. I. Kuntz, Fremont.....	last Thursday, monthly
Williams.....	D. S. Burns, Bryan.....	F. E. Solier, Bryan.....	2d Thursday, each month
Wood.....	J. W. Rae, Bowling Green.....	F. V. Boyle, Bowling Green.....	2d Thursday, monthly
<b>Fifth District....(No District Society)</b>			
Ashtabula.....	R. B. Wynkoop, Ashtabula.....	J. J. Hogan, Ashtabula.....	2nd Tuesday, monthly
Cuyahoga.....	John Phillips, Cleveland.....	Lester Taylor, Cleveland.....	Every Friday evening
Erie.....	F. F. Lehman, Sandusky.....	H. N. Sarchet, Sandusky.....	Last Thursday, monthly
Geauga.....	F. T. Myler, Burton.....	Isa Teed-Cramton, Burton.....	2d Thursday, Jan., March, July and Sept.
Huron.....	R. L. Morse, Norwalk.....	J. D. Coupland, Norwalk.....	2d Thursday, monthly
Lake.....	V. H. Tuttle, Madison.....	West Montgomery, Mentor.....	1st Monday, monthly

Societies	President	Secretary	
Lorain.....	R. D. A. Gunn, Oberlin.....	W. E. Hart, Elyria.....	2d Tuesday, monthly
Medina.....	M. F. Miller, Wadsworth.....	H. P. H. Robinson, Medina.....	3d Wednesday
Trumbull.....	J. J. Tyler, Warren.....	John D. Knox, Warren.....	3d Thursday monthly except June, July and August

**Sixth District..**

Ashland.....	G. B. Fuller, Loudonville.....	L. G. Sheets, Ashland.....	1st Tuesday, Jan., March, May, July, Sept., Nov.
Holmes.....	M. B. Pomerene, Millersburg.....	A. T. Cole, Millersburg.....	1st Tuesday, monthly
Mahoning.....	J. L. Washburn, Youngstown.....	A. W. Thomas, Youngstown.....	3d Tuesday, monthly
Portage.....	G. J. Waggoner, Ravenna.....	E. J. Wldecombe, Kent.....	1st Wednesday, monthly
Richland.....	Chas. R. Keller, Mansfield.....	J. S. Hattery, Mansfield.....	3d Thursday, monthly
Stark.....	D. F. Banker, Canton.....	George S. Hackett, Canton.....	3rd Tuesday, Jan., March, May, July, Sept., Nov.
Summit.....	R. H. McKay, Akron.....	A. S. McCormick, Akron.....	1st Tuesday, monthly
Wayne.....	O. P. Ulrich, Orrville.....	O. G. Grady, Orrville.....	2d Tuesday, Jan., April, July, Oct.

**Seventh District**

Belmont.....	F. S. Wright, Bellaire.....	J. S. McClellan, Bellaire.....	2d Wednesday, monthly, at 1:45 p. m.
Carroll.....			
Columbiana.....	J. M. King, Sr., Wellsville.....	C. R. Larkin, East Liverpool.....	2d Tuesday, monthly, alter- nately, in Lisbon, Salem and E. Liverpool
Coshocton.....	D. Edmund Cone, Coshocton.....	J. D. Lower, Coshocton.....	4th Thursday, April, June, Sept., Dec.
Harrison.....	H. I. Heavilin, Cadiz.....	R. P. Rusk, Cadiz.....	1st Wednesday, monthly
Jefferson.....	B. F. Collins, Steubenville.....	G. F. Gourley, Steubenville.....	2d Tuesday, monthly
Monroe.....	G. W. Steward, Woodsfield.....	J. H. Pugh, Woodsfield.....	2d Wednesday, monthly
Tuscarawas.....	E. C. Davis, Dover.....	P. J. Alspaugh, N. Philadelphia.....	2nd Thursday, monthly

**Eighth District** D. J. Matthews, Zanesville..... E. M. Brown, Zanesville.....

Athens.....	J. F. Weber, Amesville.....	T. A. Copeland, Athens.....	1st Tuesday, monthly
Fairfield.....	C. H. Hamilton, Lancaster.....	J. M. Lantz, Lancaster.....	2d and 4th Tuesday, monthly
Guernsey.....	C. A. Moore, Cambridge.....	G. F. Swan, Cambridge.....	1st and 3d Tuesday each month
Licking.....	T. L. Baxter, Newark.....	W. E. Shrontz, Newark.....	Last Thursday, monthly
Morgan.....	C. V. Davis, Pennsville.....	D. G. Ralston, McConnelsville.....	1st Wednesday, monthly
Muskingum.....	C. P. Sellers, Zanesville.....	Beatrice Hagen, Zanesville.....	1st Wednesday, monthly
Noble.....	G. H. Zimmerman, Belle Valley.....	J. L. Gray, Caldwell.....	1st Thursday, monthly
Perry.....	H. W. Shaw, Junction City.....	C. B. McDougal, N. Lexington.....	3d Thursday, monthly
Washington.....	J. W. Donaldson, Marietta.....	A. G. Sturgiss, Marietta.....	2d Wednesday, monthly

**Ninth District** S. B. McKerrihan, Portsmouth..... J. G. Murfin, Portsmouth..... Portsmouth

Gallia.....	C. G. Parker, Gallipolis.....	Milo Wilson, Gallipolis.....	1st Wednesday, monthly
Hocking.....	O. V. Donaldson, Gore.....	M. H. Cherrington, Logan.....	
Jackson.....	A. G. Ray, Jackson.....	R. W. Caldwell, Jackson.....	1st Tuesday, monthly
Lawrence.....	O. H. Henninger, Ironton.....	E. E. Ellsworth, Ironton.....	1st Thursday, monthly
Meigs.....	P. A. Jividen, Rutland.....	L. A. Thomas, Middleport.....	1st Wednesday, April, July and Oct.
Pike.....	R. M. Andre, Waverly.....	I. P. Seiler, Piketon.....	1st Monday, monthly
Scioto.....	Ira Martin, Portsmouth.....	W. A. Quinn, Portsmouth.....	2d Monday, monthly
Vinton.....	O. S. Cox, McArthur.....	H. S. James, McArthur.....	4th Wednesday, monthly

**Tenth District** J. T. McCarty, Delaware..... Rees Philpott, Delaware..... Delaware

Crawford.....	C. E. Kimerline, New Wash.....	K. H. Barth, New Wash'g'n.....	2d Thursday, monthly
Delaware.....	I. T. McCarty, Delaware.....	Rees Philpott, Delaware.....	1st Friday, each month
Franklin.....	E. A. Hamilton, Columbus.....	James A. Beer, Columbus.....	1st four Mondays
Knox.....	C. K. Conard, Mt. Vernon.....	I. S. Workman, Mt. Vernon.....	2d and 4th Wednesday, from March to middle of Dec.
Madison.....	R. H. Trimble, Mt. Sterling.....	F. D. Postle, London.....	4th Thursday
Morrow.....	W. L. Case, Mt. Gilead.....	Todd Caris, Mt. Gilead.....	1st Wednesday, monthly
Pickaway.....	A. F. Kaler, New Holland.....	D. V. Courtright, Circleville.....	1st Friday, monthly
Ross.....	L. E. Hoyt, Chillicothe.....	G. S. Mytinger, Chillicothe.....	1st Tuesday, monthly
Union.....	H. C. Duke, Richwood.....	C. W. Hoopes, Marysville.....	2d Tuesday



## NEWS NOTES of OHIO

*Columbus*—In recognition of his service with the American ambulance service in Italy, Lieutenant Colonel Elbert E. Persons of the Army Medical Corps, was recently decorated with the medal of the order of Saints Maurice and Lazarus, awarded by the Italian government.

*Leetonia*—Dr. Jennings King of this city was reported seriously ill with pneumonia at the home of his father, Dr. J. M. King, Wellsville, in late March.

*St. Mary's*—Dr. James E. Heap has tendered his resignation as head of the local Medical Detachment because of interference of the work with his private practice.

*Columbus*—Radium needles valued at \$10,000, the property of Dr. Edward Reinert, were lost in March but quickly recovered by means of an electroscope.

*Cincinnati*—Funeral services for Dr. V. E. Max Koehler, 69, who died in New York City, were held here March 18. Dr. Koehler was for many years an instructor in the polyclinic of Ohio Medical College but had resided in New York for the past two years.

*Van Wert*—Dr. A. C. Bartholomew has moved from this city to Fort Wayne, where he is associated in practice with Dr. K. K. Wheelock. Dr. Bartholomew temporarily maintains his office here also.

*Hamilton*—Dr. Henry Krone, Jr., has assumed his duties as police surgeon, a position to which he was recently appointed, succeeding Dr. F. P. Zerfass, resigned.

*Columbus*—Dr. S. J. Goodman has been appointed consulting gynecologist at the State Institution for Feeble Minded.

### State Medical Board Notes

Dates for the June examination to be conducted by the State Medical Board have been fixed for June 6, 7, 8 and 9.

Dr. James G. Blower, Akron, has been appointed by Governor Davis to membership on the Board, succeeding Dr. Ben R. McClellan of Xenia, whose term expired recently.

At the April 4th meeting of the Board, the certificates of Drs. W. H. Black, J. G. Clyne, Moritz Lowenthal, Cleveland, and Dr. Samuel E. Zeigler, Akron, to practice medicine and surgery in Ohio, were revoked. The certificate of Katherine Kolling, Cleveland, to practice midwifery in Ohio was also revoked.

The six months' suspension of the certificate of Dr. W. E. Wright was modified to three months and permission given Dr. Wright to practice subsequent to April 4.

## THE JOHN BLOOD SUGAR TUBE

Devised for the quick and aseptic collection and transportation of blood samples for blood sugar determination.—See article by Dr. Henry J. John, Cleveland, in "The Journal" A.M.A., Jan. 14, 1922.

*Descriptive Literature on Request*

### HARTMAN

## Blood Transfusion Apparatus

Devised by Dr. Frank W. Hartman and described by him in "The Journal" A. M. A., January 7th, 1922. Ready for delivery as described.


## Hynson, Westcott & Dunning

*Pharmaceutical Chemists*

BALTIMORE—MARYLAND

## Luer Hypodermic Syringes

Equipped with metal finger rests

2cc <hr/> 45c		20cc <hr/> 1.25
5cc <hr/> 60c		30cc <hr/> 1.50
10cc <hr/> 80c		50cc <hr/> 2.25

(All Glass)

—To pay more is a waste of money—Quality and workmanship guaranteed second to none or money promptly refunded.

## Charles E. Findlay Co.

Physicians' and Hospital Supplies  
677 N. High Street Columbus, Ohio  
Bell Phone, Main 6518



# MEDICAL ECONOMICS

PUBLIC HEALTH - SOCIAL WELFARE *and* ORGANIZATION PROBLEMS  
WITH EDITORIAL COMMENT *by* D. K. M.

## The Annual Meeting in Retrospect

Marking and illustrating still another period of advance in medical science and in progress in medical organization, the seventy-sixth annual meeting of the Ohio State Medical Association held in Cincinnati the past month, May 2, 3 and 4, was a memorable anniversary.

Characterized by unusual interest and scientific value the programs of the several sections were splendidly supplemented by the general sessions. Features of entertainment and diversion both for the members and their families as well as the opportunity to renew acquaintanceship with former associates contributed to the pleasure and success of the meeting.

The program was carried out in detail as previously announced and published in the April issue of *The Journal*. The numerous and excellent scientific papers and discussions which formed the substance of the general sessions and section meetings will be published in *The Journal* as time and editorial exigencies permit.

The official proceedings of the House of Delegates and the Council, including the annual election of officers, councilors and committeemen, action on resolutions and other Association business are published in full in this issue of *The Journal*.

The meeting was enlivened by spirited though harmonious discussions and by the universal realization that the future of scientific medicine and the proper relationship between the profession and the public depends primarily on the continuance and extension of medical organization.

Withal the success of the meeting was a tribute to the guidance and leadership of the retiring president, Dr. Wells Teachnor of Columbus, and the incoming president, Dr. Robert Carothers

of Cincinnati, whose farsighted and unselfish interest in affairs of the profession and in the purpose and necessity of organized medicine are well known and sincerely appreciated.

Confidence in the constructive ideals and policies of the State Association and in his personal qualifications for the high office is attested in the selection of Dr. Joseph S. Rardin of Portsmouth as president-elect, this honor having

been extended to him in his election by the House of Delegates in good-natured rivalry with two other splendid candidates, Dr. E. M. Huston of Dayton and Dr. H. T. Sutton of Zanesville.

The comprehensive reports of the standing and special committees as published in the May *Journal* were officially approved by the House of Delegates and commendation expressed for the consistent and constructive activities of the Association as exemplified by the committee and executive activities.

Illustrating its approval and appreciation of the committee reports the special committee of the House of Delegates in referring to the Committee on Public Policy and Legislation said: "This report is the most complete on this subject ever presented to the Association. We commend the principle laid down, not to destroy or interfere with the present and established relationship between the physician and his patient. We especially commend a conclusion of this committee

that excessive restriction, over-burdensome regulations, state practice of medicine, health insurance, paternalism in whatever guise, or for whatever ostensible purpose, are wrong and should be opposed and must ultimately fail."

The registration at the meeting was between 1,100 and 1,200, which, considering the com-



*Robert Carothers*

*Dr. Carothers, Cincinnati, assumed the office of President of The Ohio State Medical Association for the year 1922-23, at the close of the seventy-sixth annual session in Cincinnati*

parative isolation of Cincinnati from the center of state population and the conflicting dates with several large national societies of specialists held in Washington at the time, is considered remarkably good.

It is to be hoped that the message of service, the need and possibilities of medical organization, will be carried by those who were fortunate enough to be present to those who were unable to attend and that the inspiration of the meeting may extend to each member wherever located.

---

#### Genuine Keynote

With clear vision and keen judgment the retiring president of the Ohio State Medical Association, Dr. Wells Teachnor, in his annual address at the meeting in Cincinnati probed fearlessly and accurately into many of the problems which are pressing so hard for solution at the present time.

He discussed not only the scientific phases, including medical education as a function, but the social, economic and political angles to the practice of medicine, the factors which determine in large measure the relation of the profession and the public.

In conclusion he emphasized the fact that solution must be found and progress must be made through group thought and concerted effort—through medical organization, strengthened and extended.

"We need organization not to complain, object and resist, but to explain, to direct and to construct. We need it for mutual help and protection of the profession. We need it for the protection and welfare of the people", declared Dr. Teachnor in setting forth a creed on organization.

In recommending official indorsement of Dr. Teachnor's pronouncements, the special committee on the president's address reported to the House of Delegates that the address "as a whole is to be commended". The committee stated that "His ideas concerning organization are sound. His plea for better and more comprehensive organization in which a greater percentage of the members are active, is well taken and should appeal to every member of this Association."

"The president's condemnation of self-instituted committees and his counter recommendation that activities to be effective must be through recognized agencies is also worthy of our approval", said the committee, which added that "The recommendation that a bureau of the A. M. A. be established at Washington to keep in touch with federal bureaus and other agencies whose activities effect the medical profession is in keeping with sound progress and should have the support of this Association."

The declarations and recommendations of the

retiring president were adopted as the official expression of the Association by the vote of the House of Delegates on recommendation of the special committee. The address is reproduced in full in this issue of *The Journal*, starting on page 429.

That the splendid achievements of the past year will be further extended during the regime of Dr. Robert Carothers who was installed as president at the concluding session of the House of Delegates on May 3, is fully assured. Dr. Carothers, who properly may be considered the Nestor of medical organization in Ohio because of his many years of official connection with the State Association as councilor of the First District, paid a tribute to Dr. Teachnor on the latter's retirement from the presidency. He expressed appreciation for the honor which is accorded him and pledged his sincere thought, unlimited time and consistent effort on behalf of the profession and the Association.

With gratitude and commendation for the outgoing administration the profession has full assurance of able leadership under the new president and his regime.

---

#### Socialized Health Activities

So numerous have become the activities of various civic welfare organizations in the field of public health, that very definite and serious problems are being developed.

Repeatedly has *The Journal* called attention to the efforts in "conservation", "prevention", "promotion", "preservation", "protection", and even "treatment", by groups and agencies which through zeal for "correction" take a flier in the realm of health and human ailments.

Too frequently these movements though unselfishly conceived and carried forward with unquestionable motives lead to all sorts of abuses and even failures. Too frequently is medical service exploited in return for self-gratification. Although medical service is being commandeered the public gains the impression that through failure on the part of the profession these spasmodic, periodic efforts in public education and treatment are necessary. Whereas in many instances they are only satisfying the whims of chronic reformers and uplifters.

Physicians and surgeons should be praised rather than censured for giving freely of their time and service in worthy, practical causes but special public movements, campaigns and clinics may sometimes serve as subtle propaganda for individuals and "feeders" for individual practice.

If only the vast funds and unlimited energy along these lines were used in purely educational efforts, if the public could be taught that regular, frequent and thorough medical examinations are necessary and that even apparently trivial ailments should be promptly and properly treated, thus preventing later suffering, malignancy

and premature death; if the public could be educated to avoid the quack, the pretender, the incompetent; to fear and avoid self-diagnosis and self-treatment; if the inefficiency and danger of cure-alls and single-method therapy for all ailments, could become common knowledge there would be little if any excuse for the multitudinous socialized schemes for the cure of human ills.

These statements are made with the assumption that the individual physician will recognize his obligations to his patient and to the public. As one eminent public health official recently said to the writer:

"The medical profession is not only responsive to the value of public health work as a vital and necessary effort in education and prevention but it has long advocated such principle as a duty to the public. However, we have a right to expect that if we can educate the public to frequent physical examinations and to expect and demand competent service for medical and surgical ills rather than to rely on blatant claims of quacks and cultists; that genuine and conscientious service will be rendered. If each physician and surgeon would do his very best in each case, if he will be consistently thorough with each patient, there would be fewer followers of senseless frauds and fads."

#### Narcotic Registration and Restriction

Attention of those who hold narcotic licenses, and of those who wish to secure such permit to compound, dispense, administer or prescribe, is called to the fact that the annual registration is due.

The Department of Internal Revenue had expected to mail out several forms to present "permit holders" by June 1. The present federal narcotic licenses all expire on June 30 and the tax for the ensuing year must be paid before July 1. The federal department has made a complete check on all delinquents and expects to assess a specific penalty in addition to the 25 per cent. for delinquency if the licensee has been posted on the delinquent assessment list for the second time.

The classification for special tax includes: Class 1. (\$24.00 per annum) importers, manufacturers, producers and compounders; Class 2. (\$12.00 per annum) wholesale dealers; Class 3. (\$6.00 per annum) retail dealers, persons who sell or dispense narcotic drugs from original packages; Class 4. \$3.00 per annum) physicians entitled to distribute, dispense, or administer taxable drugs to patients upon whom they in the course of their professional practice, are in attendance; and Class 5. (\$1.00 per annum) manufacturers of or dealers in untaxed narcotic preparations.

Physicians who compound drugs including exempt narcotics are required to register in Class 5 as well as in Class 4 if they also administer

non-exempt narcotics. While registration is then required in both classes the one tax for Class 4 includes also tax for Class 5.

Those who have not held federal permits during the past year but who desire to secure such registration should write to the Collector of Internal Revenue of the district in which they reside (See directory of federal departments, inside front cover of this *Journal*) and ask for revised Form 678; and also a reprint of Pro-Mimeograph Letter No. 217 issued by the Bureau of Internal Revenue and containing citations for the regulations of that department.

Never before in the history of federal regulation has there been so much discussion and such wide difference of opinion on the subject of drug addiction and regulation of narcotics. In referring to the present chaotic situation, Dr. Lester D. Volk, member of Congress from the tenth New York district, says:

"So long as the issues are kept within the medical profession, they can be fought out along proper lines. But the danger now is the attempt to transfer the issues outside the medical profession in the handling of narcotic addiction is putting the doctors on the defensive against the public and their pseudo-medical, sociologic uplift, reform and lay exploiters."

\* \* \* \* \*

"\* \* \* Attempted control of the medical profession in the handling of narcotic addiction is but one phase; we need but mention in passing that the prohibition question, the use of alcohol, light wines and beer, was handled in exactly the same way; group practice and State control of medicine are but different phases of the same plan."

\* \* \*

"This is an economic problem of tremendous importance which becomes more important as the medical profession loses its grip upon its control.

"I have introduced a resolution in Congress asking for a full and free investigation on the subject of narcotic addiction, the method of handling and treatment by physicians, institutions and sanitariums, the effectiveness of the present laws, rules and regulations to control smuggling, trafficking and abuse of narcotic drugs, and for the purpose of drafting legislation for the control of this evil.

"Because of the facts which I have mentioned about the condition of affairs within the profession, the great need for knowledge upon all phases of this complex subject, every doctor, every medical society and every unbiased agency and organization, looking towards a solution of this great problem should endorse this resolution."

The Miller-Jones narcotic bill has just been passed by Congress (House of Representatives, May 4; Senate, May 12). By this bill all products of coca leaves and opium, as well as of smoking opium are prohibited importation, both crude opium and coca leaves are admitted in such amounts as are determined necessary for legitimate medical use.

By this act a federal narcotic board is created, composed of the heads of the state, treasury and commerce departments who are authorized to determine the amounts of drugs necessary for

legitimate purposes and control the granting of permits for exports, imports and in-transit shipments. It is said that smuggled goods that have once been exported from or through the United States constitutes the chief or only source of vast supply of the illicit traffickers, and this the law which has just been passed seeks to destroy.

### Organization Possibilities

The "farewell report" of Dr. Olin West on his retirement as secretary-editor of the Tennessee State Medical Association is of special interest in view of the fact that Dr. West, because of his proved leadership in medical organization, has been chosen for the newly created post of Field Secretary for the A. M. A.

In one brief paragraph Dr. West clearly states how medical organization can accomplish any worthy undertaking. He says:

"Membership in this society should be looked upon as a privilege and as carrying with it very definite obligations and responsibilities, when it comes to be so considered by every man of us, its influence will be great enough to secure the full accomplishment of any worthy undertaking in which the society may engage."

"There needs to be awakened a new spirit of 'community interest' in our county societies and in our profession as a whole. There is too much individualism and too much thought of self where the interests of the whole should be paramount," he says.

In his conclusion he points out that "Spasmodic effort will not avail, temporary rebuff should not discourage. The assumption of the leadership that naturally is ours and a persistent fight to maintain it, through a service that will justly entitle our profession to reassume and maintain leadership, will unfailingly result in good for all mankind. A failure to assert and to exercise the privileges which rightfully belong to definitely and actively to assume the responsibilities which naturally devolve upon us will unfailingly result in injury to our profession and to the general welfare. The ideals of medicine are the highest human ideals and the highest of them all is that which calls for service without selfishness. However well we may have measured up to the traditions, it can but be beneficial for us to dedicate ourselves anew to the cause of scientific medicine, personally and individually as well as collectively in our society, with a determination to hold high the torch which has been thrown to us to hold by those who have lived and served and died in making the splendid history of medicine as it has been made splendid in this state and in this nation."

### Flowers for the Living

It is always interesting to note what the press has to say about one, and fully as much so about one's profession. The newspaper is truly the

great forum of public opinion and reflects not only the sentiments of the editor but to a large extent of the readers as well. This comment from *The Marion Tribune* is gratifying to a profession whose members, like those of other altruistic callings, are wont to receive flowers when their fragrance is not felt:

"The work of the doctor is taken too much as a matter of course. He labors day and night, coming when called, regardless of weather, taking no thought of pay, unheeding whether he has had any rest of body or mind, and ministers to those that need it. He is uncompaining, cheerful, friendly and kind under all circumstances. He is paid after all other debts are satisfied, or not paid at all. Many times he furnishes his own medicines, yet receives nothing. Yet if his skill fails or he diagnoses incorrectly, he may face a suit for mal-practice. He will frankly admit that relatively little is known in the science of medicine, yet he is expected to be able to cope with every disease.

"The times when doctors have risked their own lives to save others are so many that there are not books enough to record them, and every day adds to the list. Just a few days ago a ship went 125 miles out of its course, summoned by wireless to carry a physician to a sufferer on another ship. With the doctor, it was all in the day's work—he realized that he was but living up to the ideals of his profession, ministering to the suffering under all circumstances and doing his utmost to save life wherever his skill might be needed. There are 'quack' doctors, just as there are counterfeit gold pieces, but the real doctor is more than a professional man—he is too often the friend in need, and all too often not appreciated by those he serves."

### Life Saving or Public Health?

In a recent issue of the *American Journal of Public Health*, the official organ of the American Public Health Association, the following editorial under the above caption was reproduced, with the explanation that it is the statement of a man of broad executive experience in non-official health agencies and that it was published in the hope of stimulating discussion and thought among health workers as to the proper functions of health administration.

"To the public-health official the development of his administrative machinery may appear to be an end in itself. To the layman, or at least to the man who foots the bill, life-saving and the prevention of sickness will probably appear more fundamental. This distinction is vital. Unless it is kept in mind, an overdevelopment of means—of one of the means, public-health work—may lead to the discomfiture of the general program of life-saving.

"This situation is undoubtedly, to a degree, responsible for the fundamental difference in point of view of the average doctor and the average public-health officer. The doctor, being at all times close to sickness of all kinds, senses his importance in any program of life-saving. Doctors outnumber public-health officers more than 100 to 1. They are close to the patient, and his

(Continued on page 448)

## Observations On Acute Mastoiditis\*

SAMUEL S. QUITTNER, M.D., Cleveland

*Editor's Note.*—To focus attention on the problem of when a mastoid becomes of surgical significance, Dr. Quittner presents a number of illustrative hypothetical cases, such as the general practitioner and specialist are apt to encounter in their everyday practice. Many of these types of cases are so mild and insidious in development and yet so treacherous in the dangers they involve, that every precaution must be taken to evaluate their seriousness from all the available data at hand, so that surgical interference is not delayed when indicated. Dr. Quittner, in his general observations, gives many valuable suggestions for handling the varied types of cases and conditions that present.

IT MAY BE stated that probably in every acute purulent otitis media, in its inception, the mastoid (at least its lining cell walls) is involved. So that every acute purulent otitis media is to a more or less degree also an acute mastoid involvement. Most often it is the rule to find tenderness to touch at the mastoid tip or just over its antrum area (the passageway to the middle ear). Again, pathologically it may be noted that the mastoid may be attacked by way of direct extension of its cell lining membrane (the usual way) or by way of its bony wall vessels. This method is at times of great significance.

### WHEN DOES A MASTOID BECOME OF SURGICAL SIGNIFICANCE?

When then does a mastoid become of surgical significance and how should one come to such a conclusion?

It may be safely stated that when one has concluded by study and observation of the case, (outside of evident or imminent imperative symptoms, such as incipient brain, labyrinth or sinus involvement), that such a case cannot get well without operation then an operation is indicated. This seems a broad and simple-minded statement and yet it has been shown constantly, under close observation of the course of the case, that many truly diagnosed mastoid affections have gotten well without operation and in all fairness to the patient the right course has been pursued. There may be much anxiety for the physician in charge, for on him rests the responsibility of delaying the operation and he may even tend to become over-conservative, yet there can be no question he is dealing fairly with the case. If the case is under close observation there need be no cause for unnecessary worry but close observation is imperative. Promiscuous operating as the proverbial *stitch in time* is neither ethical nor scientific.

How then does one come to such a conclusion? By study of the tympanic membrane in detail; the purulent discharge, its amount, odor and color, the mastoid, temperature, infecting organism and general symptoms of wellbeing.

### ILLUSTRATIVE HYPOTHETICAL CASES

A series of hypothetical cases—not the ex-

ception but the rule—will best explain and impress:—

CASE 1.—We may pass over this briefly for it is the classical type. With the temperature varying one to three degrees above normal, with mastoid swelling of varying degree, tenderness persisting or increasing, an operation is indicated if under rest and good membrane opening the symptoms do not subside.

CASE 2.—Given an acute purulent otitis media, starting with a fair degree of temperature two degrees to three degrees above normal, marked mastoid tenderness, even some mastoid oedema, there is a violent onset, and the perforation of the drum (artificial or of itself) will disclose a profuse serosanguinous discharge. With such a type of mastoiditis one can expect a gradual recession of symptoms in four or five days and complete recovery is very possible. Such a case is apparently alarming but not so much as the clinical picture warrants. But there must be a gradual and proportionate recession of all symptoms. Should one or the other symptoms persist into the second or third week, (not considering exceptional cases of progressively worse symptoms, which of itself would indicate immediate operation), then it is more than likely that necrosis of the mastoid, in its entirety or a pocket, exists. As sufficient time has elapsed, under favorable circumstances it is presumed, then one is convinced the case will not get well and operation is indicated.

CASE 3.—Take a case in the course of an acute otitis media. At occasional intervals of two to four days, for a day or so, there is a mild rise of temperature (say one-half to one degree), and this is not known usually unless sought for. It is in the third or fourth week from the onset. The patient feels perfectly well, and there is no swelling or thickness of the skin over the mastoid. But there is a fairly profuse discharge from the ear, almost as much as at the onset. Such a case is very suspicious of mastoid involvement. Looking at the drum membrane we are apt to find it bulging, very thick, sagging in its upper half, very often with a nipple-like protrusion and a drop of pus squirting through this opening at frequent intervals. The significance of this is that there is much pus behind under pressure. We may in such a case presume a mastoiditis and one that cannot get well if we

are sure the passage-way to the antrum is free enough to give drainage for the mastoid. If an incision is made through this perforation well up and the picture of the drum and slight elevations of temperature does not change in a day or so, the operation is indicated. On operation one may be surprised to see how much of the mastoid is broken down from such an unsuspecting picture.

CASE 4.—The case is in the sixth to the tenth week. The patient has never had any pain or temperature except at the very onset; feels fine and has not one general symptom. But there is much discharge from the middle ear which may or may not have some odor. The drum is markedly thick or congested. Now this is probably a mastoid involvement, not general but of some isolated pocket that will not resolve. Such a case, providing favorable conditions for cure have been used, such as proper attention to nose and throat for recurring focus of infections, should be operated for two reasons: *first*, to prevent chronicity, into which it will surely drift, if it does not at some time later extend; *second*, in the interest of preservation of hearing. Were such cases followed up hundreds of chronic discharging ears would be obviated and thousands of hearing apparatuses would be conserved.

CASE 5.—It is about the third or fourth week of the disease; the patient has not a single complaint. There is very little discharge. The drum is not very red or bulging. There is no noticeable temperature. Apparently everything is going well. But somehow the careful doctor presses on the mastoid for luck and the patient winces in pain. Further careful palpation will elicit tenderness high up posteriorly and indicate that there is some thickening of the mastoid periosteum, not apparent to the eye. Such a case is apt to be a very dangerous one. Operation is surely indicated. It is very misleading as the patient is apparently well. But careful history taking will show that the patient does not sleep as well as might be at night, and occasionally has headache on the affected side. The patient says he feels good but will admit, if questioned persistently, that he has not had as much *pep* as usual. This is a much feared mastoid type, because of its insidious danger. Any moment may bring the imminent symptoms indicating sinus or meningeal involvement. Operation is to be urged as soon as one has concluded that there is no progress for improvement clinically.

CASE 6.—In such a case the patient complains of pain in the ear for a day or two, and which then disappeared. This type is particularly met with in children. Everything is forgotten in happy ignorance. The drum has never been inspected; no discharge ever appears, in fact there never was any. Not another symptom is noted, except possibly some restlessness at night or

some irritability in the past few weeks may be elicited. But this is usually attributed to other causes. One fine day you are suddenly called because the frightened patient has discovered a large post-auricular swelling. No it is not a gland or a primary mastoiditis. It is but a neglected ear that might have been saved a necrotic mastoid if the middle ear had been inspected but once in the previous weeks.

CASE 7.—Along about the third week a patient has been complaining of persistent *localized* headache. He is not sleeping well nights. Here, as in other places, bone affection seems to disturb at night. There is a fair amount of ear discharge but no evidences of mastoid pain or swelling. In this type of case interference, on the headache symptom alone, is to be seriously considered. More than likely, on closer observation, you will find an occasional slight rise of temperature or the drum membrane may not harmonize with the general clinical picture. Such an insidious type is apt to burst out in meningitis any moment as headache, persistent and lateralized, signifies close proximity of toxicity to the meninges.

CASE 8.—If, in the second or third week, mastoid swelling and tenderness, with or without temperature, suddenly appears, drainage being good, it is more than likely that an operation will be needed, and the mastoid will not get well of its own accord, at least in adults. In contradistinction, if such symptoms appeared in the opening days of the trouble, they would not have such significance. The reason of course is that the progress backward has been slow until it reaches the superficial areas of the mastoid and suddenly announces itself by breaking through or affecting the cortex.

I have made no mention of early meningeal or labyrinthian irritative conditions and their significance for they are out of the purview of this paper.

#### GENERAL OBSERVATIONS

1. Early paracentesis in indicated cases, those in which the drum is bulging and landmarks are gone, with complete rest in bed does make for a quick return to the normal and is a helpful preventative of mastoiditis.

2. Unless urgent progressive symptoms warrant, it is better to operate in the second, third or fourth week than earlier, for two reasons; *first*, the condition may subside, and *second*, the inflammatory resistance wall has formed and after operation extension is less likely.

3. When a case is very bad from the beginning, as with definite meningeal symptoms or labyrinthian septic involvement or lateral sinus affection, it may be said that operation may not stop the progress of the disease; and more than likely the extension is by way of the blood current (as mentioned earlier) or, what is also a proved possibility, a natural hiatus may exist

leading directly to the dura and the infection thus rapidly reaches the meninges.

4. In a post-auricular sub-periosteal abscess from mastoiditis the picture is out of proportion to the danger, for here the cortex has broken through and the pus has an outlet. Also it may be noted in this connection that, particularly in infants, this is the first evidence of mastoid trouble. Do not incise the swelling, letting out the pus, and rest secure. For while occasionally the case may get entirely well from a simple incision alone, more often the cortical sinus or middle ear will not heal. A mastoidectomy is indicated in every case.

5. In the diagnosis of acute mastoiditis during the third or fourth week, consider a profuse discharge, a pendulant sagging drum with or without nipple projection; a pulsating pus appearing under pressure in the drum perforation; a sagging of the posterior superior wall of the canal; lateralized headache, lack of *pép*, occasional temperature, sleeplessness, persistent mastoid tenderness, especially in the mid-posterior portion where the emissary vein of the lateral sinus is situated; or persistent tenderness high up over the antrum region near the meninges, some thickening of the skin or periosteum; or obliteration or filling up of the posterior auricular fold. These symptoms *in toto* or one alone may mean much. Careful thought in their presence should be given as to mastoid interference.

6. The X-ray, as an aid in diagnosis, is, in itself of no value. As an aid, in conjunction with symptoms or history, it may be of use but cannot be relied upon. It will show the extent of the mastoid cells or the situation of the lateral sinus; but for an interpretation of the amount of necrosis or its situation, most often it will tell you nothing. Every early otitis media shows a cloudy mastoid picture. Again if there has been a previous ear affection (mastoid) healed and forgotten, the picture may misguide you or tell you nothing.

7. Lice in the hair, external otitis, or erysipelas may give swelling, temperature and tenderness over the mastoid and must be borne in mind in making a differential diagnosis.

8. The nature of the infection is of value in coming to a decision when to operate. Slight symptoms with a streptococcus haemolyticus in the ear discharge may be of more significance than greater symptoms with a staphylococcus infection.

9. Odor, in an ear discharge in acute cases, has no real significance; but if it begins to disappear it may be of favorable moment in prognosis.

10. In the course of an acute purulent otitis media, other organs in the body may complicate the clinical picture or misguide one. In childhood, particularly, a pyelitis may be co-existent and unless one is on guard the temperature may

be attributed to the ear and cause worry and confusion.

11. The leucocyte curve is of significance and following its indication is often a great help.

12. In an infant, meningeal symptoms may usher in an attack of acute purulent otitis media, and may be relieved immediately by incision of the membrane tympani.

13. A receding drum membrane with lessening discharge, a mucoid whitish discharge gradually appearing from a previous yellow pus, a drum beginning to show its landmark, all other symptoms being equal, foretells a prognosis of return to normal and healing and until then all cases should be under observation.

It is not within the scope of this paper to touch on chronic mastoiditis or acute exacerbations, for they have their own peculiarities of careful observation and their dangers are equally as great if not greater.

To speak of this peculiar area with its great possibility of extension to the labyrinth, which means meningitis or brain abscess; or extension to the facial nerve, with paralysis; or direct extension to the cerebellum or cerebrum which means its own abscess; or infection and extension to the lateral sinus with its profound troubles; or to the chronic conditions which it may subside to with loss of hearing or remain as a source of danger, is to speak only in caution of greater consideration in every case of acute otitis media.

What has been outlined above is what is meant by careful observation; and if one mistakes occasionally it should be an error of omission and not commission, and one should be just twice as careful the next time.

3912 PROSPECT AVENUE.

---

## List of Publications on Industrial Hygiene

In addition to the "List of Publications" issued by the International Labour Office, the Industrial Health Section intends shortly to begin issuing at regular intervals lists containing information regarding publications dealing with industrial hygiene.

Although the International Labour Office cannot receive all medical and industrial periodicals, the Industrial Health Section is able to examine the most important publications dealing with industrial Hygiene.

The International Labour Office therefore request all scientists and members of the medical profession, who are interested in social and industrial medicine, to be good enough to furnish to its Health Section (Industrial Health Section, International Labour Office, Geneva, Switzerland), with detailed bibliographical notes on their recent publications (the author's name, the title of the article, and the date and number of the periodical in which it appeared); and they are also requested to forward if possible an off-print of such articles. In return, the International Labour Office will be pleased to supply its correspondents regularly with its bibliographical lists on Industrial Hygiene.

# Cardiac Arrhythmias and Their Clinical Recognition\*

ROGER S. MORRIS, M.D., Cincinnati

*Editor's Note.*—Dr. Morris considers that in the great majority of cases of disordered heart action, the type of disturbance may be diagnosed without recourse to polygraphic or electro-cardiographic records; careful physical examination sufficing. Treatment and prognosis depend entirely upon the type of disordered heart action which is present. The importance of accurate diagnosis is apparent, for many arrhythmias require no treatment. Acceleration of the pulse to 120 per minute tends to abolish sinus arrhythmias, premature contractions and partial block, whereas the irregularity of auricular fibrillation becomes more pronounced with frequent heart action.

THE KNOWLEDGE which we possess regarding disturbances in the rhythm of the heart is the result largely of studies with the polygraph and the electrocardiograph. This fact has led many, who have not given close attention to the subject, to believe that one or both of these instruments of precision must be employed to recognize the type of disturbed rhythm. That the great majority of cases of arrhythmia may be accurately diagnosed with nothing more than the stethoscope, combined with careful inspection and palpation of the patient, we shall attempt to show in the following pages.†

## SINUS ARRHYTHMIAS

*Sinus Arrhythmias.*—The simplest type of arrhythmia is the so-called sinus arrhythmia. The sino-auricular node is situated in the wall of the right auricle near the entrance of the superior vena cava. In the normal heart, the impulses or stimuli arise in the node, and are distributed to the heart. The node is the so-called pacemaker of the heart, for, while stimulus production is an inherent property of all heart muscle cells, the rate of formation of stimuli is more rapid in the sino-auricular node than elsewhere in the heart, and the stimuli formed here are transmitted throughout the heart.

The commonest of the sinus arrhythmias is the *respiratory arrhythmia*, in which there is a quickening of the pulse during inspiration, a slowing during expiration. This irregularity of the heart beat is physiological in children, and is seen in many young adults, in fact, in the majority of young adults during forced inspiration and expiration. If the quickening and slowing of the pulse occur regularly during inspiration and expiration, it is sufficient to establish the type of arrhythmia as a respiratory arrhythmia.

As the sinus node is under nervous control, it follows that stimulation of the vagi may cause a slowing of the heart beat,—a *bradycardia*. This type of sinus disturbance is not uncommon in athletes and after acute infections, such as

pneumonia, in jaundice, in cases of hypertension, *et cetera*. The bradycardia is without special significance. The pulse rate is generally between 50 and 60.

*Phasic variation* is another form of sinus arrhythmia. There is a slowing and a subsequent quickening of the heart beat, spread over a period of ten to fifteen or more seconds. This disturbance of rhythm may be repeated regularly or it may recur from time to time. It is a relatively uncommon type of arrhythmia, which is usually, though not invariably, associated with heavy dosage of digitalis.

Lastly, there is an *irregularity* of the heart of *mild degree*, which originates in the sinus node, and in which *shorter and longer pauses are mingled indiscriminately*. It is seen rather frequently, and is usually associated with a slowing of the pulse rate. It is observed in healthy children and young adults, and is particularly common in patients with rheumatic hearts during digitalis therapy. This may simulate auricular fibrillation with a slow pulse rate, but is easily differentiated by the fact that the sinus irregularity tends to disappear when the heart is quickened by exercise, while the irregularity of fibrillation becomes more pronounced.

The arrhythmia becomes more pronounced when the heart slows after it has been accelerated by exercise.

Sinus arrhythmias have little diagnostic significance. Their chief importance lies in their possible confusion with other types of arrhythmia. In connection with the respiratory arrhythmia, MacKenzie has observed that, in children during an attack of acute endocarditis, this form of disturbed rhythm is absent so long as the disease is active; it may, therefore, possess certain prognostic value.

## PREMATURE CONTRACTIONS

*Premature Contractions (Extra Systoles).* Lewis has defined premature contractions as the response of the heart to new and isolated impulses formed in the muscle, resulting in contractions which occur before the anticipated time; the impulse may arise in either auricle or ventricle (thus, auricular or ventricular premature contractions), and there is not a tendency for the premature contraction to repeat itself, a normal beat being interpolated between the premature beats.

\*An address delivered in substance before District Medical Meetings in Portsmouth, Oxford, Hamilton and Youngstown, Ohio, and published by request. From the Medical Clinic of the Cincinnati General Hospital, the University of Cincinnati College of Medicine.

†The reader is referred to Lewis' "Clinical Disorders of the Heart Beat", Hart's "Abnormal Myocardial Function" and MacKenzie's "Principles of Diagnosis and Treatment in Heart Affections", from which the material in this paper has been largely drawn.



In this connection, it is helpful to recall Bowditch's law, *i.e.*, when the heart contracts, it always does so with maximal force. Furthermore, it has been shown that the earlier in diastole the heart is stimulated, the weaker the contractile force. These observations explain why premature contractions are always smaller, weaker than the normal contractions.

As there is no gain clinically in distinguishing between the auricular and ventricular premature contractions, and since, furthermore, the distinction is often impossible without recourse to a tracing, the following remarks are made to include both.

When the heart contracts prematurely, the contraction may or may not be strong enough to open the aortic valves. If the valves are opened, a small, premature pulse wave can usually be palpated at the wrist, followed by a long pause before the next normal pulse wave is felt. Auscultation at the heart in such case reveals two premature sounds, corresponding to the premature pulse wave, with a long pause before the normal sounds are resumed. This may be represented diagrammatically as follows:

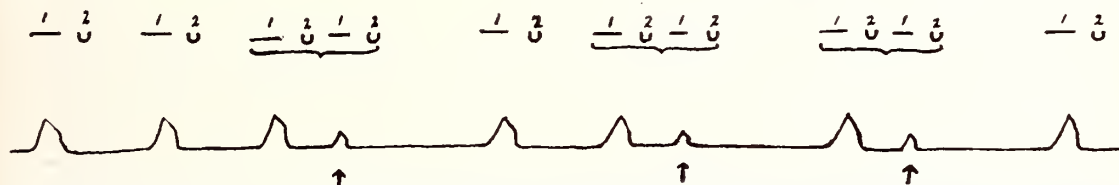


Fig. 1. *Premature Contractions.—(Diagrammatic).* The upper line represents the heart sounds (⊥ = first sound; 2/u = second sound); below is a tracing of the radial pulse. The arrows indicate *premature contractions*: Note the heart sounds in groups of four, with the small premature pulse wave, corresponding to the premature contraction. A long pause follows each premature beat.

It often happens, however, that the premature contraction is of insufficient strength to open the aortic valves. Under such circumstances, there is heard only one sound—the premature first—with the premature contraction, and the pulse wave is lacking at the wrist. The heart sounds of the normal contraction, with the single sound of the premature beat, form a group of three sounds, followed by a long pause, as follows:

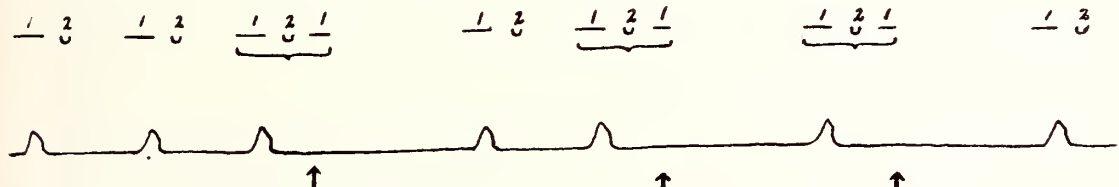


Fig. 2. *Premature Contractions.—(Diagrammatic).* The upper line represents the heart sounds (⊥ = first sound; 2/u = second sound); below is a tracing of the radial pulse. The arrows indicate *premature contractions*: Note the heart sounds in groups of three, and the dropped pulse wave, corresponding to the premature contraction. Compare with Fig. 1.

Therefore, if every second beat is a premature contraction, which fails to open the aortic valves, it follows that the pulse rate will be just one-half the heart rate. This illustrates the importance of counting the heart rate at the heart either by palpation of the apex impulse or preferably by auscultation with the stethoscope; for *counts of*

*the radial pulse should never be relied upon in patients with cardiac disease.*

Premature contractions occur in a wide variety of conditions and at all ages, though perhaps most frequently between the ages of 50 and 70 years. This type of irregularity is not infrequently met with in normal adults, in whom no other cardiac disturbance can be found; in such instances, no treatment is required, further than to reassure the patient. Extra-systoles are frequently seen in patients with heart disease, especially mitral stenosis and aortic insufficiency. They are often associated with excessive use of tobacco or coffee, with digestive disturbances, and with hypertension. With a heart beating at the rate of 100, premature contractions are uncommon, while with an acceleration to 120 per minute they are in most cases abolished.

When digitalis is being administered, the occurrence of many premature contractions, especially *bigeminal rhythm*, is an indication for discontinuing the drug.

To summarize briefly, then, premature contractions can be diagnosed readily by auscultation

at the heart where the characteristic groups of sounds, either in groups of four or three, are heard. The premature contraction produces a pulse wave if the pressure developed within the ventricle by the premature beat is greater than the diastolic pressure in the aorta, whereas, if the ventricular pressure is insufficient to open the aortic valves, there is a dropped beat, with a group of three sounds at the heart.

HEART BLOCK

*Heart Block.* In heart block, there is either a delay in the ventricular response to the contraction initiated in the auricle, or the ventricle fails to respond at all.

Normally, the stimulus is formed at the sinus node, spreads through the auricles, and thence

the impulse is conducted through the auriculo-ventricular (A-V) bundle (the bundle of His) to the ventricle. Damage to the bundle either delays the passage of the impulse or prevents its reaching the ventricle at all (partial block). When no auricular impulses reach the ventricle, complete block exists; the ventricle beats regularly as the result of stimuli arising within its walls, but since the inherent rate of stimulus formation of the ventricle is slower than that of the sinus node, the pulse rate drops to about 30 per minute.

The normal time required for the passage of the stimulus from auricle to ventricle is about 0.2 seconds (the auriculo-ventricular [A-V] interval). In the earliest stage of block, there is simply a prolongation of this interval. This cannot be detected as a rule without a graphic record—either a polygraphic tracing or an electrocardiogram.

With a greater degree of block, the ventricle fails to respond occasionally to the auricular impulses, resulting in a dropped beat at the wrist. This is easily differentiated from a dropped beat due to a weak premature contraction by auscultation; one hears a first sound, due to closure of the mitral and tricuspid valves, whereas with heart block there is silence over the heart due to failure of the ventricle to contract, at the time of the dropped beat. In cases where the apex impulse of the heart is palpable, one can also differentiate the two conditions by palpation, as there is a palpable premature apex impulse with the premature contraction and no impulse with heart block.

The dropped beat due to heart block may be represented diagrammatically as follows:

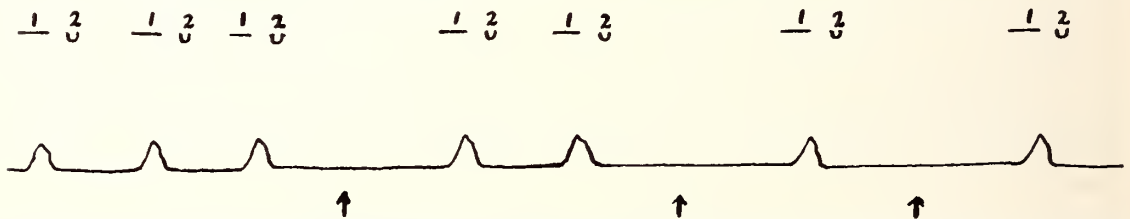


Fig. 3. *Heart Block, (Partial)—(Diagrammatic)*. The upper line represents the heart sounds ( $\perp$  = first sound;  $\perp/\cup$  = second sound); below is a tracing of the radial pulse. The arrows indicate blocked auricular impulses which failed to reach the ventricles, resulting in dropped beats and silence (i.e., no sounds) over the heart. Compare heart sounds with those in Fig. 2; the radial pulse tracings are the same in both.

There is usually a quickening of the pulse immediately before and after the dropped beat.

As the degree of block advances, definite rhythms may be set up, in which the ventricle fails to respond to every fourth, third or second auricular contraction (4:1, 3:1, or 2:1 block). The latter causes a halving of the pulse rate, such as may be found with alternating premature contractions (bigeminal rhythm), which fail to open the aortic valves. Again, auscultation of the heart or palpation of the apex impulse enables one to differentiate readily, as indicated above.

With complete block, the auricle and ventricle

beat regularly at different rates, the former, say at 76, the latter at 30. It happens occasionally that the sounds produced by the auricular contractions can be heard with the stethoscope, or that the pulsations in the jugular veins may be visible. The Adams-Stokes syndrome may be present.

Heart block may occur at any age, and is commoner in males. In the earlier years of life, it is frequently seen in those whose hearts have been affected by chorea or acute rheumatic fever. It may occur during the course of an acute infectious fever, and is often transient. Chronic block is usually due to syphilis or to repeated attacks of rheumatic fever and is usually an evidence of extensive disease of the myocardium.

It is worthy of note that the administration of digitalis preparations in toxic doses in young patients with rheumatic hearts may produce partial heart block, due, it is said, to the action of digitalis on the vagus, for atropine relieves it.

With the earlier grades of block (dropped beats), the disturbance of rhythm tends to disappear whenever the heart is accelerated to 120 or more per minute.

#### AURICULAR FIBRILLATION

*Auricular Fibrillation.* In auricular fibrillation, the auricles are dilated and do not contract as a whole. Normal stimulus production at the sinus node is abolished, and, in its stead, multiple foci of stimulus production are formed in the auricle. The result is a helter-skelter of impulses which reach the ventricle, producing a complete or disorderly type of arrhythmia. Unlike the preceding types of irregular heart action, the disturbance in rhythm becomes more pro-

nounced, the more rapid the heart rate. Thus, with rates above 120, respiratory arrhythmia, premature contractions and partial heart block tend to disappear, while with auricular fibrillation the pulse becomes more irregular.

This disturbance of rhythm may occur at any age, but it is rare before puberty. It is very frequently seen in patients with mitral stenosis, and may occur in any case in which the myocardium is diseased. The majority of patients with circulatory failure have auricular fibrillation. Once established, it usually persists during the life of the patient, though instances of paroxysmal fibrillation have been noted.

In auricular fibrillation, many of the ventricular contractions fail to produce pulse waves, and those which reach the wrist are very irregular in force and rhythm, (Fig. 4). The

and 320 per minute, giving pulse rates of 130 to 160 per minute.

It is often impossible to recognize this rare disturbance of the heart beat without an electro-

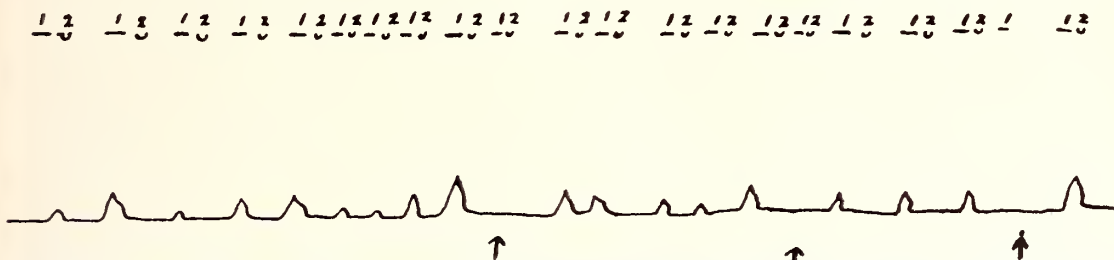


Fig. 4. *Auricular Fibrillation — (Diagrammatic)*. The upper line represents the heart sounds (— = first sound; 2/v = second sound); below is a tracing of the radial pulse. The arrows indicate dropped beats, resulting in pulse deficit. Note the total irregularity in time and force of pulse waves, and irregularity of heart rhythm. Compare with Figs. 1, 2 and 3.

difference between the heart rate and the pulse rate is termed the *pulse deficit*. As the condition of the patient improves, with slower rates the frequency of the heart and of the pulse may be the same. But still individual waves show variation in force and size. Hart has pointed out the fact that by counting the pulse at varying pressures applied to the brachial artery with a blood pressure apparatus, a record like the following may be obtained, indicating a difference in pressure values of different waves, the so-called *relative pulse deficit*. (Fig. 5):

cardiogram. According to Lewis, a regular and persistent ventricular rate of 130 to 160 in an elderly subject is most suspicious; if the tachycardia persists for a month or more at one of the stated rates and there is absolutely no change of rate with change of posture, rest or exercise, the condition is almost certainly flutter. He further states that pressure on the carotid artery, sufficient to obliterate the vessel and stimulate the vagus, always produces conspicuous slowing of the pulse or lapse of many beats. There is also visible a vibratory pulsation in the neck. Digitalis in full doses always slows the pulse and usually changes flutter to fibrillation, which, in turn, may be replaced by normal rhythm, if the drug is continued.

Brachial pressure	Count of radial pulse
140 mm. Hg.	0
130 mm. Hg.	50
120 mm. Hg.	58
110 mm. Hg.	62
100 mm. Hg.	64
0 mm. Hg.	64

PULSUS ALTERNANS

*Pulsus Alternans*. In this condition large pulse waves alternate regularly with smaller waves. There is not a disturbance in rhythm but



Fig. 5. Represents pulse tracing in *auricular fibrillation*. Pulse rate normal, and equal to heart rate. Spacing of waves slightly irregular, though imperceptible to palpation. Note inequality in size of waves, denoting varying systolic pressures. Such a pulse gives a "relative" pulse deficit.

This relative deficit is practically diagnostic of auricular fibrillation; premature contractions are easily excluded by auscultation.

It is highly important to recognize all cases of auricular fibrillation, as it always indicates serious heart trouble, and is the condition in which the digitalis preparations are most effective.

AURICULAR FLUTTER

*Auricular Flutter*. In auricular flutter, the auricles are usually contracting at a phenomenally rapid rate, 200 to 360 times per minute. The ventricles cannot keep pace with them; 2:1 heart block generally results, so that the ventricular rate is just one-half the auricular. Lewis states that the usual auricular rates vary between 260

an irregularity in the force of the pulse waves. The disturbance may persist only for a few beats, often following a premature contraction, and in this case it can seldom be recognized without a pulse tracing. When more pronounced, it may be apparent to the palpating finger. It is distinguished from a bigeminal pulse or a dicrotic pulse by the fact that the intervals between the pulse waves are normal. Applying the cuff of the blood pressure apparatus to the arm, the alternation of large and small pulse waves may be detected, since, as the pressure is lowered, one first hears the sounds produced by the large waves, then with lower pressure, both large and small waves produce sounds, thus doubling the frequency of the sounds, (Fig. 6).

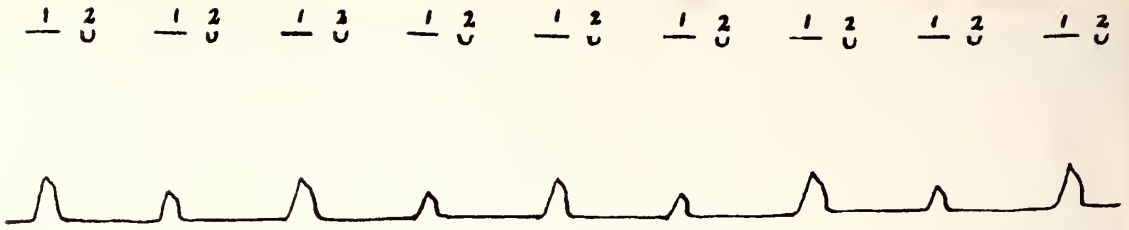


Fig. 6. *Pulsus Alternans*—(Diagrammatic). The upper line represents the heart sounds ( $\pm$  = first sound;  $2/u$  = second sound); below is a tracing of the radial pulse. Note the regularity of the heart and pulse in rhythm, the irregularity of the pulse in force, large waves alternating regularly with small waves.

*Pulsus alternans* may be found physiologically with very rapid heart rates, resulting from exertion or emotion, for example. It is of importance clinically when the heart rate is normal, and is encountered in patients with angina pectoris, hypertension or serious myocardial disease. It is a sign of bad prognosis.

#### CONCLUSIONS

1. In the great majority of cases of disordered heart action, the type of disturbance may be diagnosed without recourse to polygraphic or

electro-cardiographic records; careful physical examination sufficing.

2. Treatment and prognosis depend entirely upon the type of disordered heart action which is present. The importance of accurate diagnosis is apparent, for many arrhythmias require no treatment.

3. Acceleration of the pulse to 120 per minute tends to abolish sinus arrhythmias, premature contractions and partial block, whereas the irregularity of auricular fibrillation becomes more pronounced with frequent heart action.

## Medical Service in Industry\*

C. E. FORD, M.D., New York City  
Medical Director of the General Chemical Company

*Editor's Note.*—In discussing medical service in industry, Dr. Ford touches on a great many subjects in order to crystallize somewhat nebulous views as to what industrial medicine is, and with the further object of indicating that the sound medical man, who appreciates that industrial medicine is no longer a matter of medicine and surgery or hygiene and sanitation alone, but that it must be widened to include fundamental factors associated with plant processes and the materials used therein, as well as the more personal problems arising out of industrial life, together with energy, will be of great value to his organization, will command the highest respect of every person in it, wield a constant influence and always find a post awaiting him.

**T**HE VALUE of medical service in industry was emphasized when State Compensation laws, which rendered it compulsory to provide medical and surgical treatment for injured workers, became effective.

Medical and surgical preventive work proved itself of value and demonstrated that early attention to trivial accidents and injuries reduces the amount of time lost both by the employer and the employe. Further experience showed that improved working conditions notably reduced absenteeism among employes.

It also showed that conditions inimical to the health of workers could be removed with the resulting assurance that general physical and mental health would be benefited, in increased production and lessened turnover. In other words, it has been established that proper health instruction to workers pays in enhanced efficiency, besides fulfilling important humanitarian considerations.

#### COMPENSATION FOR INDUSTRIAL DISEASES

The importance of the foregoing is about to become amplified through the adoption of laws providing compensation for industrial diseases. The States of Ohio, Massachusetts, California, New York, Wisconsin and Connecticut have already adopted such legislation and it is indicated that other industrial states will rapidly follow their example.

#### FITTING THE EMPLOYEE TO HIS WORK

Supplementing the former concept, the work of a plant physician should reach all departments and all activities of the organization. The physician who limits his activities to the plant dispensary is found to be relatively of little value to the industry with which he is associated. It is only as his influence reaches into the operating department that the fullest measure of his service is realized. Co-existent with his curative and preventive activities should be a desire to see that men are placed at work for which they are physically qualified. The only method

\*Read before a meeting of the Ohio Association of Industrial Physicians, at Cleveland, 1921.

possible of obtaining this end is through the physical examination of workers and applicants for employment—not only is the applicant's physical condition determined but his mental attitude as well is considered. His reaction toward industry in general and particularly toward the job he seeks can be gauged with a fair degree of accuracy concurrent with the physical examination.

The study of processes and job requirements brings to light the degree of hazard present in different operations and suggests protective measures to meet each situation. Of course, certain hazards will remain concealed until cases of accident or illness bring them sharply to the attention of the Superintendent through the medical department, but it has been found that most of these, especially those of major character, are revealed when exhaustive studies are carried on from the viewpoint of the plant dispensary. With a doctor or staff with experience, discretion and the best interest of the employer and employed in mind, this work is so carried forward that rejections and recommendations incur little or no criticism. Rejections in many plants are based on the following:

1. Organic disease, including uncompensated heart disease, disease of the circulatory system, stomach, liver, kidneys, etc.

2. Loss of or defective vision.

3. Deafness or disease of the ears likely to lead thereto.

4. Disease of the nervous system.

5. Hernia, unless operated upon or the company is released from legal responsibility.

6. Communicable disease.

7. Amputations.

8. Defective mentality.

9. Candidates should be classified as follows:

A. Individuals physically and mentally fit for any job.

B. Individuals physically fit for any employment but below par in development or by reason of minor defect who by treatment may be placed in Class A.

C. Individuals fit for limited employment when certified to by the Plant Physician.

D. Individuals unfit for any employment.

It should be made clear to candidates that physical examinations are not designed to eliminate the defective unless dangerous to the organization but rather to lead him to remedy his defects for mutual benefit.

#### INDUSTRIAL MEDICINE AND SURGERY AS A SPECIALTY

Notwithstanding this broad basis for the existence of the Industrial Physician as such (a misnomer by the way) the question has been raised and debated as to the status of the physician in industry. Certain eminent authorities active in association work as well as in universities have dismissed the suggestion that indus-

trial medicine or surgery is a distinct specialty with a more or less flippant assertion that industrial medicine and surgery is nothing but good medicine and surgery in industry.

It is conceded that nothing short of the very best trained men have any right in the field. It is contended, however, that the very group of high authorities, who have denied the physician in industry the right of special grouping and recognition, have signally failed in giving to the industrialists, whether he be employer or employed, that prolonged period of economic productivity which special knowledge and responsibility places upon a physician in industry. He has not contributed to the study of hazards of the occupation, he has not studied processes, he did not investigate the various operations, the mechanical appliances or the working environment, subjects fundamentally related to good medicine and surgery. In many instances these men were lacking in knowledge of the nature of the product of the plant.

Was it the general surgeon or industrial medicine as represented through its personnel that recognized the opportunity for the rehabilitation of the disabled and crippled soldier? It was the physician in industry familiar with the enormous wastage of man power, much of which can be charged to the general surgeon in his neglect of physical reconstruction and vocational retraining methods, that has created this new field that we apparently must defend.

One might inquire who of these glib critics, many of whom secured their early surgical training by doing so-called accident work, are now in the field. We know full well that many of these men did not leave the industrial field of their own volition and it may be noted that many of these eminent gentlemen have not been retained in a consulting capacity.

Corporations have realized that they were shortsighted in providing medical service of the sort that disregarded the economic, social, educational, political and even moral phases of the worker's life.

Industrial medicine is not simply a field for the ordinary practice of general medicine and surgery, but bears the same relationship to medicine and surgery as does the specialty of gynecological surgery, or brain surgery, with their topical limitations, or traumatic or military surgery, with its special pathology and, as Legge has well stated: "*The scope of application of industrial medicine is to the larger group as a unit and it is in this relation that the main endeavors are directed; although individual service is rendered as occasion demands, its special purpose is prevention—the prevention of occupational diseases and accidents. When these two main issues are applied to the whole group, the humanizing of industry is obtained and a crowning victory for society accomplished. To secure the maximum efficiency from the human machine, the industrial surgeon, virtually the human engineer, acts*

*as the agent for stabilizing labor, thereby facilitating production and helping the worker to do a better day's work, prolong the years of his activity and increase his compensation."*

#### COMMUNITY RELATIONS OF THE PROFESSION

The skeptic may see in industrial medicine elements subversive to the best interests of the profession, socialized medicine, the health insurance fetish or what not. There is less danger of exploitation by faddists, of groups such as ours, gradually acquiring a business training, if only by contact and absorption, than by the profession at large, with its isolation from affairs.

It is true that we doctors have been remiss in our communal and business obligations. There has been, unfortunately, a dearth of medical statesmanship and business capacity. I quote from a former communication.

"In the volumes of biologic essays prepared by the fellows of Sir William Osler to celebrate his 70th birthday, which lamentably appear rather as a memorial, the British Ambassador presents certain reflections upon the medical profession, which are as stimulating and suggestive as they are courteously phrased. More than any other of the great professions, Sir Auckland Geddes says, physicians lack 'the spirit of citizenship', the willingness 'to bear their share of the burden of the Government'. Their devotion to science and to the service of individual healing is paramount; but they do not conceive of these things in their relation to the nation. 'I have heard teachers in medical schools say that their whole duty to their students was to teach them to prevent disease, to treat the sick and to understand the method of science.' Sir Auckland Geddes denies this, though to do so 'seems to me, in my purely scientific moods, almost discreditable.'

The forces which determine national progress, and with which a statesman is primarily obliged to grapple, are not recognized in any science to which the physician is trained. They are the forces of 'mass emotion', largely blind, inarticulate and groping, yet supreme and indomitable,—forces of the racial genius. Just at present there are forces with which the physician, if he could only recognize the fact, is peculiarly qualified to deal, 'an emotion of human betterment, finding expression in centers for child welfare, in schemes for housing the working classes, in the establishment of ministries of health, of reconstruction and research'. In brief, 'we are at present in the power of a world-wide emotional storm, the full effects of which are not yet manifested', but which will center in the betterment of the nation's health and of the more purely human relationships. Meantime the medical profession, 'with brilliant exceptions', is composed of men who are 'immature as citizens' and whose citizenship, such as it is, 'is as divorced from their technical knowledge as is the citizenship of the speculative builder when he jerrybuilds new slums'. The world is 'moving on to the greatest

of its revolutions', but the majority of physicians, 'who might be its far-seeing leaders', are 'blind and babbling of industrial unrest.'

Throughout a relatively brief but active relation with the medical profession it has been observed that the individual doctor has been so occupied with the specific case that he has all too frequently permitted others to direct the social, economic and professional adjustments that modern progress has made necessary—this, notwithstanding that the professional interests and those of the public are identical and should be solved and applied only by a socially-minded medical leadership. The present day is intolerant of isolation from affairs. With others, the doctor must become active and not only support and direct actively but create those remedies for the ills of society with which he is or should be familiar. Unless medicine does this and makes apparent its group strength before the people, the people will all too frequently be victimized by the various cults and pseudo-medical interests that quickly grasp the importance of public control and especially with legislative and governmental interests.

Science has developed facts that have afforded remarkable opportunity to progress, but, in so doing, serious obligations have been imposed upon the doctor. Changes in health administration have, at times, been radical, perhaps revolutionary, but no more radical and more revolutionary than the changes that have come to our scientific thought. The modern health administration, in asking much, is likewise giving much to the physician. The individualization of health work, instead of threatening the material of the doctor, actually benefits him in many ways."

#### MEDICAL RESEARCH IN INDUSTRY

The doctor who accepts employment as a plant physician merely to run a dispensary for emergency service or to fill his wards for teaching purposes or to protect the interests of the employer in case of liability claims can hardly be an industrial physician in the strict sense. The greatest shortcoming on the part of the physician in industry from a strictly medical viewpoint is his neglect of research. Investigation and inspection of plants disclose innumerable opportunities for saving measures in illimitable variety. It is true that investigators are born as a rule but with the present pace of the world investigators must be trained. Nevertheless, I believe there are among us enough men with latent research instinct awaiting an arousing opportunity which, with heads up, they will see.

The study of *industrial physiology* is a phase of our work neglected by all of us with a few notable exceptions. Industrial physiology has two objects:

1. The purely scientific one of ascertaining how the worker performs his work, the conditions under which he can produce most advantageously and maintain bodily health.

2. The more practical object of establishing in industry the conditions that are conducive to the maximum output of the plant and the maintenance of the highest power of the worker.

#### ESSENTIAL QUALIFICATIONS OF THE INDUSTRIAL PHYSICIAN AND SURGEON

A question having the serious consideration of industrial surgeons during the year has been that relating to the *full time* physician in industry; wholly aside from the relative value of full time service versus part time service both to the employed as well as the physician in the sense of his progress or retrogression professionally, I refer to the moral responsibility in encouraging young men of the best type to enter industrial medicine through a term of preparation as elsewhere referred to with the insecurity of tenure, which fact has been rudely thrust upon our conscience as well as consciousness. Notwithstanding the feeling that full time men with a hospital connection, if possible, render better service than the part time man in general practice, I cannot bring myself to promise a career free from financial worries to which a professional man is entitled; hence would hesitate to commit myself until such time as industrial medicine is on a firmer basis than exists today.

To meet the present day requirements of the physician in industry, medical director or however he may be characterized, it seems that the following qualifications are essential:

"He should be a man of good general education, upright in bearing and demeanor, possessed of tact and judgment. He must have had a sound professional training in a college stressing the great basic foundations of his future work, *namely*, anatomy, physiology and pathology; a general hospital training of not less than two years, the second year with special attention to surgery. If to be employed in a foundry, mill, shipyard, railroad, or heavy industry, but if situated in a store, telephone office or an industry of light operations such as the industry whose guests we are today, one trained in medicine is probably preferable.

2. In the absence of university training in industrial hygiene, he should have at least five years of general practice. The future industrial physician should maintain a connection with public health-agencies such as the city health department with its various dispensaries, the general dispensary, and other public medical service. In order to develop the social viewpoint as well as to broaden professional skill.

3. He should be capable of making elementary psychological and psychopathic observations. Being certain, however, in their practical application of not confusing the psychopathies of the employer with those of the worker.

4. The industrial physician should have a knowledge, not necessarily profound, of the fundamentals of industrial relations; these are

widely applicable and include applied preventive medicine, accident prevention and the methods leading thereto.

5. He should have knowledge of employment methods, some notion of job analysis, knowledge of race problems, knowledge of industrial training, apprenticeship, continuation schools for training in particular jobs.

6. He should have knowledge of special problems relating to the employment of women and children, some knowledge of pensions and insurance, including liability, group and social, some knowledge of plant organization, which is likely to prove effective in dealing with the problem of labor.

7. He should have knowledge of the hours of work in relation to fatigue and output, knowledge of the security and continuity of employment in slack seasons, while convalescing from accident or disease.

9. He should have a general knowledge of physical working conditions, safeguards, disagreeable gases and dusts, heating, lighting, ventilation, locker rooms, wash rooms, rest rooms, restaurants, hospitals, laundries, toilets, showers, water supply and plant beautification.

10. He should have very definite knowledge of housing, transportation, recreational and educational facilities, and at least some knowledge in relation to the cost of living according to local standards.

11. He should be familiar with follow-up work, especially among new employes and with the injured, replacement of injured and crippled employes.

12. He should be familiar with the athletic and social activities, company stores, commissaries, type of house suitable for economic administration and housing problems generally.

13. He should be familiar with labor turnover and its cost, designs and data for the construction and operation of plant hospitals, neighborhood and community houses, general education and Americanization, together with a knowledge of broad methods of raising the standard of employes' living conditions.

#### THE PROBLEM OF HEALTH

As Meredith has recently pointed out, it is time the doctor realized his concern in the normal human being as well as the human being sick, and that his ideal should be the human body always well and his shame the human body sick. It must be realized that the problem of health, like disease is a medical problem and that if we have a responsibility to the sick, our responsibility is none the less to the well. We, in industrial medicine, are seriously at fault in not devoting more attention to increasing our knowledge of the conditions of health.

That which has made America great in industry is her faculty of bringing together energies hitherto rambling and misdirected into a rounded, concrete whole with largely amplified

production. The mainspring of production or success is individual action and not state action. Success is nothing more nor less than opportunity to the individual. The enlightened business man of today sees clearly that the measure of his success is almost directly in proportion to the degree of opportunity his operation creates for others, but of what value is opportunity lacking its essential adjuvant—the individual in good health.

The relationship of the Medical Department to the organization is a question that is of concern to all of us. Too frequently the activities of the Medical Department are under the direction of a Personnel Manager, who, in turn is totally lacking in human understanding and unappreciative of the finer confidential relationships of doctor and patient. Until a group of Personnel Managers are trained or industrial relations are recognized as having sufficient importance to merit the attention of a high executive, I am definitely of the opinion that the Medical Department should be under the direction of and answerable to the highest possible executive. This is asserted with full recognition of its unscientific form. This matter has recently been drawn to the attention of the National Industrial Conference Board, with evident interest and some assurance that the suggestions would have consideration.

#### STATISTICAL DATA

Another most important problem confronting the industrial physician is that of standard and accurate records including cost records. Are we as individuals in position to justify completely and accurately the expenditure of the funds for the maintenance of the departments for which we are responsible? In no part of our work is the lack of adequate records more evident than in the keeping of morbidity statistics, upon which is based the real proof of the right of existence, that is, the net saving in time lost.

A practical obstacle in the accumulation of useful morbidity statistics in the past few years has been the high rate of labor turnover, and, more recently, the high rate of transfer from one occupation to another and from one department to another in the process of reducing personnel. In most industrial establishments, this latter process seems to be about complete. One cycle of industrial activity and depression has apparently terminated, but a new one has begun. Now that the number of employes in establishments is less, the work involved in record keeping is lessened and the data are more valuable because the worker stays long enough at one plant to permit observation of what actually happens from a health point of view. The present time is therefore opportune for inaugurating the collection of sickness data, even if the present industrial situation necessitates a very modest beginning.

In order to make the collection of such statistics of real value, there should be a clearing house from which publications are issued to a wide field of readers. Probably the widest dissemination could be secured through the Public Health Service, which department has inaugurated a study of some 50 odd establishments which are submitting the data desired. Through standardization of the statistical methods and terms used by different organizations, and records sickness periods of employes of many plants and groups of workers will be comparable. If the industry will install and maintain records in conformity with the general plan, certain definite advantages can be expected. In the accumulation of records from different factories and for different industrial groups, a basis will be established for the further study of the behavior of specific diseases, the conditions under which they are most prevalent, their seasonal incidence, and their possible recurrence in cycles. From the accumulation of such a body of material, as suggested, the normal expectancy of sickness among persons of different age, sex and color, as well as the amount of preventable illness, and the effect of certain improvements in conditions, may be ascertained. There are many questions which ought to be studied in addition to the direct relationship between disease and occupations,—questions, which, as matters now stand, are subjects of speculation only. If the science of preventive medicine in the industrial field is to progress, its statistics must develop. No science can be expected to make such headway without a means of measurement. It would seem that there is not merely a field, but an urgent necessity for cooperative effort in the direction that will afford a real basis for the control and prevention of disease among industrial employes.

I would counsel that your organization, represented here today, appoint a committee to study records as are now existent or find practicable, and submit your findings to a similar committee of the American Association of Industrial Physicians and Surgeons in order that standardization throughout the field may be effected.

#### SUGGESTIONS

Among other problems that should receive immediate attention by industrial physicians, may I enumerate the following:

1. Define the proper limitations of the industrial physician in relation to general community health activities, also the relations in extra-industrial cases of illness or disability to the work of the practitioner in private practice; relationship to hospitals, community dispensaries and diagnostic clinics.

2. Devise a simple method of cost accounting for medical service in industry that would seriously enlist the attention of plant executives, thus, perhaps, making more stable this branch of medicine.



3. Evolve a practical scheme for supplying health service in small plants.

4. Make available for the medical profession at large, special methods of treatment and technique which have been used to advantage by individuals or by a group in a more or less restricted territory.

5. Endeavor to produce high types of papers for publication in the official journal, featuring problems dealing with industrial hygiene and medicine.

6. Production of scientific data.

7. Stimulate the active interest of members in national and state legislation having to do with medical economics.

8. Closer cooperation with the organized industries of different states, contact with chambers of commerce and manufacturing associations. In this way information regarding our activities could be more easily spread, thus educating a larger group as to the value and progress of industrial medicine.

9. Codification of Compensation Laws.

10. The creation of departments of industrial

hygiene in federal, state and local health departments. If existing, what work is being done and what prospects of widening their activities.

#### CONCLUSION

In the foregoing I have perhaps wandered far afield and have offered several subjects in a fragmentary fashion, with the object of evoking or provoking a discussion that will serve to crystallize our somewhat nebulous views, as to what industrial medicine is, and the further object of indicating that the sound medical man, who appreciates that industrial medicine is no longer a matter of medicine and surgery or hygiene and sanitation alone, but that it must be widened to include fundamental factors associated with plant processes and the materials used therein, as well as the more personal problems arising out of industrial life, together with energy, will be of great value to his organization, will command the highest respect of every person in it, wield a constant influence and always find a post awaiting him.

25 BROAD ST.

## Hare-Lip and Cleft Palate

CHARLES M. CLARK, M. D., Akron

*Editor's Note.*—An inestimable service is conferred on all children by correcting hare-lip and cleft palate. Not only are they given an additional protection against attack by respiratory and gastro-intestinal diseases, but also they are relieved of a conspicuous deformity and are enabled to become self-supporting and intelligent members of society without any handicap. Dr. Clark details the operative procedure of choice for hare-lip and cleft palate along the lines laid down by Dr. New and the technique is shown in splendid illustrations. Valuable advice is also given with regard to the conduct of the operative procedure and the after-care of patients.

**P**LASTIC SURGERY, as practiced in the correction of hare-lip and cleft palate deformities, performs a wonderful service to society and when successful, fills all the demands made upon the art of surgery

The most important service rendered by closure of these deformities, is that the child is enabled to become strong and healthy; while in many cases death is prevented.

These deformities are not directly fatal, but it is well known that but few children, born with these malformations, reach adult life without having been operated upon. They are easily attacked by respiratory and gastro-intestinal diseases.

The nasal structures that are intended in the normal child to warm the air and to abstract at least some of the floating foreign material from the air, are prevented from functioning by the wide open cleft which also permits direct access of air to the larynx, without coming in contact with the protecting membranes of the nose.

The second object attained by the surgery of hare-lip and cleft palate is the relief of the deformity and the greater comfort of the patient.

A third desirable result is that of giving to society a member who is not handicapped by a bad facial deformity and one who will become a useful rather than a burdensome citizen.

#### THE BEST TIME FOR OPERATING

These deformities are found about as often in females as in males. They are congenital conditions due to the failure of union of the parts that form the lip and the palate. The lip is formed from the globular, the lateral nasal and the maxillary processes; while the palate is formed from the globular and the maxillary processes of the mandibular arch.

Hereditary tendencies in successive generations are only noticed in a very few cases, about 14 per cent. The roll of heredity in the incidence of these malformations has been studied extensively by Mr. Blades of the Eugenics Record Office but as yet no deductions can be drawn from data so far collected.

Much discussion has arisen as to the proper time for operating these cases, some insisting on closing the lip and palate both, a few days after birth, others preferring to wait as long as

possible, getting all the structures closed by the time the patient is one and one-half years of age.

I follow the plan that has been carried out at the Mayo Clinic for the past ten years:

I operate on the lip at three months of age if the child is doing well, if not, interference is postponed until the general condition justifies operation.

If the hare-lip is accompanied by a very wide cleft of the alveolar process, this should be closed if possible, by a single wire suture at the time of closing the lip, but if this cleft is narrow, the tension of the lip itself will gradually close it by the time the palate is operated.

The most ideal time for closing cleft palates is at about the age of twelve months. This allows ample time for any secondary operations that may be necessary, so that the baby should have a good palate by the time it begins to talk. If the palate is holding and functioning at the time the baby begins to talk, the development of speech should be perfect.

It has been my observation that when these cases are operated earlier than the respective ages mentioned, the tissues do not heal so readily, as the structures have not developed sufficient blood supply and the shock of the operation is greater than when done later. In a few instances, perhaps, we will find the clefts interfering seriously with nutrition and in such cases, I believe, we are justified in taking the additional surgical risk of operating early.

No operation for hare-lip or cleft palate should be performed unless the baby is in good physical condition. No matter how accurately the sutures are placed, nor how gently the tissues are handled, if the baby is not gaining or the food is not agreeing with it, the operation will usually be a failure. These cases should always be put on mother's milk or modified cows' milk several weeks before operation. A child fed largely or entirely on condensed or artificial milk may look well, but will not stand operation satisfactorily.

Many types of these deformities are seen. The lip may be fissured on one or both sides with varying degrees of deformity. Single hare-lip may be complete or incomplete, single or double, with modifications of each.

A single cleft palate may involve the entire hard and soft palate, the hard palate only or just the alveolar process. Double hare-lip presents the most unsightly deformity of all, the nostrils are widened, the pre-maxillae stand forward, sometimes on the same plane with, and attached to the tip of the nose, leaving a very wide cleft of the alveolar process. Double cleft-palate is almost invariably complete and associated with complete double hare-lip.

#### TECHNIQUE OF HARE-LIP OPERATION (FIG. I.)

Several authorities believe that it is necessary to have a solid background before closing a lip,

but I do not think this is essential, because I have had many cases with alveolar clefts one inch or more in width brought into good approximation by the tension of the lip alone, when it had been closed at the proper time. This will usually have occurred by the time the child returns to have the palate closed. In single hare-lip the initial incision begins at a selected point inside the external ala of the nose and extends in a curved direction to a fixed point on the vermilion border of the same side. Then a point is selected on the vermilion border of the opposite side and with calipers, accurate measurement is made to a point at the inner side of the ala, (Fig. I, A.), so that the selected points on the vermilion border will be of equal distance from the points selected inside the nose. A curved incision is made through the mucocutaneous border on each side of the lip, extending between the points selected at the ala and vermilion border respectively. These parings are left long and fixed with small clickers, (Fig. I, B.). The lip is next freed completely from the maxillary bone in order to allow the parts to come together without tension. Bleeding is usually free at this stage but is controlled with pressure and specially designed forceps, (Fig. I, B.). The tissues should never be traumatized with ordinary forceps.

Silk worm gut is used for tension sutures. The first silk worm suture is placed just inside the nostril, being passed in through the mucous membrane and out beneath the skin, it is put in again just beneath the skin of the opposite side and out through the mucous membrane, which allows the suture to be tied on the inside of the lip and avoids the usual scar of tension sutures, (Fig. I, C.). A satisfactory cosmetic result is obtained only when the nostril is shaped to correspond to the normal side. The nostril should be made a little smaller than seems best at the time of operation, since the cartilage tends to spread in a few weeks. The second silk worm suture is passed in a similar manner between the fixed points on the vermilion margin, giving a continuous line to this border, (Fig. I, D.). The skin is then closed with interrupted dermal sutures or horse hair. (Fig. II.). These parings are left attached until the operation is almost complete, as it enables one to judge more accurately how much should be excised in order to leave a lip that is too full. Unless the lip is made *too full* at the time of operation, contraction occurs in a few months, resulting in an unsightly notched lip that requires a secondary operation to correct. This type of operation is indicated and usually successful in any type of single hare-lip.

*Double hare-lips* are more difficult to close but the same fundamental principles are observed as in operating the single types.

The pre-maxillary bones are usually protruding, but it is never necessary to resect a portion

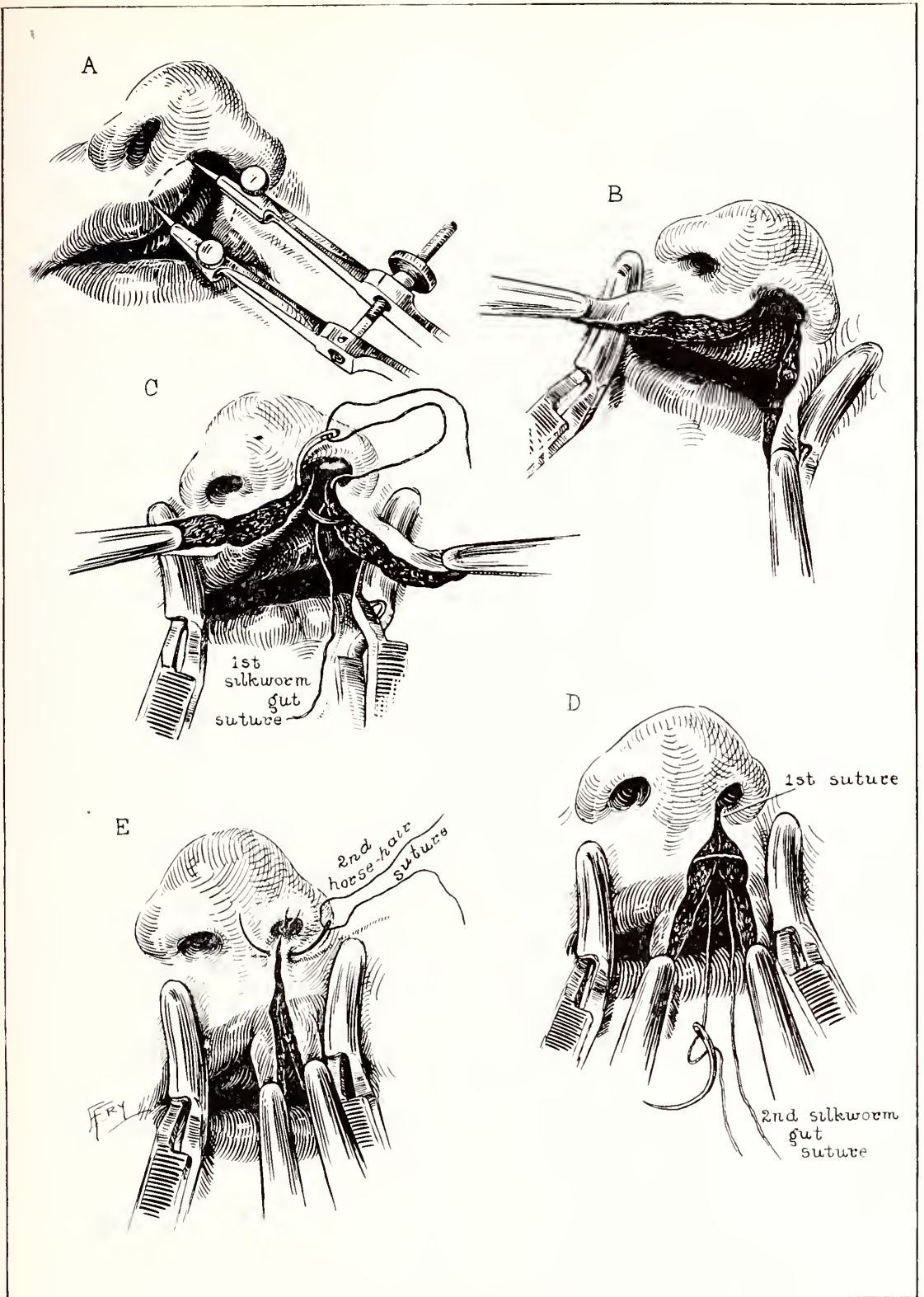


Fig. I. Operative procedure for hare-lip.

(Illustration by courtesy of Dr. New.)

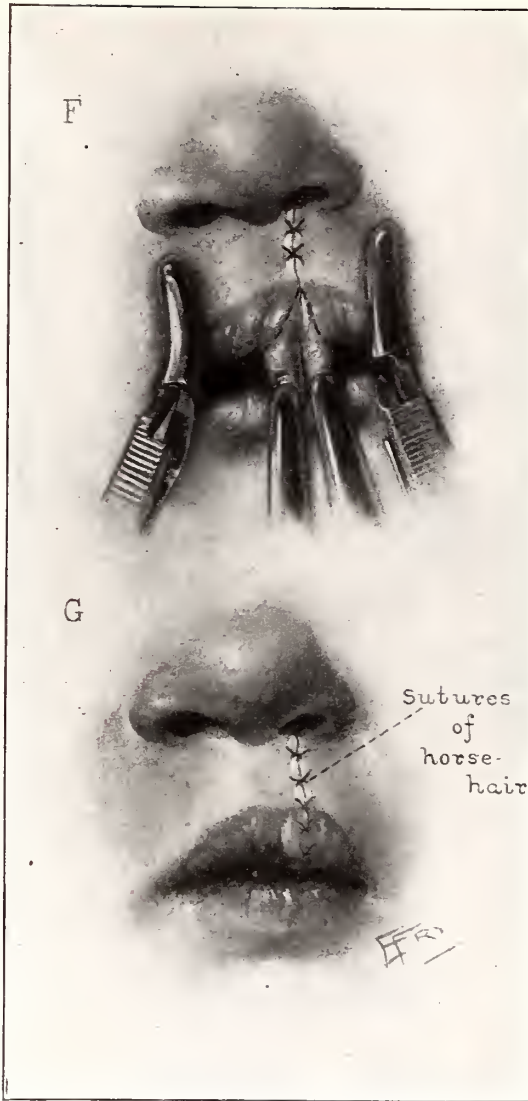


Fig. II. Note the fullness of the lip along the suture line and the slight pouting of the vermilion margin. (Illustration by courtesy of Dr. New.)

of the vomer, or remove the pre-maxillae, as advocated by some, in order to get the lip approximated.

For several months following the operation, the lip has the appearance of being too full, but eventually all structures will be retracted so that a lip of normal contour and appearance results. If we expect to get good results in hare-lip work, it is unwise to remove tissue and the removal of pre-maxillary bones or resection of the vomer is certain to result in a deformed lip.

The skin over the pre-maxillary bones, or so-called pre-labia, is next trimmed along the edge, leaving a square block of tissue to approximate the raw surfaces of the lip. Incisions are made similar to those described in single hare-lip and the structures completely freed from the underlying bone. The skin flap over the pre-maxillary bones is sutured with silk worm gut to the

corresponding sides of the lip and below this point the raw edges of the lip are approximated. In some cases the lip will come together with too much tension and it becomes necessary to make a straight horizontal incision in both sides of the lip from a point just below the pre-maxillae outward and upward for one-half inch. This permits better approximation and less tension, but should be avoided if possible.

In the incomplete double hare-lip, I follow the plan of Dr. New, at the Mayo Clinic. He trims the skin of the pre-labia into a triangular shape, so that the lip can be approximated without making the horizontal incision and this is certainly an excellent idea because it keeps intact the blood supply of the flaps and insures a better chance for healing. This method also has the decided advantages of giving better approximation of the vermilion border and of seldom resulting in a notched lip.

After the operation, stiff cardboard is placed on the arms to keep the hands away from the mouth.

Feeding is carried out by the use of a medicine dropper or a spoon.

The stitches are removed on the sixth day. Sometimes it may be necessary, in a few cases that come together with a great deal of tension, to apply an adhesive appliance to relieve some of the tension, but this should always be avoided if possible.

The mother should be instructed to bring the child back in four to six months after the operation; as sometimes when the lip is approximated perfectly, undue contraction occurs during healing and a slight notch is produced or one side of the lip will be pulled up a little more than the other. In such cases it may be necessary to do a slight secondary operation.

#### CLEFT PALATE OPERATION

The object of a cleft palate operation, is to restore the palate, in as far as is possible, to its anatomic and physiologic normal. Various types of operations and their modifications have been used, but in all the essential points of the technique are included either in the Langenbeck operation, the Brophy method, or that first described by Lane. In observing the principles of plastic surgery the operation of Langenbeck approaches the ideal more nearly than any other, but whatever method is used there are certain points to be observed to insure success.

The *first* is to handle all the tissues as gently as possible. These wounds cannot be protected against infection from food or air, so their natural resistance must be preserved.

A *second* point is to keep intact the branches of the posterior palatine artery, which is not done in flap operations.

A *third* point is to completely separate the palatine aponeurosis at the junction of the hard and soft palate.

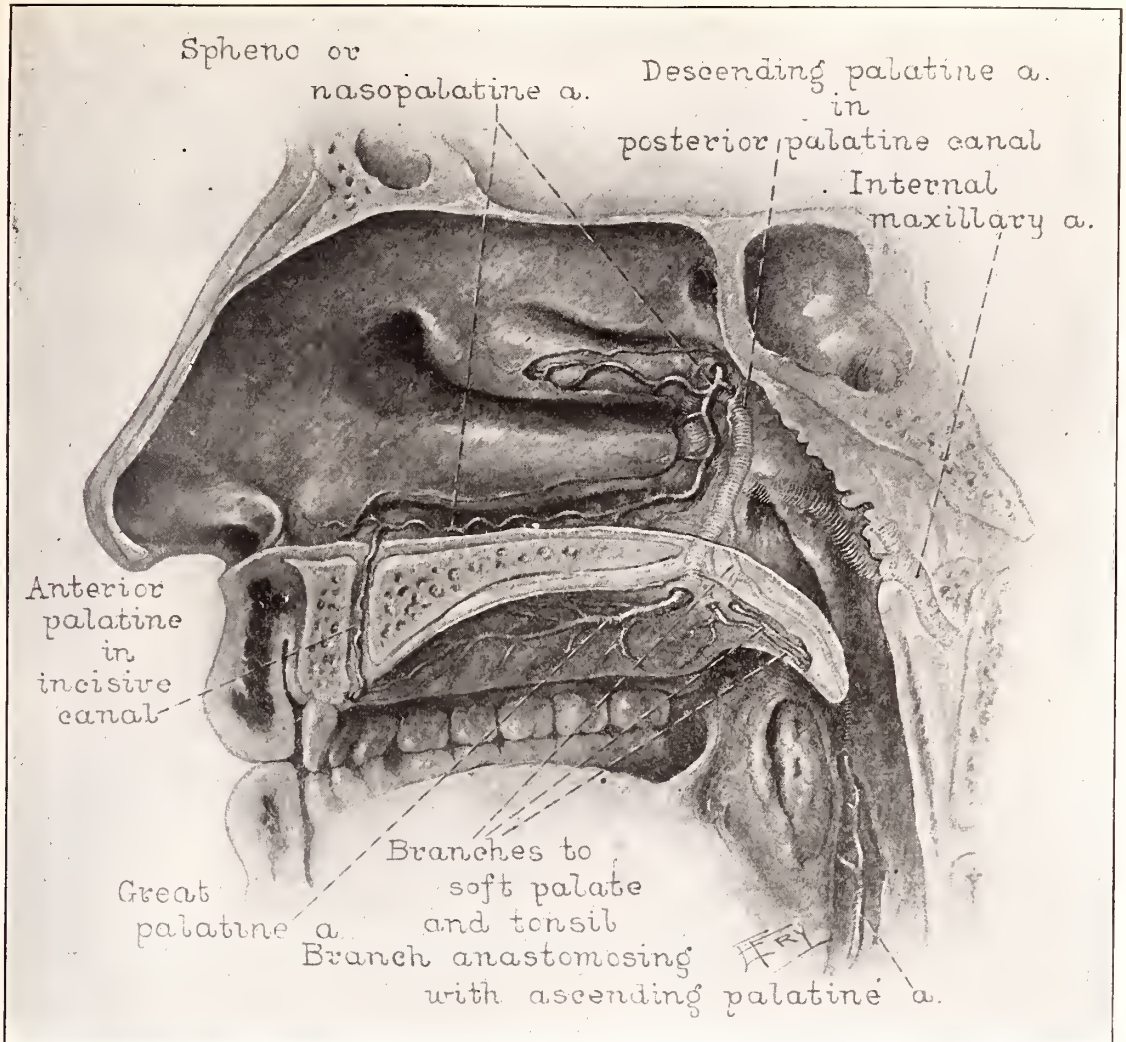


Fig. III. Blood supply of the palate. Note the position of the great palatine artery and its anastomosis. (Illustration by courtesy of Dr. New.)

And a *fourth* point is that closure should always be in the lip-palate sequence.

The Lane operation, as already mentioned, consists in turning a flap over from one side of the palate, including the mucous membrane over the alveolar process, with the mesial margin acting as a hinge, and suturing this flap into a pocket made by elevating the mesial margin of the opposite side. By this method many clefts can be closed with apparent success at the time of operation, but when the cases are followed, it is found that the ultimate results, in many, are far from good. It is generally agreed by most authorities that considerably more secondary operations are necessary following the Lane method than all others; in fact, Lane himself seldom used it except in extreme cases, or in secondary operations.

The Langenbeck operation, or some modification of it, should be done in all cases where there is sufficient tissue to permit of an edge-to-edge

approximation. I prefer to close my cleft-palates according to New's method, which is a modification of the Langenbeck operation.

An incision is made on both sides of the hard palate, close to the alveolar process and carried down to the bone. Ordinarily this incision is just long enough to admit a periosteal elevator and should extend forward rather than backward in order to avoid the posterior palatine artery and its branches, (Fig. III).

In both complete and incomplete clefts the muco-periosteum is elevated by means of an elevator, passed through this incision until completely separated from the bone. At this point the palatine aponeurosis is cut with curved scissors, which permits the entire palate to be lifted into the mouth and usually insures approximation without tension.

After the patient has been anesthetized the head is brought over the end of the table and allowed to rest in the lap of the operator who

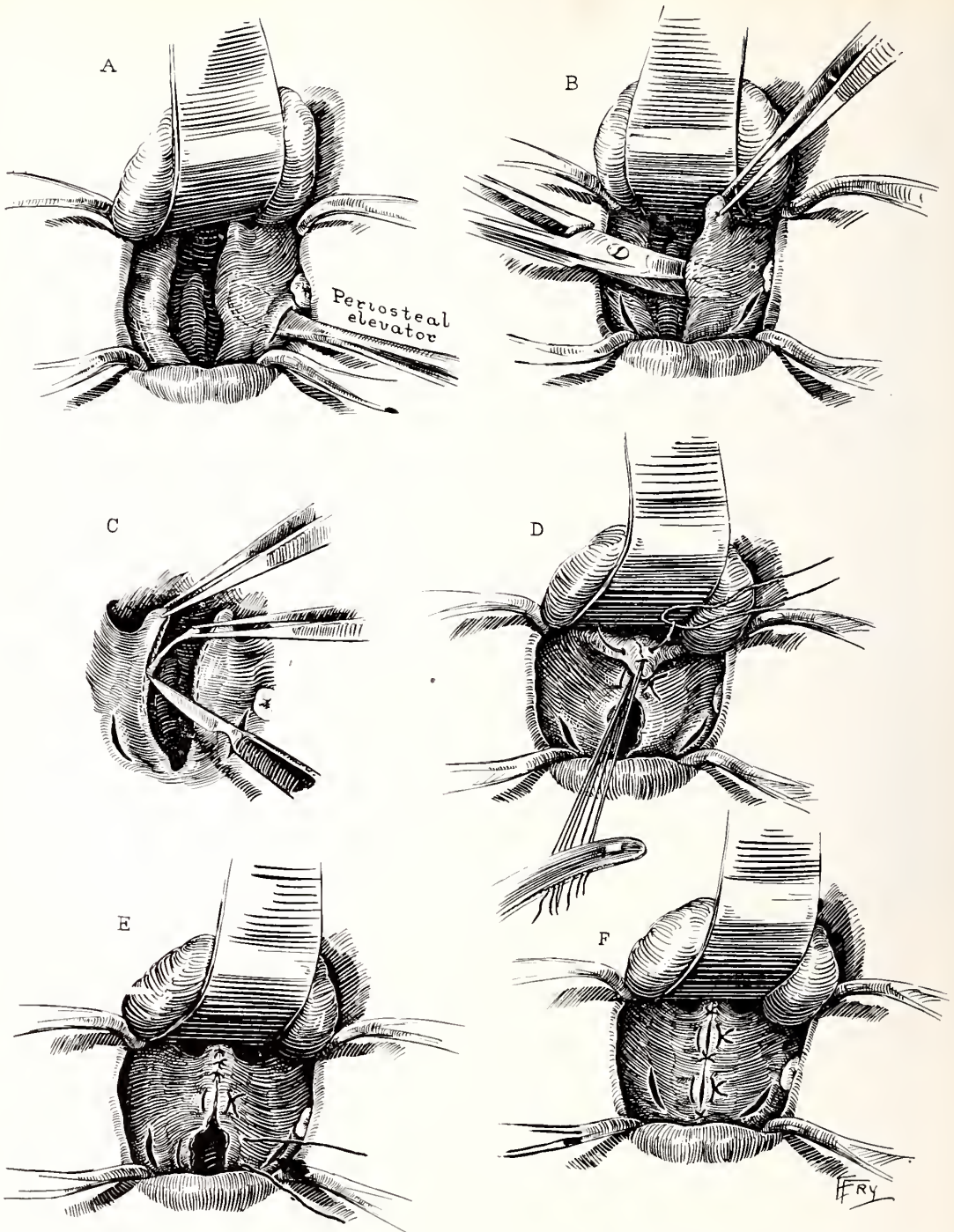


Fig. IV. Operative procedure for cleft palate.

(Illustration by courtesy of Dr. New.)

sits on a stool. A Whitehead mouth gag is used, while ether vapor is given through a canula passed into the nose, and the tongue is elevated by an assistant.

A lateral incision is made as near as possible to the alveolar process on both sides and sufficiently long to permit complete elevation of the hard palate. A small elevator is introduced through these relaxation incisions and the muco-

periosteal flaps well elevated, (Fig IV, A). The fibrous band that joins the soft palate to the bone of the hard palate is cut with curved scissors and the entire palate lifted upward, (Fig. IV, C).

Silk suture material is used in closing the palate. A mattress suture is first placed at the junction of the hard and soft palate. Posteriorly the soft palate is closed with interrupted sutures

placed along the oral and nasal surfaces, (Fig. IV, D).

The sutures are left long and caught with straight forceps in order to lift the palate and uvula into the mouth, thus affording better exposure. After this the hard palate is closed with two or three mattress sutures, (Fig. IV, E and F).

It is probable that some bad results are due to using too many sutures so it is always advisable to limit the number as far as possible. When the tension caused by closure of a palate is pronounced, a silk worm suture should be passed through the anterior pillars and left from three to four days. It relieves the tension somewhat and prevents movement of the structures. The silk sutures are not removed as they usually slough out in eight to ten days. Sprays of antiseptics should not be used, for in some cases I believe they delay healing and tend to cause sloughing. Absolute quiet and liquid diet for two weeks are the most important points to observe in the post-operative care.

Successful results with this operation can be obtained in proportion to the operator's experience.

If the operation is done carefully, a majority

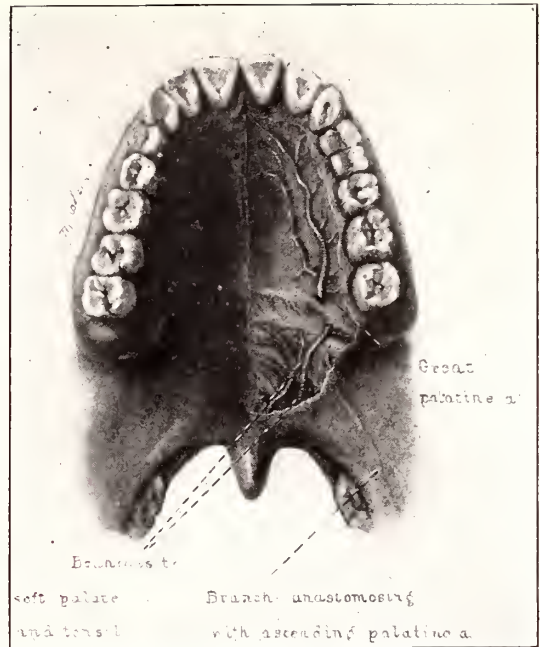


Fig. V. Blood supply of the palate. (Illustration by courtesy of Dr. New.)



Fig. VI. (1) Complete double hare-lip. (2) Same case six days after operation. (3) Complete single hare-lip one month after operation.

of these clefts should unite after the first operation, but one should always bear in mind the possibility of some stitches breaking down, and a secondary operation being necessary.

I believe that all congenital cleft palates, no matter how bad, can be closed, if properly handled.

303 OHIO BLDG.

NEW AND NON-OFFICIAL REMEDIES

During April the following articles were accepted by the Council on Pharmacy and Chemistry for inclusion in New and Non-Official Remedies: Abbott Laboratories—Izal; Izal Disinfectant Powder. Intra Products Co.—Ven Sterile Solution Mercury Benzoate, 1 cc. Merrell-Soule Co.—Powdered Protein Milk—Merrell-Soule. Parke, Davis & Co.—Pertussis Vaccine; Pneumococcus Vaccine (4 types); Streptococcus Vac-

cine Polyvalent (Scarlatina); Typhoid-Paratyphoid Vaccine (Prophylactic). Seydel Manufacturing Co.—Benzocaine-Seydel. Winthrop Chemical Co.—Iothion; Iothion Oil; Sabromin; Sabromin Tablets, 8 grains.

Acriflavine-Heyl and Proflavine-Heyl: These products are now marketed by the National Aniline & Chemical Co. and the Council has continued the acceptance for New and Nonofficial Remedies under the new firm name.

## The Stem Pessary\*

A. F. SPURNEY, M.D., F. A. C. S. and P. M. SPURNEY, M.D., Cleveland

*Editor's Note.*—The Drs. Spurney insist that if the following important details are observed, the use of the stem pessary in properly selected cases, is a simple effective method of cure in certain types of dysmenorrhea. The operation should only be done in the hospital. A careful selection of cases, both as to correct diagnosis and elimination of pre-operative infection, should be made. There should be a most careful selection of the size of the stem and the operation should be repeated if the stem slips down. The most desirable type of stem is a self-retaining spring with a cervical button. Pregnancy is an incidence and should not be made the cause of operation.

IT IS ENCOURAGING to note the increasingly favorable attitude toward the stem-pessary, even though it is still frowned upon by many prominent gynecologists, who remember only the early days of its indiscriminate use under poor aseptic conditions.

It is the purpose of this brief paper to show that the use of the stem pessary, in properly selected cases, is a simple effective method of cure; and further to demonstrate, by analysis of cases, how both the technique of its employment and later results may be improved.

### SCOPE AND UTILITY OF THE STEM PESSARY

The stem pessary is of use only in those cases of dysmenorrhea associated with anti-flexion of the uterus, or of a narrowed internal or external os. Its function is to develop the weakened musculature of the anterior uterine wall; it will also, in those cases of infantile uterus, so often found in this condition, assist in the development of the entire uterine musculature. There is the further function of permanently dilating a narrowed os, and allowing a free escape of uterine secretions.

Results from the use of stem pessaries are purely mechanical, the development of the uterine musculature being a result of the continued effort of the uterus to expell a foreign body. This development of the uterus and the institution of proper drainage permit an improved menstrual function. The ovaries are not assisted in development, but they are indirectly given a better opportunity to functionate, thus benefiting the internal secretions and the organism as a whole.

Patients applying for aid in dysmenorrhic conditions, aside from their primary complaint, are often of a severe neurotic type as well as in poor physical trim. Directly, then, their physical condition is assisted by the alleviation of pain and distress; indirectly the internal secretions, about which so little is as yet known, but which are undoubtedly present, are benefited, and it is found that the patient is stabilized mentally. If ovarian function is deficient, it is not assisted. In such cases recourse must be had to organotherapy, though with questionable results.

A frequent and happy sequence of the use of the stem pessary is pregnancy. This result is due both to the relief of mechanical obstruction, and to the development of the uterus allowing

matriculation of the ovum. It is a known fact that cases with anti-flexion of the uterus, becoming pregnant without interference, are cured.

It must be remembered that this procedure is primarily for the cure of dysmenorrhea. As the patient frequently presents herself more for the cure of sterility, to promise her too much is wrong. The problem of sterility is a big one, involving so many factors, that it is impossible to state that the remedying of this or that apparent defect will give assured results.

### ILLUSTRATIVE CASE

The history of these cases are quite typical, viz:—

Hospital case (24862) Mrs. M. M., aged 23. Housewife. Married 3 years. Complains of severe backache and severe abdominal pain with menstrual flow. Pain precedes flow by 2 or 3 days. Periods every 3 to 5 weeks, lasting 2 to 5 days. Scanty flow, at times with clots. Patient of fairly good appearance but says she lacks strength and is thin; also very nervous. Heart and chest negative. Vaginal examination shows marked antifixion of the uterus. Uterus is small, freely movable. Tubes and ovaries negative. Patient has never been pregnant and desires children.

### TREATMENT

Treatment by medical gynecology consisting of tampons and drugs is useless. Plastic operations designed to straighten and enlarge the os are difficult and fail absolutely in the important factor of developing the uterine musculature. Dilation and curettage will often give temporary relief, but the cure is not permanent. The use of the stem pessary is a simple procedure and one more certain of success.

### SELECTION OF CASES

Great care is necessary in the selection of cases. *First*, all cases should have definite physical findings—the stem pessary should not be used empirically. *Second*, all cases with any trace of infection along the entire genito-urinary tract should be excluded until cleared-up. This applies especially to pelvic infection, involving the tubes, and to cervical erosions. Operative infection of these cases is very probable. Further, dysmenorrhea may be due entirely to in-



fection, and it is known that anti-flexion of the uterus may be present without symptoms.

#### SELECTION OF STEM PESSARIES

The selection of the stem pessary is important; the Carsten model has been used in the majority of this series, and exclusively in recent years. It is a self-retaining spring stem of silver with a slight anterior curve, and with a cervical button. It will corrode in the vaginal, but not in the uterine secretions. The great advantage of this type of stem is that no suture or mechanical device is needed to keep the stem in position; the occasional failures due to slipping are certainly far better than the risk of infection from a permanent suture. Slipping is greatly overcome by experience in choosing the proper size of stem. This stem will not, if properly chosen, injure the uterine mucosa, and does allow ample drainage.

#### OPERATIVE TECHNIQUE

The operation should be done in the hospital; office placement even with rigid asepsis is certain of failure in any series, for the patient should be kept quietly in bed until the stem is firmly set and all dangers of infection passed.

The patient is prepared the night previous by shaving and careful cleansing of the parts; in the operation room the patient is placed in the dorsal position, vulva and vagina are thoroughly irrigated, and the parts are painted with picric acid solution. General anesthesia is always used.

The cervix is thoroughly dilated. Curettage is then performed, for these patients often suffer with endometritis. The sound is inserted, and the depth of the uterus is carefully noted.

The next step is the most important. A stem must be so carefully selected as to reach well up into the fundus of the uterus; yet not be so long as to injure the mucosa. This allows the arms of the stem to separate to the fullest extent, and is of greatest importance in holding the pessary in place. The stem is then carefully inserted, note being made that it stays in position. The vagina is not packed.

The patient is returned to bed and kept there for one week. She is then discharged, being cautioned to do but very light work and to report any alarming symptoms. The patient also reports after each menstrual period. The stem is left in position for six months and then removed. This period is perfectly safe and usually sufficient for relief of all symptoms. If the stem slips down no attempt at replacement should be made, but the entire operation should be repeated.

#### RESULTS

Ninety-two cases were reviewed; seventy-nine cases (85.8 per cent.) were relieved or cured; thirteen cases (14.2 per cent.) were failures; thirty-four cases (36.5 per cent.) afterward became pregnant. Patients ranged in age from twenty-one to thirty-seven years; in married life

from one and one-half to fifteen years, the general average being two and one-half years. Four unmarried women were included in the series.

Infection following operation occurred in three cases, all making their appearance from two to six weeks after operation. The reason for the late appearance of these infections is not clear, for in no case was there any ill effect immediately. Most probably the result was due to a stem too long thus irritating the fundus, lowering resistance and allowing infection to take place. Not one of these cases was re-operated; indeed, one became pregnant, one was later relieved, and one was a complete failure, though the evidence of pelvic infection entirely cleared up.

No hard and fast line can be drawn between those cured and relieved; this should be evident because of the marked variation of the individual. No case is reported as relieved or cured which was not under observation for at least one year; no case is reported as relieved whose improvement was only temporary; in fact no case under observation over a year has had any recurrence of symptoms.

Reviewing the cases reported as failures reveals the all important fact that in ten of thirteen such cases the stem slipped down: it has also been learned from experience that office replacement of these stems failed, and that these cases should be re-operated. Cases of this type will be fewer with a more careful selection of the stem.

The percentage of pregnancy in any series will not change markedly with the success of this operation; the percentage given here, however, would be somewhat higher by eliminating unmarried women, and those cases not under observation for periods up to three years. The possibility of pregnancy is increased, but there may be any of a number of conditions contributing to sterility which were not determined. As an example, it has been noted in this series that three cases sterile with one husband have immediately become pregnant with the second. It is, therefore, hard to state in what percentage we have increased the chances of pregnancy.

#### SUMMARY

In recapitulation, the most important facts brought out by this study are:—

- (1) That the operation should be only performed in the hospital.
- (2) That a careful selection of cases, both as to correct diagnosis and elimination of pre-operative infection, should be made.
- (3) That there should be a most careful selection of the size of the stem and the operation should be repeated if the stem slips down.
- (4) That the most desirable type of stem is a self-retaining spring with a cervical button.
- (5) That pregnancy is an incidence and should not be made the cause of operation.
- (6) That the method is simple and effective.

# Personal Experiences with Local Anesthesia Especially in Tonsillectomies

C. ARBUTHNOT CAMPBELL, M.D., Steubenville

*Editor's Note.*—As a result of his personal experience with local anesthesia, Dr. Campbell concludes that absolute anesthesia can be obtained by local anesthesia and that it is safer than general in the vast majority of cases. If local anesthesia is good for a bad risk, Dr. Campbell argues that it is equally good for a good risk. Local anesthesia requires a more finished technique than general. Its use for tonsillectomy in children is often an advantage but it must be remembered that the psychic factor is of great importance.

**S**INCE KOLLER, of New York, discovered cocaine, in 1884, followed by the pioneer work of Reclus and Schleich, there has been steady progress in the use of local anesthesia. Today operations are performed under local anesthesia that formerly were considered impossible without a general anesthetic. Vision and continued patient efforts will affect just as brilliant results in the future. In the past the barrier to our progress has been cocaine's toxicity. Drugs are now obtainable, however, which induce anesthesia almost equal to that of cocaine, but which are many times less toxic. In other words, we have *absolute anesthesia with perfect safety*.

## COMBATING SHOCKS

The degree of shock, attendant upon the different forms of anesthesia is of interest and value, as shock is usually blamed for many of our bad results. Experimentally it has been shown that pain impulses with tissue trauma are carried to the brain, producing shock. The degree of shock depends not only upon these two factors but also on other conditions as hemorrhage, circulatory depression, etc. In regional anesthesia the pain impulse arises but is prevented from passing to the brain. In local anesthesia the pain impulses are prevented from arising and therefore they cannot, of course, be carried to the brain. Thus one of the causes of shock is prevented.

Tissue trauma is another cause of shock and this factor is eliminated in local anesthesia by working delicately with the tissue, as this prevents pain, and pain is incompatible with successful local anesthesia.

Fear, as a mental phase, is one of the well recognized causes of shock. Clinical and experimental experience has demonstrated this many times. Local anesthesia eliminates the fear of general anesthesia and gives instead confidence and stability to the nervous system. When the patient realizes the absence of pain and is amenable to the encouragement of the surgeon, there is no fear. The more extensive use of local and regional anesthesia for fearful patients will be of especial benefit.

The future may bring forth specialists in regional and local anesthesia, just as there are today specialists in general anesthesia. The danger and unpleasantness of the general anesthetics will not be considered in this paper.

## SELECTING PATIENTS

It must not be thought that local anesthesia can be used on every patient for tonsillectomy. Indeed anesthesia cannot be used on every patient, nor should it be attempted, not because of the anesthesia *per se*, but because of the patient's reaction to the anesthesia and the operation. Personally, in considering local operations on the nose, throat and ear, I have found it convenient to subdivide subconsciously my prospective cases into three arbitrary classes as follows: (1) those who will react as children, including, of course, the children; (2) those who will react abnormally due to unstable nervous systems; (3) those who will react as normal adults. The last group are the ideal local anesthesia patients. Extensive experience has convinced me of the value of this arbitrary classification, for by it the mental control of patients is gauged in order that they may derive the full benefit of the local operation. In our pursuit of a safe, uniform and absolute anesthetic the importance of the mental phase of local anesthesia has been neglected, to the patient's disadvantage. Experience has shown that patients, who upon first examination seemed unfit for the local anesthesia, are found upon more careful and painstaking study to be ideal or at least good local anesthesia subjects. This gradually reduces the percentage of classes (1) and (2).

## LOCAL ANESTHESIA IN CHILDREN

*In children*, local anesthesia has the same advantages as in adults, although it is more difficult to make the little patients rest after local than after general anesthesia. However, the same statement often applies to adults as well. Children of a mentality of six years and upward react so well to local anesthesia for tonsil operations that the average tonsillectomy may be done with the same or greater beneficial results than in adults. Farr<sup>1</sup> recently stated that: "more refined technique and tact are essential in operations on children under local than general anesthesia". It is evident that the same principle must be maintained in children as in adults only to a higher degree. I refer especially to absolute anesthesia, refinement of technique, minimum of bleeding and confidence of the patient. Difficulty in obtaining a child's confidence, occasionally encountered, is influenced by the home training, constitutional diseases such as tuberculosis, congenital syphilis, malnutrition; for then the patient lacks the stability

of being on his own initiative, even with the strong mental support, of the surgeon, for the short time of the operation. It should also be borne in mind that a child's nervous system is not so stable as an adult's, and that his mind is governed by instinct and not by reason. Therefore the anesthesia must be an absolute anesthesia. One can readily explain a slight pain to an adult whereas with a child his trust is broken and control is lost automatically. He becomes apprehensive of every movement made by the operator and changes rapidly from a quiet, obedient and confident child to one who cries and struggles, requiring a general anesthetic to complete the operation.

This mental process has been clearly portrayed by James<sup>2</sup>: "The native (inherent) interests of children lie together in the sphere of sensation. Novel things to look at or novel things to hear, especially when they involve the spectacle of action of the violent sort, will always divert the attention from abstract conceptions of objects verbally taken in." This statement takes on a peculiar meaning when considered from the standpoint of the present subject as it agrees exactly with what has already been noted, *namely*, that, irrespective of the interest aroused by the operator's brilliancy of conversation, the child's attention and confidence are immediately lost when he experiences an uncomfortable feeling of pain. James, states furthermore, in discussing the arousal of the child's interest: "from these facts there emerges a very simple abstract program for the teacher to follow in keeping the attention of the child. Begin with the line of his native interests and offer him objects that have some immediate connection with these." The instincts and impulses which point out the child's personality, may be adapted by the operator to suit his particular work and technique. "These native reactions are fear, love, curiosity (especially for novelties), imitation, emulation (to imitate what you see another doing in order not to appear inferior); distinction between the manifestations of the two impulses is difficult, so intricately are their effects mixed; emulation is the very nerve of human society, ambition, pride, ownership, constructiveness."

Local anesthesia has modified and in some cases changed the technique of operations, always effecting an improvement. Rough technique cannot be used if pain is to be avoided. A familiar example of this is the change in the technique of tonsillectomies of the hemorrhagic era, that required a corps of assistants and a table of instruments. Now tonsillectomy is a truly surgical procedure and the refinement, influenced greatly by the demands of local anesthesia, will continue to progress as surgeons take an increased interest in the work. If they have been accustomed to disregard the delicacy of the tissue, it will soon become patent to them

that a radical change must be instituted to insure success without pain.

#### SEDATIVES

In practically all cases, the misapprehension commonly manifested by the hyper-sensitive can be relieved by a sedative *plus* mental control. When this misapprehension is transmitted to the operator he hesitates and acquires the habit of demanding a patient of high standard before he will use local anesthesia. The sedative of choice varies with the individual operator, operation and patient. I require that the sedative shall be non-toxic and induce no other ill effects, while producing the desired results. As one looks over the list of possible drugs, one thinks first of morphine. In the proper dose for selected patients, morphine is the best; more than 1/6 grain of morphine may induce its emetic action, when given either alone or in combination with other drugs such as scopolamine or atropine. With the use of 1/6 grain of morphine there is only a very small percentage of emesis and at the same time the action of the morphine itself is obtained. Heroin is too toxic. Chloral hydrate is too slow as well as too toxic. Chlorotone in 5 and 10 grain doses alone or combined with one of the synthetic hypnotics, such as barbital or sulphonal, in small doses has been found useful. Chlorotone is safe, prompt, of short duration, and what is of advantage in nose and throat surgery, it is a gastric sedative. In tonsillectomy especially the tendency to nausea may be influenced. Chlorotone in from 5 to 10 grain doses with a hypodermic injection of morphine of 1/12 to 1/6 grain is a most effectual sedative combination when using local anesthesia in nose and throat surgery.

#### LOCAL ANESTHETICS

The principal local anesthetics used alone and in combination are five; *viz.*, cocaine, procaine, apothosine, stovaine and quinine-urea hydrochloride. Each drug has its advantages and its disadvantages. My experience with them, personally and clinically, has been in nose, throat and ear surgery, especially tonsillectomies. It must be borne in mind that the results of the anesthesia are influenced not only by the drug used but many other factors, such as the personal equation of the operator, the technique of the operation, the technique of injecting the anesthesia and the use of general sedatives. For instance, either cocaine, procaine or apothosine in 0.5 per cent. solution is sufficient for tonsillectomy by the average dissection method but is not of sufficient strength for a technique where excessive crushing or pulling is used. Thus we realize that the differences in clinical results often vary, when the same drug is used in the same strength for the same operation but not with the same technique. In other words, one drug in a stated solution is not of the same value to all surgeons for the same operation.

My experience with stovaine has been too limited for me to presume to pass judgment upon it. Cocaine hydrochloride in 0.5 per cent. solution, using an ounce or less to the patient, as in a tonsillectomy, will produce no constitutional reaction in 75 per cent. of the cases, of the remaining about 20 per cent. will show cocaine reactions and 5 per cent. true cocaine poisoning. If a 0.6 per cent. solution is used the susceptibility will rapidly increase; whereas with a 0.4 per cent. solution the reaction will just as rapidly decrease. However, it has been reported that a 0.01 per cent. solution has produced cocaine poisoning of an alarming nature. Absolute anesthesia is usually produced by a 0.4 per cent. solution. Apothosine in 0.5 per cent. solution, if not more than an ounce is used to the patient, is non-toxic. I have not had occasion to use stronger solutions than this. However reliable reports of the injection of much larger quantities than this also show uniformly good results without toxic symptoms. Solutions weaker than 0.5 per cent. can also be used and with satisfactory anesthesia. Apothosine induces anesthesia rapidly, in less than five minutes, but the absolute anesthesia cannot be depended upon for a longer time than fifteen minutes, although in many cases (and in certain operations) anesthesia of a good grade will last considerably longer.

Quinine-urea hydrochloride has deservedly fallen into disrepute because of the post-operative reaction it produces upon the tissue in the nature of sloughing and tardy granulation. A 0.5 per cent. solution is non-toxic in ounce quantities for tonsillectomies and requires fifteen to thirty minutes for anesthesia. The anesthesia thus obtained is absolute and lasts several hours, the effect gradually passing off. The duration of the anesthesia is the drug's only advantage, but this is more than counter-balanced by the retardation of tissue repair. In other specialties it is used in much stronger solutions with success and without toxic symptoms.

Procaine (novocaine) in 0.5 per cent. solution, an ounce to the patient for tonsillectomy, is non-toxic. Absolute anesthesia begins in from seven to ten minutes, lasts at least thirty minutes and is usually entirely satisfactory. A 1 per cent. solution may be used with the same safety as the 0.5 per cent. solution in an ounce quantity. Compared to cocaine of equal strength and quantity, procaine may be used with far greater safety, but the anesthesia is not so pronounced. Apothosine and procaine are at present the safest and deservedly the most popular local anesthetics.

The comparative toxicity of the mentioned local anesthetics, except quinine-urea hydrochloride, has been determined by the Council on Pharmacy and Chemistry by the intravenous injection in cats. The fatal dose, in terms of milligrams per kilogram ranged as follows:

Cocaine .....	15	mg.
Apothosine .....	20	mg.
Stovaine .....	25-30	mg.
Procaine .....	40-45	mg.

#### PRECAUTIONS

The clinical dangers arise more from idiosyncrasies or the method of injection, than from the local anesthetic itself. A recent survey of the causes of toxicity from local anesthesia, as used by laryngologists, brought forth the information that one of the more frequent causes was the injection of the wrong concentration or the wrong drug or both. That is, instead of injecting a 0.5 per cent. solution of cocaine, an injection of 5 per cent. or stronger solution was given, some cases resulting in death. The toxicity of the solution was also influenced by the rate of injecting. For this reason the solution should not be injected rapidly with a large bore needle. Use rather a small bore needle with a slow injection, for it must be remembered that there is a possibility of entering a vessel and placing the solution directly into the circulation.

The addition of adrenalin chloride enhances the anesthetic action, as well as the vasomotor constriction, slows the time of absorption, thus reducing the toxicity, whatever anesthetic solution is used. An excessive quantity of the epinephrine produces cardiac and vascular symptoms. Consequently its use should be guarded in patients having cardio-vascular-renal abnormalities.

The technique of injecting is of the utmost importance in tonsillectomies, as in other operations on the nose and throat. The alleged advantages of infiltrating the pillars, tonsil parenchyma and various parts of the soft palate have not stood the test of time. The oedematization of the fauces thus brought on is unnecessary, if not harmful, for the absence of the old landmarks and the innovation of others tend to make dissection slower and more difficult. Patience, gentleness and care when injecting make impossible any unpleasant symptoms such as pain and roaring in the ears when force and haste are used.

#### SUMMARY

1. Absolute anesthesia can be obtained by local anesthesia.
2. Local anesthesia is safer than general in the vast majority of cases.
3. If local anesthesia is good for a *bad risk* it is equally good for a *good risk*.
4. Local anesthesia requires a more finished technique than general anesthesia.
5. Local anesthesia for tonsillectomy in children is often an advantage.
6. The psychic factor is of great importance in local anesthesia.

#### REFERENCES

1. Farr R. E.: Trans. Sect. Dis. Child., 162, 1920.
2. James, W.: Talks to Teachers on Psychology
3. P.C. Council Pharm. & Chem.: Jour. A. M. A., Jan. 24, 1920.

# The Medical Profession---Its Objects, Opportunities and Obligations Discussed in Annual Address of President

WELLS TEACHNOR, M.D., V. A. C. S., Columbus

At the expiration of my term as President of our Association, realizing as I do the responsibilities resting on me by virtue of the honor which you have accorded me, it is not without conflicting emotions that I undertake to voice for you and for our Association a resume of group purpose and a creed of professional service.

Permit me to say at the outset, in spite of occasional differences within our ranks, that after more than a decade of close contact with our organization affairs, I believe whole-heartedly in the purpose and function of our affiliation through our Ohio State Medical Association and that I have a steadily increasing confidence in our future; that such affiliation is of inestimable benefit as well as a vital need to our profession and to ourselves as individuals.

I am truly grateful for the assistance, advice and co-operation of the other officers, the council, which has labored unceasingly to promote your interests, the committees and the membership at large; which latter through the constituent and component academies of medicine and county societies, has made possible all the worthwhile activities and accomplishments of our Association.

It has been well said that the active members of the county medical societies are the backbone of the profession. Each county society is a unit vertebra of the profession of the state.

## OUR POSITION IN THE CYCLE

In order to correctly judge of our group position in a trying period of social upheaval let us briefly sketch developments within our own memory. Up until the present generation medical practice was purely individual. The physician had little if any responsibility to his community since there was no act of his which was conceived as affecting society at large. Medical education itself was individualistic. The idea of private instruction through preceptors was only further developed into medical schools and colleges, often owned and operated by the professors who taught there. The question of expense in carrying on such a system of scientific education led to abuse, for in order to provide funds prospective students, with inadequate preliminary equipment, were admitted.

As the social aspect of medicine expanded, the state gradually recognized the value of taking over such medical schools as then existed or of providing for them as a unit in university development. The need for better trained physicians thus became a subject of public concern. But even this was not sufficient. Expensively equipped laboratories were required, facilities for

research were needed, hospital connections were demanded. And thus developed the idea of endowments with provision for full-time instructors.

Throughout that period of development with its radical change in medical education there came a broadening conception of the function of medical service as a social need, as an educational medium, and so also was born the public health viewpoint, the appreciation of sanitary provisions, quarantine measures and modern public health administration.

With little if any time for delicate adjustments, for a realization or study of sudden problems, much less any opportunity of meeting pending hazards; with only a precipitous clamor for the solution of social relations and responsibilities which had scarcely begun to exist, the medical profession found itself in a maelstrom of social, economic and political perils.

Then the war came multiplying and confounding an already seething, almost aimless social era. Up rose reformers, social surveyors, self-styled experts and economists—clans, droves and armies each striving to out-clamor and subdue the others.

And so "paternalism" and "socialization" became the battle cries, and we were plunged into a period of regulation, restriction, repression.

And where has the medical profession found itself in this cycle of events? If we have been disturbed and harrassed, we must be sincerely thankful that it has been no worse. And it would have been worse had not medical organization existed. Even yet questions of medical economics, social relations, public policy and legislation, involving as they do not only the entire status of the profession but the welfare of the state, arouse too little general interest among us; such consideration being too often left to a comparatively small group of public-spirited members.

And still those who have served us, who have achieved most for us, are often bitterly criticized because, even though there have been victories against odds, even though accomplishments were secured in the face of overwhelming forces, there has been an infrequent reverse—an occasional casualty—along the line of battle. Those who have had the temerity to criticize most have at best been among the reserves, not those who on the battle line have striven hardest to uphold the principles, purposes and integrity of our profession.

## PUBLIC RELATIONS

Public welfare, industrial justice, health and sanity; these are fundamental considerations to the progress, the social structure of our civili-

zation. In spite of the fact that medical service intimately touches these problems, what part has our profession taken in the present crisis? In spite of the fact that the physician has the closest view of the intimate lives and thoughts of the people; why should he, why should we as a group play so small a part in the disposition of individual problems as an integral part in the public existence?

If the world is to progress the medical profession must render its best service and prove itself indispensable to the main group of society. To paraphrase an axiom, "By our deeds shall we be known."

#### SPECIALIZATION—GROUP PRACTICE

Specialization in medical science is a natural development. If properly developed it should insure more expert service and more evenly distribute the burden of caring for the sick and disabled. The same principle holds true in group practice, insuring more complete facilities for practice and more complete service to patients. There is no reason, provided such service does not become mechanical and lose contact with the general profession, why such developments should interfere with the individual practitioner or with the family physician who is and should continue to be the large group, the fundamental part of the medical profession, provided justice and ethics are adhered to. Safeguards, however, must be established to prevent the tendency toward stereotyped routine; individualism in each case must be preserved.

To insure the permanency and success of the family physician, the general practitioner, the profession as a whole must stand united on the principle of the domiciliary visit, the close and intimate contact with family life, the primary service to the ill and distress of the social structure.

All proposals, all fads of paternalism or socialization which would destroy or interfere with such relationship or with the freedom of the public to choose its individual medical service, are fallacious and must not be permitted to materialize.

#### MEDICAL EDUCATION

There are those who complain against full-time instructorship in medical education. But after all, aren't there many advantages in such a system? There is no reason why such instructors should lose what we please to term the "medical viewpoint." What if they are maintained through foundation subsidies and large endowments? Isn't the primary purpose to educate better doctors to care for human ills? At any rate the system is here to stay. It may require some modification, some readjustments, but if there exist some abuses in the matter of treatment or operation of patients, these are perhaps necessary incidents to a comprehensive plan

for providing completely trained physicians. Hospital facilities are essential in instruction not only in surgical cases but to an equally great degree in medical teaching. Bedside instruction, clinical material—these are necessary and must be provided.

The great need is for closer affiliation between the medical profession as a whole and medical education as a function. Medical curricula should not only comprehend the definite sciences with which we are concerned but it should include those subjects of a social and economic nature with which every physician is later confronted.

There should be courses in medical history comprehensive enough to include an insight into the various innovations and modifications in past decades and centuries; medical psychology with the social angles on psychiatry, applied to sociology; medical economics to include not only business office routine, records, bookkeeping and collections, but a resume of medico-economic relations, with an insight into industrial medicine, as well as a complete history of medical legislation, its causes, results and relationship to social and political developments.

Thus schools of medicine must develop broad gauge, farsighted, skillful practitioners, able investigators, public spirited citizens. By training and tendency, the times demand that physicians be not only scientific men but leading citizens with very definite responsibilities in guiding and directing public thought on public questions for which they should be peculiarly fitted.

Too long have we had in our profession the inert group which desires only that things remain as they are. But even this group is not so dangerous as that which favors any and every change in the existing status, those actuated by distrust and discontent. However, we must all develop a vision and be willing to adopt new methods, new alignment and new conditions the value of which can be demonstrated; neither welded to the past as are the ultra-conservatives, nor plunging rashly into the future as are the radicals.

The question is: are we as individual practitioners going to restrict ourselves entirely to the treatment of individual patients? or as a group, in addition to that basic duty, are we going to assume our full and just share of the responsibilities for the well being of society as a whole? If we are willing to assume these present-day demands, well and good, the leadership is ours. If, however, we do not qualify through judgment and inclination, we cannot complain when others take up the work.

If we are to have the leadership to which we are entitled we must be consistent in our policy based on knowledge of conditions and how to meet them; not based on prejudice and selfish interest.

We have seen examples recently of self-constituted committees, individuals and groups sometimes actuated by self-interest, proceeding without a knowledge of or consideration for the funda-

mental problems of medical organization. Spasmodic individual appeals to the legislators and the public tend to destroy the position and influence of organized medicine. To be effective, procedure must be through the recognized agencies. The Council of your State Association, together with your standing committees are constantly considering problems, not as detached issues but in their inter-relationship to fundamental policies. To proceed otherwise creates friction and dissension and destroys organization effectiveness.

The principle is clear. Will we recognize it? Our group policy must be based on justice and service to the public. That is the test. This does not mean that medical individualism is to be submerged; but rather that the medical viewpoint is to be broadened. It does not mean that recognition of, and reward for genuine medical service are to be lessened; but rather that they are to be enhanced.

If we conclude that it is proper for us to broaden our scope of medical training, it reasonably follows that we should develop in ourselves the capacity and instinct for civic and social leadership.

#### SHORTAGE OF DOCTORS

The problem of the uneven distribution of the product of our medical schools—the unwillingness of medical men to locate in small communities—is the subject of much thought and discussion. We frequently hear the contention that the cost of medical education is excessive, that too long a period of time is required to turn out the medical man under present conditions, and that if requirements were lowered, young men of limited means could become physicians and locate in the small towns and rural communities.

But is this all true? Is the question largely economic? When the public is taught to appreciate the value of medical service, will not such service be proportionately rewarded? Haven't good roads and telephones lessened distances? Isn't the problem to be met to a large degree with the provision for community hospitals in even small centers of population?

#### GOVERNMENTAL REGULATION

We all realize that too much governmental regulation has hampered the physician in the application of his professional judgment in his private practice. The tendency has gone too far in emphasizing social and criminal aspects, and in submerging or overlooking medical aspects. This is particularly true in laws and regulations governing the prescribing and dispensing of narcotics and alcoholics, both of which have a definite, proved and established place in medical science. While not minimizing the social and criminal phases in these problems we must see to it that the medical viewpoint is realized and appreciated.

So often we hear complaints against govern-

mental restrictions interfering with private practice, with the establishment of involved regulations requiring time and effort on the part of the individual physician, contemplating innumerable reports and many formalities. And yet we must recognize the need for some regulation for the public good, and that additional and burdensome regulations have sometimes been added because of the willful or careless acts of a few individual practitioners whose forgetfulness or unscrupulous disregard of professional duty have resulted in hampering and restricting the entire profession.

#### HEALTH INSURANCE—STATE MEDICINE

In the whirlpool of immediate problems we have almost lost sight of the health insurance menace, but which like a chameleon is constantly changing its form and appearance but without a lessening of its dangers. We must continually guard against those insidious but superficially plausible schemes whose visionary advocates claim the discovery of a panacea for all industrial and social ills.

Sugar-coated, sentimental, even maudlin appeals cause rapidly changing eddies and currents in public sentiment. We can safely stand on the policy that such proposals are only appealing fancies until they can be proved to meet the test of medical logic as applied in most effective service toward public advantage and advancement.

#### NATIONAL ORGANIZATION AND INFLUENCE

Likewise the voice of organized medicine must become more positive and convincing in a national way in the guidance of many federal functions in which health, welfare and medical service are concerned. How can this be accomplished?

It will be remembered that at the last meeting of the American Medical Association the delegation from Ohio submitted for consideration a plan for closer coordination between the state medical associations, a more powerful national influence but more directly representative of and responsive to the membership at large. It is unnecessary for me to recount the details of that plan which in a national way would conform to the effective and responsive organization machinery developed in our Ohio State Association with the county units, through their officers and policy committee chairmen in constant touch with our state headquarters.

In similar fashion we should have and must insist upon a bureau of the A. M. A. at Washington, not to influence legislation so much as to represent the viewpoint and ideas of the profession, not alone before Congress but in constant touch with the many federal bureaus and departments whose functions, policies and procedure effect in innumerable ways the medical profession in its practice and in its relation to public questions; much in the same fashion that our state headquarters is in constant touch with state and federal bureaus, public officials, other professional

groups, public, semi-public and private agencies in any way concerned with the same problems with which we are interested.

Just so must our organization be strengthened, expanded and re-gearred to carry the necessary load and to make the steep grade which the times demand.

#### ORGANIZATION CONTACT

Never before in a similar period has medical organization impressed itself on public events as in Ohio during the past year. A cooperative interest has been taken in all worthy, wisely conceived and constructive health movements, including physical and health education, proper school supervision, vocational rehabilitation, functions and extensions of state institutional service to the wards of the state, care and education of the indigent handicapped, conservation of vision, care of indigent crippled children; and the crowning accomplishment of a rational, sane, mutually helpful policy between the profession as a whole and the state in public health administration.

This latter development not only recognizes but defines the limitations of the public in its educational and preventive program in health administration. It recognizes the social and state aspects of preventive medicine, but condemns in positive terms the extension of any program for "state practice of medicine"; at the same time stipulating the reciprocal obligations and mutual efforts of the medical profession and the State Department of Health.

Thus there is no reason why Ohio should not again establish a policy and lead the way for the solution of many existing difficulties in other states and in relation to national affairs.

We hear and read so much these days on the proposals and program for international peace; which can never exist until there is unity among the people that comprise each nation. Just so there can be no mutual understanding; no realization and adherence to mutual or reciprocal obligations between the medical profession and the public, until the profession itself is united on fundamental questions. Just as in government so in medical organization must the composite expression of the best ideas and judgment of its members become the fundamental principles for the entire group.

And still in spite of all the innumerable social and economic problems, discussions on these subjects among medical men, in their societies and also in our medical schools, are the rare exception rather than the rule. When held they are often listened to by a mere handful, while throngs flock to listen to papers on diagnosis and treatment of individual patients.

The potential power of medical organization exerted in the study and solution of its problems must be made available.

An active, harmonious and zealous professor, with interest in the work for the betterment of

the physician and the conditions under which he has to work, are among the greatest needs of the profession today. The whole profession is not at its task. If fifteen per cent. of the profession with the greatest foresight and vision should suddenly discontinue their activities on behalf of their professional brethren the profession itself would be left flat on its back.

The large percentage of physicians look to the few for enlightenment and guidance, and when that does not shine to the greatest degree of brilliancy or there is an obstruction in their path which is not successfully overcome, the cry of criticism is heaped on those who have been most active and loyal. More physicians must devote mere thought and effort to organization. The rank and file must realize how impotent are the officers and committees without the active support of the entire membership.

Civilization itself is founded on cooperation, on a realization of obligations. Without these there can be no permanence to our institutions; no human advancement. This spirit should be manifest to the highest degree within our profession. When one cooperates with his fellows for the common good, the spirit of charity, good will or altruism holds sway and that of envy, jealousy and selfishness are subordinated. If we are to advance the usefulness of our profession and benefit ourselves individually we must continue to grow in individual efficiency, in spirit of cooperation and in adaptability to new developments.

#### ORGANIZATION

Thus we need medical organization as never before, through which medical thought and medical leadership can be expressed. We need organization not to complain, object and resist, but to explain, to direct and to construct. We need it for mutual help and protection of the profession. We need it for the protection and welfare of the people.

Always realizing that the State Medical Association depends on strong, active, local county societies and academies of medicine, our efforts constantly should be exerted toward increasing the effectiveness of the central organization which is the point of contact not only with governmental functions, but with other state-wide and national organizations and groups interested in allied issues. The State Association as such is really a clearing house of information for its members as well as a medium of service to the physicians of Ohio, individually and collectively. Important among these functions is the publication of *The Journal* which is not only the official medium of expression, but the chief means of disseminating information. Through contact established by our state headquarters, cooperation has been developed with many other influential groups, the policies of which have been largely molded by the best thought in the medical profession, as represented by the policies of the State Association.



The mechanics of organization must be steadily added to and enlarged. Every eligible physician should be induced to become a member of his county and state association. I foresee in the not distant future a substantial raise in membership dues. Ten dollars a year per member for the State Association should not be considered too large. It would be ridiculously small in comparison to membership dues in many other kinds of organizations and not at all excessive for the effective service which is now rendered on but half that amount, a substantial proportion of which is now required for the publication and distribution of *The Journal*.

Physicians should make contact with other professional, welfare, civic and commercial groups, and this must be developed to include contact locally with those elements which mold the thought and determine the progress in each community. This means a greater interest by each physician in all local and civic movements, to the end that medical organization from top to bottom in addition to constituting effective machinery for mutual advancement and advantage, will constitute a united pyramid—a monument of service—a shrine of public welfare.

## PUBLIC HEALTH NOTES

Dr. James A. Beer began his services as Columbus' first full-time health commissioner in May. For fourteen years he has been well and favorably known as bacteriologist in the Columbus health department, and his nomination to the health commissionership comes as a reward for meritorious service. The action of appointing a full-time commissioner followed in the wake of agitation at a meeting of various civic organizations, recently, for more extended public health activities in the capital city. At this meeting Dr. Wells Teachnor, president of the local board of health, called attention to the fact that Columbus was devoting but 38 cents per capita for health purposes, compared to 81 cents in Toledo, 48½ cents in Dayton, 57 cents in Cleveland and 71 cents in Akron. Dr. Beer is a graduate of Ohio State University College of Medicine and secretary of the Columbus Academy of Medicine.

—Health Commissioner Rockwood of Cleveland reports that ten cases of blindness were prevented in that city last year by early treatment of infectious eye diseases. A total of 1420 cases of inflammation of the eyes of new-born were reported and received treatment.

—That the colored race in Ohio has more than three times its share of tuberculosis compared to that of the white race, despite the fact that they form only 3.1 per cent. of the population of the state, is shown by figures compiled by the division of industrial hygiene of the State Department of Health for the period from 1915 to 1920. The colored population of Ohio at the present time is over 190,000, and 3,442 deaths from tuberculosis occurred in the race from tuberculosis in the five-year period. The figures also show that Ohio negroes had twice their proportionate share of typhoid fever in the period and more than twice their share of whooping cough. The cancer and scarlet fever death rates were found to be

lower than in the white race although cancer mortality is on the increase among negroes.

—Dr. E. A. Weeks has been appointed a member of the Akron health commission, succeeding Dr. W. S. Chase, resigned.

—As a beginning step in the child health demonstration in Mansfield and Richland County a health census of children under six years of age was taken in April. "To find out how much health we have among our children in order to determine how much more health we must have to make them the 'healthiest and happiest kiddies in America'", was the reason for the census given by Dr. Walter H. Brown, director of the health demonstration.

—A survey of the water supply of Kingston by the Ross County Health Department found 50 out of 196 wells examined absolutely polluted with sewage; 20 other wells unsafe; 73 wells suspicious, and 53 approved.

—The positions of health commissioner of Wayne County and Wooster were vacated by the death of Dr. D. K. Jones of Wooster. Dr. C. D. Barrett of Creston and formerly of Youngstown has been appointed by the two boards of health to fill these positions. Immediately following his appointment Dr. Barrett spent several days at the State Department of Health.

—Following the resignation of Dr. R. R. Richison as health commissioner of Springfield, Dr. O. M. Craven was appointed to the position. For many years Dr. Craven has been chief medical inspector of the Cincinnati Health Department, first under the late Dr. J. H. Landis and more recently under Dr. W. H. Peters. Dr. Richison remains as health commissioner of Clark County on a part time basis.

Dr. L. W. Heizer, Cincinnati district physician for 10 years, has succeeded Dr. Craven in the office of chief medical director. Dr. Arch I. Carson has been named as successor to the late Dr. E. Gustave Zinke on the Cincinnati board of health.

# Election of the Officers, Councilors and Committeemen Action on Resolutions and Committee Reports Included in Official Sessions of House of Delegates

## Proceedings of the House of Delegates of the Ohio State Medical Association, Cincinnati, May 2 and 3, 1922

The first session of the House of Delegates of the Ohio State Medical Association was called to order by the president, Dr. Wells Teachnor, in the ball room, Gibson Hotel, Cincinnati, Tuesday morning, May 2, 1922, at 11:00 o'clock.

Seventy delegates and officers responded to roll call, which was a majority of delegates registered. (See tabulation on page 441).

Dr. C. A. L. Reed, of Cincinnati, was granted the privilege of the floor, and spoke favoring the Gorgas Memorial.

In accordance with official precedent, President Teachnor announced the appointment of the following committees to serve during the sessions of the House of Delegates:

*Committee on Delegates Credentials:* Dr. Oliver Steiner, chairman, Lima; Drs. J. M. Thomas, Columbus, Gainor Jennings, West Milton, J. L. Gray, Caldwell, and R. C. Paul, Wooster.

*Committee on Standing and Special Committee Reports:* Dr. J. P. DeWitt, chairman, Canton; Drs. A. W. Francis, Ripley, W. E. Ranz, Youngstown, R. C. Chamberlin, Tiffin, and E. R. Henning, Bellefontaine.

*Committee on President's Address:* Dr. A. S. McKittrick, chairman, Kenton, Drs. R. L. Bidwell, Toledo; D. B. Hartinger, Middleport; C. W. Kirkland, Bellaire; and E. O. Smith, Cincinnati.

*Committee on Resolutions:* Dr. J. C. Tritch, chairman, Findlay; Drs. D. C. Houser, Urbana, G. E. Follansbee, Cleveland, Lee Humphrey, Malta, and J. C. Larkin, Hillsboro.

*Sergeant-at-Arms and Tellers:* Drs. Mark Millikin, Hamilton; James J. Tyler, Warren; D. J. Matthews, Zanesville; H. H. Hartman, Galion, and C. E. Case, Ashtabula.

On motion by Dr. Goodman, seconded by Dr. Brush, the minutes of the meetings of the House of Delegates during the seventy-fifth annual session held in Columbus May 3 to 5, 1921, as published in the June, 1921, Journal (page 412) were approved.

Dr. E. O. Smith read a proposed amendment to the By-laws of the State Association as embodied in the following resolution previously published as required by the Constitution and By-laws:

"Resolved, That the Section on Dermatology, Proctology and Genito-Urinary Surgery be abolished, and that the By-Laws be so amended."

Following Dr. Smith's presentation of his

reasons for advocating the elimination of this section and on his motion, seconded by Dr. Carothers and carried, the resolution was adopted and Chapter II, Section 1, Line 4 of the By-Laws, amended as provided by the resolution.

Upon motion by Dr. Carothers, seconded by Dr. Ranz, and carried, the House of Delegates rejected the resolution previously presented providing for the establishment of a Section on Clinical Diagnosis. In the rejection of the resolution which read as follows: "Resolved that Chapter II, Section 1 of the By-Laws of the Ohio State Medical Association be amended to include a section of Clinical Laboratory Diagnosis, to be composed of those members of the Association whose chief interests lie in the clinical and laboratory branches", the House of Delegates refused to amend the By-Laws to include such section.

The following resolutions were introduced, and upon motion, duly seconded, were referred to the Committee on Resolutions:

A. Introduced by Dr. Upham:

"Whereas, the medical profession of the various countries of the Western Hemisphere is co-operating by voluntary contributions for the purpose of establishing a memorial to the late General W. C. Gorgas, the said memorial to take the form of the Gorgas Institute of Tropical Medicine to be located at Panama; therefore be it

"Resolved by the Ohio State Medical Association that the said movement is hereby most cordially endorsed and that members are urgently requested to contribute to the fund for such purpose through the avenue of the American Medical Association."

B. Introduced by Dr. Davidson:

"Whereas, the Ohio State Medical Association has long recognized its direct responsibility in the advancement of the public health work in the state, and,

"Whereas, the Ohio State Medical Association protested against the provisions of the Administrative Code relating to the State Department of Health at the time of its enactment; and

"Whereas, the Ohio State Medical Association is convinced that public health administration to be effective must be based upon continuity of policy, and

"Whereas, the Administrative Code abolished the former power of the Public Health Council to appoint the Director of Health of Ohio for a term of five years and placed this power with the governor, thus destroying the assurance of continuity of policy in the administration of health work in the state; therefore be it

"Resolved, That the Ohio State Medical Association, in annual convention assembled, reaffirms its policy to the effect that the public health work of the state will be greatly advanced by the amendment of the present Administrative Code to insure a longer tenure of office for the Director of Health and a more direct protection

to the health policies adopted by the state and therefore we pledge our association to advocate these changes at the next session of the General Assembly."

C. Introduced by Dr. Jennings:

"Resolved, that the House of Delegates of the Ohio State Medical Association hereby instructs the Ohio delegates to the A. M. A. to recommend the adoption of the following supplement to Principles of Ethics of the American Medical Association at the meeting of the A. M. A. in St. Louis this month:

"The Relations of the Public to the Profession.

"Section 1. Any individual, or any institution, private or public, or corporation, or association, or group of individuals under whatever name, which shall solicit patients by circulars or advertisements to the general public, shall be considered to act contrary to the best interests of the profession and the public, and shall be deemed unworthy of the approval and support of the regular medical profession.

"Section 2. Any individual, or any institution, private or public, or corporation, or association, or group of individuals under whatever name, which has for its purpose to, or which actually does, unfairly advertise a small group of physicians to the detriment of the whole profession, shall be deemed unworthy of the approval and support of the regular medical profession.

"Section 3. Any individual, or any institution, private or public, or corporation, or association, or group of individuals under whatever name, which shall solicit or collect funds under the guise of charity and then offer free medical treatment to persons able to pay for such medical services and thus pauperize such recipients of charity, and rob them of their self-reliance, shall be deemed unworthy of the approval and support of the regular medical profession.

"Section 4. Any individual, or any institution, private or public, or corporation or association, or group of individuals under whatever name, which attempts to appropriate without fair remuneration the skill, knowledge, and time of a physician, or which unduly interferes with the individualism of the medical man, or which is paternalistic, shall be deemed unworthy of the approval and support of the regular medical profession.

"Section 5. The legitimate medical function of organized society is sanitation and public hygiene; the teaching of personal hygiene; and rendering medical services to the indigent. Any other medical function by the state or any of its subdivisions shall be deemed unworthy of the approval and support of the regular medical profession."

D. Introduced by Dr. Lukens:

"Whereas, there has been much thought and discussion on the subject of nurse education, relative to preliminary educational requirements, subjects in curriculum, and period of training, and

"Whereas, the entire subject of nurse education is in the course of development, and

"Whereas, there is now under way a national movement for a definite standardization of nurse education with the possibility of shortening the period of training, therefore be it

"Resolved, That the Council authorize the President to appoint a special committee to confer with the official representatives of the State Association of Graduate Nurses, the Ohio Hospital Association and other groups and agencies interested in the question to the end that

**OFFICERS 1922-23**

PRESIDENT

Robert Carothers .....Columbus

PRESIDENT-ELECT

Joseph S. Rardin.....Portsmouth

TREASURER

H. M. Platter.....Columbus

COUNCILORS BY DISTRICTS

1. Otto P. Geier (new).....Cincinnati
2. M. F. Hussey.....Sidney
3. R. R. Hendershott.....Tiffin
4. C. W. Waggoner.....Toledo
5. R. K. Updegraff.....Cleveland
6. D. W. Stevenson.....Akron
7. J. S. McClellan.....Bellaire
8. E. R. Brush.....Zanesville
9. I. P. Seiler (new).....Piketon
10. S. J. Goodman.....Columbus

**STANDING COMMITTEES**

(Elected)

PUBLIC POLICY AND LEGISLATION

- J. H. J. Upham, Chairman.....Columbus  
 H. S. Davidson.....Akron  
 John B. Alcorn.....Columbus  
 Robert Carothers .....Cincinnati  
 J. S. Rardin.....Portsmouth  
 Don K. Martin.....Columbus

PUBLICATION

- L. L. Bigelow, Chairman.....Columbus  
 D. V. Courtright.....Circleville  
 L. A. Levison.....Toledo

MEDICAL DEFENSE

- J. E. Tuckerman, Chairman.....Cleveland  
 C. T. Souther.....Cincinnati  
 W. H. Snyder.....Toledo

MEDICAL ECONOMICS

- H. L. Sanford, Chairman.....Cleveland  
 Webster Smith .....Dayton  
 J. S. Cherrington.....Logan

thorough consideration and unity of purpose may be brought to bear on the entire subject, with the idea of eliminating unnecessary subjects, if found, from the curriculum of nurse education, reducing the period of training, if practical, and overcoming the shortage of nurses, if possible, wherever such condition prevails.

E. Introduced by Dr. Bower:

"Whereas, the Ohio State Medical Association advocated the passage of the Hughes-Griswold law which reorganized the system of local health administration in Ohio; and

"Whereas, the Ohio State Medical Association believes the Hughes-Griswold law has made it possible to provide real health protection for the people of the state; and,

"Whereas, the Ohio State Medical Association recognized that the results to be secured through an adequate system of public health administration provided under the Hughes-Griswold law cannot become fully established until the system is given a thorough trial over a period of years; therefore be it

"Resolved, That the Ohio State Medical Association, in annual convention assembled records its opposition to any amendments that may be proposed to the Hughes-Griswold Law which do not have the effect of adding strength to it"

F. Introduced by Dr. McLean:

"Whereas, to safeguard the interests of the public and of the physicians who serve the public, it is necessary for physicians to have the clearest possible understanding about all matters pertaining to the health of the people, and the welfare and education of physicians with the state and with the managers of hospitals and medical colleges; therefore, be it

"Resolved, that the Ohio State Medical Association is opposed to any plan whereby the State Industrial Commission may employ, at a fixed salary, physicians and surgeons to render medical or surgical services to those injured in industrial accidents or to those who contract occupational diseases in the course of employment; or in any way limit the choice of physicians to those injured or diseased:

"That the Ohio State Medical Association is also unalterably opposed to any scheme of 'State Medicine', 'Health Centers', 'Group Medicine', and 'Diagnostic Centers', either wholly or partly controlled, operated or subsidized by the State or National Government, except for legal wards or the State and National Government.

"That the Ohio State Medical Association is also unalterably opposed to medical re-registration; foundation control of full time medical education; lay board dominion and closed shop hospitals; legislative dictation of therapy and fees; demoralization of medical standards by the expansions of cults; and exploitation of the specialties by lay technicians;

Be it Further Resolved that the Executive officers of the Ohio State Medical Association are hereby directed by the House of Delegates to render these resolutions effective by every possible means of organization, publicity and legislation."

G. Introduced by Dr. Huston:

"Whereas, it is the sense of the Ohio State Medical Association that the Sheppard-Towner Maternity Act was not conceived, and will not function in the best interests of the public, therefore, be it

"Resolved, That the Committee on Public Policy and Legislation be directed to use its every honorable means to deter the Ohio legislature from the appropriation of any monies for the purpose of putting into execution in Ohio any provision of the said law."

#### ELECTION OF NOMINATING COMMITTEE

On separate motions, duly seconded, the following nominations were made, the rules suspended, the secretary instructed to cast the ballot, and recorded as carried:

First District—Dr. E. O. Smith, nominated by Dr. Bonifield

Second District—Dr. Gainor Jennings, nominated by Dr. Huston

Third District—Dr. A. S. McKitrick, nominated by Dr. Henning

Fourth District—Dr. John T. Murphy, nominated by Dr. Gillette

Fifth District—Dr. John Phillips, nominated by Dr. Follansbee

Sixth District—Dr. D. H. Morgan, nominated by Dr. Davidson

Seventh District—Dr. C. W. Kirkland, nominated by Dr. McClellan

Eighth District—Dr. C. S. McDougall, nominated by Dr. Stedem

Ninth District—Dr. E. W. Tidd, nominated by Dr. O'Neill

Tenth District—Dr. John B. Alcorn, nominated by Dr. Goodman.

The reports of the treasurer, councilors, and the standing and special committees being called for, and there being no oral supplementary reports, the reports of the following committees as published in the May issue of *The Journal*, were referred to the Committee on Committee Reports:

#### Report of Standing Committees—

(a) Public Policy and Legislation—J. H. J. Upham, Columbus, chairman.

(b) Publication—L. L. Bigelow, Columbus, chairman.

(c) Medical Defense—J. E. Tuckerman, Cleveland, chairman.

(d) Medical Economics—H. L. Sanford, Cleveland, chairman.

(e) Medical Education—E. F. McCampbell, Columbus, chairman.

(f) Auditing and Appropriations—S. J. Goodman, Columbus, chairman.

#### Report of Special Committees—

(a) Hospital Standardization—C. D. Selby, Toledo, chairman.

(b) Crippled Children—B. G. Chollett, Toledo, chairman.

(c) Control of Cancer—Andre Crotti, Columbus, chairman.

Following supplementary announcements of general and special sessions during the annual meeting, on motion duly seconded, the House of Delegates adjourned to meet at 1:30 P. M. on Wednesday, May 3.

### Second Session

The second session of the House of Delegates was called to order by President Teachnor at 1:30 P. M., Wednesday, May 3.

Roll call showed eighty-three delegates and officers present and responding to their names. (For tabulation see page 441).

The first order of business was the report of the Nominating Committee. Dr. Smith, as chairman, submitted the following nominations as the report of his committee:

President-elect—E. M. Huston, Dayton  
J. S. Rardin, Portsmouth  
H. T. Sutton, Zanesville

Treasurer (three-year term) H. M. Platter, Columbus

Committee on Public Policy and Legislation: (One year each)

J. H. J. Upham, Columbus, chairman  
H. S. Davidson, Akron  
John B. Alcorn, Columbus

Publication Committee (one year each):

L. L. Bigelow, Columbus  
D. V. Courtright, Circleville  
L. A. Levison, Toledo

Medical Defense (three-year term):

J. E. Tuckerman, Cleveland

Medical Economics (one year each):

- H. L. Sanford, Cleveland
- Webster Smith, Dayton
- J. S. Cherrington, Logan

Councilors (two years each):

- First District.....Otto P. Geier, Cincinnati
- Third District.....Albert S. Rudy, Lima
- Fifth District.....C. W. Stone, Cleveland
- Seventh District.....J. S. McClellan, Bellaire
- Ninth District.....I. P. Seiler, Piketon

Delegates to American Medical Association, (One year each):

- C. D. Selby, Toledo
- C. W. Waggoner, Toledo (alternate)
- G. Warburton, Zanesville
- John Millette, Dayton (alternate)
- W. D. Haines, Cincinnati
- Dudley Palmer, Cincinnati (alternate)

(Two years each)

- J. H. J. Upham, Columbus
- D. H. Morgan, Akron (alternate)
- B. R. McClellan, Xenia
- A. C. Messenger (alternate)
- G. E. Follansbee, Cleveland
- C. L. Cummer, Cleveland (alternate)

(Signed)

COMMITTEE ON NOMINATIONS,

- E. O. Smith, Chairman
- D. H. Morgan, Secretary.

On motion by Dr. Smith, seconded, the report of the Nominating Committee was received by the House of Delegates.

In response to the call by the President for nominations from the floor for any of the offices on which the House of Delegates is to hold an election, Dr. Machamer nominated Dr. Hendershott for the position of Councilor from the Third District for a term of two years. This nomination was duly seconded.

Dr. A. S. Rudy, who had been nominated by the Nominating Committee for Councilor of the Third District, announced his withdrawal in favor of Dr. Hendershott.

Dr. Wood placed in nomination the name of Dr. R. K. Updegraff of Cleveland as Councilor from the Fifth District for a term of two years. This nomination was seconded by Dr. Pipes.

Dr. Gilmore placed in nomination the name of Dr. J. M. King, of Wellsville as Councilor for

the Seventh District for a term of two years. Seconded.

There being no further nominations from the floor the president announced that there would be a separate ballot cast for the three nominees for the position of President-elect. He called upon the tellers previously selected and upon tabulation by the tellers, Millikin and Matthews, the first ballot showed the following result: Huston 18; Rardin 33; Sutton 31.

In accordance with requirements, the name of Dr. Huston was withdrawn, and the House proceeded to ballot on the nominees, Dr. Rardin and Dr. Sutton, as the remaining candidates for the office of President-elect. The results of the second ballot showed the following result: Rardin, 44; Sutton, 38. Dr. Rardin was declared elected.

On motion Dr. Millikin, seconded by Dr. Rarz and carried, the election of Dr. Rardin as President-elect was declared unanimous.

On motion Dr. McGavran, seconded by Dr. Smith and carried, Dr. H. M. Platter was elected by acclamation, without opposition, as treasurer of the State Association for a term of three years. On motion Dr. Goodman, seconded by Dr. Bonifield, the secretary was instructed to cast the unanimous ballot for Dr. Platter. So recorded and announced.

On motion Dr. Goodman, seconded by Dr. Stedem, the secretary was instructed to cast the unanimous ballot for the following members of the Committee on Public Policy and Legislation: J. H. J. Upham, chairman; H. S. Davidson, and John B. Alcorn. So recorded and announced.

On motion Dr. Bonifield, seconded by Dr. Smith and carried, the secretary was instructed to cast the unanimous ballot for three members of the Publication Committee for one year, as nominated. The secretary then cast the ballot, and announced the election of the following: L. L. Bigelow, D. V. Courtright, and L. A. Levison.

On motion Dr. Weitz, seconded by Dr. Dexter and carried, the secretary cast the unanimous ballot for J. E. Tuckerman, as a member of the Committee on Medical Defense for a term of three years. So recorded and announced.

On motion Dr. Matthews, seconded by Dr. DeWitt and carried, the secretary cast the ballot

## Delegates to American Medical Association

DELEGATES

(Elected for Two Years)

- J. H. J. Upham.....Columbus
- B. R. McClellan.....Xenia
- G. E. Follansbee.....Cleveland

(Elected for One Year)

- C. D. Selby.....Toledo
- Granville Warburton.....Zanesville
- W. D. Haines.....Cincinnati

ALTERNATES

- D. H. Morgan.....Akron
- A. C. Messenger.....Xenia
- C. L. Cummer.....Cleveland

- C. W. Waggoner.....Toledo
- John Millette.....Dayton
- Dudley Palmer.....Cincinnati

for three members of the Committee on Medical Economics for one year, as nominated, and announced the election of H. L. Sanford, Webster Smith and J. S. Cherrington.

On motion Dr. Smith, seconded by Dr. Doughty and carried, the secretary was instructed to cast the unanimous ballot for Otto P. Geier as Councilor of the First District for a term of two years. So recorded and announced.

On motion Dr. DeWitt, seconded by Dr. Lukens and carried, the secretary was instructed to cast the unanimous ballot for Dr. R. R. Hendershott as Councilor for the Third District for a term of two years. So recorded and announced.

On written ballot on the nominees for Councilor of the Fifth District, the official vote certified by the tellers showed the following result: Updegraff, 47; Stone, 32. Dr. Updegraff was declared elected.

On written ballot on the nominees for Councilor of the Seventh District, the official vote certified by the tellers showed the following result: McClellan, 53; King, 17. Dr. McClellan was declared elected.

On motion Dr. Weitz, seconded by Dr. C. S. McDougall and carried, the secretary was instructed to cast the unanimous ballot for Dr. I. P. Seiler, as Councilor of the Ninth District for a term of two years. So recorded and announced.

On motion Dr. Alcorn, seconded by Dr. Smith and carried, the secretary was instructed to cast the unanimous ballot for three delegates to the American Medical Association for a term of one year, as nominated. The secretary announced the election of the following: C. D. Selby, G. Warburton, W. D. Haines: (alternates, C. W. Waggoner, John Millette, Dudley Palmer).

On motion Dr. Stedem, seconded by Dr. Bonifield and carried, the secretary was instructed to cast the unanimous ballot for three delegates to the American Medical Association for a term of two years, as nominated. The secretary announced the election of the following: J. H. J. Upham, B. R. McClellan, G. E. Follansbee: (alternates, D. H. Morgan, A. C. Messenger, C. L. Cummer).

#### PROPOSED AMENDMENT

Dr. Smith submitted the following resolution for an amendment to Chapter V, Section 1, line 7 of the By-Laws:

"Resolved that the Constitution and By-Laws be amended to read: "with the exception of councilors, and that one councilor be elected in each district by the delegates from that district."

Upon ruling of the President, this resolution will be held over and voted upon by the House of Delegates in 1923.

#### REPORT OF RESOLUTIONS COMMITTEE

The following report of the special Committee on Resolutions was submitted:

"Mr. President and Members of the House of

Delegates, Ohio State Medical Association:

Your Reference Committee on Resolutions has carefully considered the resolutions presented and desires to present all of them to you with their approval for adoption, with such changes in their wording and phraseology, and such omissions as have been necessary to avoid vagueness, assure directness of purpose, maintain cordial relations with other organizations whose purposes are similar to ours, and retain so far as advisable the intent of the introducers of the resolutions, as follows: Resolutions, A, B, C, D, E, F, G, attached herewith and signed by the Committee.

(Signed), J. C. Tritch, Chairman  
George E. Follansbee  
D. C. Houser  
J. C. Larkin.

On motion Dr. Follansbee, seconded by Schwab and carried, the report of the Committee on Resolutions was received.

The resolutions as amended and recommended for adoption by the Committee on Resolutions, were submitted as follows:

A. (Introduced by Dr. J. H. J. Upham).

"Whereas, the medical profession of the various countries of the Western Hemisphere is co-operating by voluntary contributions for the purpose of establishing a memorial to the late General W. C. Gorgas, the said memorial to take the form of the Gorgas Institute of Tropical Medicine to be located at Panama; therefore be it

"Resolved by the Ohio State Medical Association that the said movement is hereby most cordially endorsed and that members are urgently requested to contribute to the fund for such purpose through the avenue of the American Medical Association."

Approved by J. C. Tritch, Chairman  
D. C. Houser  
G. E. Follansbee  
J. C. Larkin.

On motion of Dr. Follansbee, seconded by Dr. Schwab and carried, the above report was adopted.

B. (Introduced by Dr. H. S. Davidson).

"Whereas, the Ohio State Medical Association has long recognized its direct responsibility in the advancement of the public health work in the state; and,

"Whereas, the Ohio State Medical Association is convinced that public health administration to be effective must be based upon continuity of policy; therefore,

Be it Resolved:

"That the Ohio State Medical Association, in annual convention assembled, reaffirm its policy to the effect that the public health work of the state will be greatly advanced by the amendment of the present Administrative Code to insure a longer tenure of office for the Director of Health and a more direct protection to the health policies adopted by the state, and therefore we pledge our association to advocate these changes at the next session of the General Assembly."

Approved as corrected by  
J. C. Tritch, Chairman  
G. E. Follansbee  
D. C. Houser  
J. C. Larkin.

On motion Dr. Follansbee, seconded by Dr. Courtright and carried, the above report was adopted.

C. (Introduced by Dr. Gainor Jennings).

"Resolved, that the House of Delegates of the Ohio State Medical Association hereby instructed the Ohio Delegates to the A. M. A. to recommend the adoption of the following supplement to Principles of Ethics of the American Medical Association at the meeting of the A. M. A. in St. Louis this month:

THE RELATION OF THE PUBLIC TO THE PROFESSION

"Section 1. Any individual, or any institution, private or public, or corporation, or association, or group of individuals under whatever name, which shall solicit patients by circulars or advertisements to the general public, shall be considered to act contrary to the best interests of the profession and the public, and shall be deemed unworthy of the approval and support of the regular medical profession.

"Section 2. Any individual, or any institution, private or public, or corporation or association, or group of individuals under whatever name, which has for its purpose to, or which actually does, unfairly advertise a small group of physicians to the detriment of the whole profession, shall be deemed unworthy of the approval and support of the regular medical profession.

"Section 3. Any individual, or any institution, private or public, or corporation, or association, or group of individuals under whatever name, which shall solicit or collect funds under the guise of charity and then offer free medical treatment to persons able to pay for such medical services and thus pauperize such recipients of charity, and rob them of their self-reliance, shall be deemed unworthy of the approval and support of the regular medical profession."

Approved as corrected above by

J. C. Tritch, Chairman  
G. E. Follansbee  
D. C. Houser  
J. C. Larkin.

On motion of Dr. Follansbee, seconded by Dr. Stedem and carried, the above report was adopted.

D. (Introduced by Dr. Charles Lukens).

"Whereas, there has been much thought and discussion on the subject of nurse education, relative to preliminary educational requirements, subjects in curriculum, and period of training, and

"Whereas, the entire subject of nurse education is in the course of development, and

"Whereas, there is now under way a national movement for a definite standardization of nurse education with the possibility of shortening the period of training,

"Therefore, be it resolved that the Council authorize the President to appoint a special committee to confer with the official representatives of the State Association of Graduate Nurses, the Ohio Hospital Association and other groups and agents interested in the question to the end that thorough consideration and unity of purpose may be brought to bear on the entire subject, with the idea of eliminating unnecessary subjects, if found, from the curriculum of nurse education, reducing the period of training, if practical, and overcoming the shortage of nurses, if possible, wherever such condition prevails."

Approved by J. C. Tritch, Chairman  
G. E. Follansbee  
D. C. Houser  
J. C. Larkin.

On motion of Dr. Follansbee, seconded by Dr. Bonifield and carried, the above report was adopted.

E. (Introduced by Dr. Bower of Ross County).

"Whereas, the Ohio State Medical Association advocated the passage of the Hughes-Griswold law which reorganized the system of local health administration in Ohio; and,

"Whereas, the Ohio State Medical Association believes the Hughes-Griswold law has made it possible to provide real health protection for the people of the state; and,

"Whereas, the Ohio State Medical Association recognizes that the results to be secured through an adequate system of public health administration provided under the Hughes-Griswold law cannot become fully established until the system is given a thorough trial over a period of years; therefore,

"Be It Resolved: That the Ohio State Medical Association, in annual convention, heartily approves the present Hughes-Griswold law and records its opposition to any amendments that may be proposed which do not have the effect of adding strength to it."

Approved as corrected by

J. C. Tritch, Chairman  
G. E. Follansbee  
D. C. Houser  
J. C. Larkin.

On motion of Dr. Follansbee, seconded by Dr. Stedem and carried, the above report was adopted.

F. (Introduced by Dr. C. C. McLean).

"Resolved, that the Ohio State Medical Association is opposed to any plan whereby the State Industrial Commission may employ at a fixed salary, physicians and surgeons to render medical or surgical services to those injured in industrial accidents or to those who contract occupational diseases in the course of employment;

"That the Ohio State Medical Association is in favor so far as practicable of extending the choice of the attending physician or surgeon to the injured or sick employe;

"That the Ohio State Medical Association is also unalterably opposed to foundation control of medical education; legislative dictation of therapy and fees; demoralization of medical standards; and exploitation and unsupervised practice.

"Be It Further Resolved; That the executive officers of the Ohio State Medical Association are hereby directed by the House of Delegates to render these resolutions effective by every possible means."

Approved as corrected above by

J. C. Tritch, Chairman  
G. E. Follansbee  
D. C. Houser  
J. C. Larkin.

Dr. Follansbee moved the adoption of the above resolution. Seconded by Dr. Stedem.

Dr. McLean moved that the committee report on this resolution be amended by inserting after the word "standards;" in the third paragraph, of the above report, the words, "by the expansion of cults;" and after the word, "exploitation", the words, "of the specialties by lay technicians." Dr. McLean's motion was seconded by Dr. Jennings, which on being put to vote, was lost.

On motion Dr. Follansbee, seconded by Dr. Lukens and carried, the House voted to adopt the

committee report on the above resolution without amendments.

G. (Introduced by Dr. E. M. Huston).

"Whereas, it is the sense of the Ohio State Medical Association that the Sheppard-Towner-Maternity Act may not function in the best interests of the public, therefore

"Be it Resolved: That the Committee on Public Policy and Legislation be directed to use its every honorable means to deter the Ohio Legislature from the appropriation of any monies for the purpose of providing medical attendance under the provisions of the said law."

Approved as corrected above by

J. C. Tritch, Chairman  
G. E. Follansbee  
D. C. Houser  
J. C. Larkin.

On motion Dr. Follansbee, seconded by Dr. Bonifield, the above report was adopted.

On motion Dr. Follansbee, seconded by Dr. Schwab and carried, the House of Delegates adopted the report of the Committee on Resolutions in toto as presented.

#### COMMITTEE ON PRESIDENT'S ADDRESS

Dr. McKitrick, chairman of the special committee on the President's Address, presented the following report:

"As a whole the president's address is to be commended. His ideas concerning organization are sound. His plea for better and more comprehensive organization in which a greater percentage of the members are active, is well taken and should appeal to every member of this Association.

"It was particularly refreshing to note the reference to the family physician and his important place in the social and professional fabric.

"The recommendation that there should be a 'closer affiliation between the medical profession as a whole and medical education as a function' through additions to medical curricula of courses in social and economic subjects is a good one and should be approved.

"The president's condemnation of self-constituted committees and his counter recommendation that activities to be effective must be through recognized agencies is also worthy of our approval.

"That too much governmental regulation hampers proper administration of professional duties is apparent.

"The recommendation that a bureau of the A. M. A. be established at Washington to keep in touch with federal bureaus and other agencies whose activities effect the medical profession is in keeping with sound progress and should have the support of this Association.

(Signed)

A. S. McKitrick, Chairman  
E. O. Smith  
C. W. Kirkland  
D. B. Hartinger.

On motion by Dr. McKitrick, seconded by Dr. Bonifield and carried, the report was adopted.

Dr. DeWitt, chairman of the Committee on Standing and Special Committee Reports, submitted the following report for his Committee:

"The Committee on Reports of Standing and Special Committees recommends the adoption of the reports of the following committees:

"Public Policy and Legislation, Publication; Medical Defense, Medical Economics; Medical Education; Auditing and Appropriations; Hospital Standardization; Crippled Children; and Control of Cancer.

"The report of the Committee on Public Policy and Legislation is exhaustive and the most complete report on this subject ever presented to the Society.

"We commend the principle laid down in this report not to destroy, or interfere with the present and established relationship between the physician and his patient.

"We especially commend a conclusion of this Committee that excessive restriction, over-burdensome regulations, state practice of medicine, health insurance, paternalism in whatever guise, or for whatever ostensible purpose are wrong, should be opposed, and must ultimately fail.

"We suggest that the Committee on Medical Defense create a plan whereby delinquencies in county societies will not occur; these delinquencies are a constant menace to the medical profession and to Medical Defense.

"We suggest to the Committee on Crippled Children that the report be more complete, and that the Committee on Crippled Children shall keep in mind the possibilities of infringing upon the rights and privileges of the patient and of the family physician."

(Signed)

J. P. DeWitt, Chairman  
A. W. Francis  
W. E. Ranz  
E. R. Henning.

On motion Dr. DeWitt, seconded by Dr. Bonifield, the report of the Committee on Standing and Special Committee Reports, was adopted.

On invitation, and on motion by Dr. Huston, duly seconded, the House of Delegates voted to hold the seventy-seventh annual meeting in 1923, in Dayton.

In a formal statement, Dr. Teachnor, the retiring president, introduced Dr. Carothers and officially installed him as president.

On being inducted into office, Dr. Carothers spoke in part as follows:

"I hope I will be able to carry out the job to your full satisfaction, and at the close of next year, I can introduce the next president with the same satisfaction that I am being introduced today, and that I will be able to fill the office as well as the retiring president."

On being introduced, Dr. George W. Crile presented to the State Association through the newly installed president, an historic gavel, made from the first flag pole erected in France during



the World War, by an American medical unit—the Lakeside Hospital Unit. This gavel, mounted in silver, was appropriately engraved, commemorating the occasion.

On motion of Dr. Schwab, seconded, a rising vote of thanks was extended to Dr. Crile for the presentation of the gavel.

On motion duly seconded, a unanimous vote of thanks was extended to the officers, council, and local committees for their time and effort in arranging the annual meeting.

On motion Dr. Schwab, seconded by Dr Bonifield, the House of Delegates adjourned to meet in Dayton in 1923.

**Roll Call, House of Delegates**

County	Member	May 2	May 3
Adams	W. B. Loney	present	present
Allen	Oliver Steiner	present	present
Ashland	C. C. Patton	present	present
Ashtabula	C. E. Case	present	present
Athens	C. S. McDougall	present	present
Auglaize	Harry S. Noble	present	present
Belmont	C. W. Kirkland	present	present
Brown	A. W. Francis	present	present
Butler	Mark Millikin	present	present
Champaign	D. C. Houiser	present	present
Clark	C. W. Evans	present	present
Clermont	F. A. Ireton	present	present
Clinton	J. H. Fisher	present	present
Columbiana	W. N. Gilmore	present	present
Coshocton	E. C. Carr	present	present
Crawford	H. H. Hartman	present	present
Cuyahoga	Fred J. Wood	present	present
Cuyahoga	C. L. Cummer	present	present
Cuyahoga	R. H. Birge	present	present
Cuyahoga	G. E. Follansbee	present	present
Cuyahoga	John Phillips	present	present
Cuyahoga	C. W. Stone	present	present
Cuyahoga	Richard Dexter	present	present
Darke	J. C. Poling	present	present
Defiance	George W. Huffman	present	present
Delaware	F. H. Lehman	present	present
Erie	W. R. Coleman	present	present
Fairfield	C. C. Crum	present	present
Fayette	J. H. J. Upham	present	present
Franklin	J. M. Thomas	present	present
Franklin	C. W. McGavran	present	present
Franklin	John B. Alcorn	present	present
Franklin	C. L. Hutchins	present	present
Fulton	G. G. Kineon	present	present
Gallia	F. S. Pomeroy	present	present
Geauga	Clarence Denser	present	present
Greene	George F. Swan	present	present
Guernsey	A. G. Ringer	present	present
Guernsey	C. L. Bonifield	present	present
Hamilton	Louis Schwab	present	present
Hamilton	E. O. Smith	present	present
Hamilton	Magnus Tate	present	present
Hamilton	William Doughty	present	present
Hancock	J. C. Tritch	present	present
Hardin	A. S. McKittrick	present	present
Harrison	J. A. McGrew	present	present
Henry	C. H. Skeen	present	present
Highland	J. C. Larkin	present	present
Hocking	J. S. Cherrington	present	present
Holmes	R. L. Morse	present	present
Huron	J. H. Ray	present	present
Jackson	John R. Caldwell	present	present
Jefferson	W. W. Pennell	present	present
Knox	O. U. O'Neill	present	present
Lake	J. P. Stedem	present	present
Lawrence	E. R. Henning	present	present
Licking	John R. Pipes	present	present
Logan	R. L. Bidwell	present	present
Lorain	John T. Murphy	present	present
Lucas	Ben Gillette	present	present
Lucas	F. D. Postle	present	present
Madison	W. E. Ranz	present	present
Mahoning	W. D. Coy	present	present
Mahoning	Dana O. Weeks	present	present
Marion	E. L. Crum	present	present
Medina	D. B. Hartinger	present	present
Meigs	M. L. Downing	present	present
Mercer	Gainor Jennings	present	present
Miami	E. M. Huston	present	present
Morrow	C. C. McLean	present	present
Montgomery	Emmett Fayen	present	present
Montgomery	R. L. Pierce	present	present

County	Member	May 2	May 3
Muskingum	D. J. Matthews	present	present
Noble	J. L. Gray	present	present
Ottawa	A. A. Brindley	present	present
Paulding	L. R. Fast	present	present
Perry	J. G. McDougall	present	present
Pickaway	D. V. Courtright	present	present
Pike	E. W. Tidd	present	present
Portage	W. B. Andrews	present	present
Preble	S. P. Carter	present	present
Putnam	P. D. Bixel	present	present
Richland	S. E. Findley	present	present
Ross	R. E. Bower	present	present
Sandusky	C. I. Kuntz	present	present
Scioto	A. L. Test	present	present
Seneca	Roswell Machamer	present	present
Shelby	Arthur Silver	present	present
Stark	J. P. DeWitt	present	present
Stark	C. A. Portz	present	present
Summit	D. H. Morgan	present	present
Summit	H. S. Davidson	present	present
Trumbull	James J. Tyler	present	present
Tuscarawas	Max Shawecker	present	present
Union	C. D. Mills	present	present
Van Wert	N. H. Hamilton	present	present
Vinton	A. G. Sturgiss	present	present
Warren	R. C. Paul	present	present
Washington	J. A. Weitz	present	present
Wayne	H. J. Powell	present	present
Williams	I. N. Zeis	present	present
Wood			
Wyandot			
President	Wells Teachnor	present	present
President-Elect	Robert Carothers	present	present
Ex-President	Charles Lukens	present	present
Treasurer	H. M. Platter	present	present
Councilors			
First District	W. D. Haines	present	present
Second District	M. F. Hussey	present	present
Third District	R. R. Hendershott	present	present
Fourth District	C. W. Waggoner	present	present
Fifth District	R. K. Updegraff	present	present
Sixth District	D. W. Stevenson	present	present
Seventh District	J. S. McClellan	present	present
Eighth District	E. R. Brush	present	present
Ninth District	J. S. Rardin	present	present
Tenth District	S. J. Goodman	present	present
Total		70	83

**Council Meetings, May 1 and 3**

MINUTES

Council of the Ohio State Medical Association met in Cincinnati on Monday evening, May 1, 1922, at the University Club, following a dinner given by Drs. Teachnor and Carothers in honor of former presidents of the State Association. Those present at the Council meeting, in addition to former presidents were: President Teachnor, President-elect Carothers, Treasurer Platter, Councilors Haines, Hussey, Updegraff, Stevenson, McClellan, Brush, Rardin, and Goodman, and Executive Secretary Martin.

Minutes of the previous meeting on March 5 were approved as published in the April, 1922, issue of *The Journal*.

The membership statement showed a total of 4635 as compared with a total for 1921 of 4868.

Dr. Carothers, president-elect, and Dr. Haines, councilor for the First District, announced supplementary plans for the annual meeting, scheduled to open on the following morning.

Dr. Platter submitted the communication which he had addressed to Council of the Ohio State Medical Association relative to Section 1286-2 of the General Code, which was published on page 332 of the May, 1922, issue of *The Journal*.

Dr. Haines, chairman of the special committee from Council, previously authorized to recommend a properly qualified person for assistant

executive secretary for which appropriation was made at the March meeting of Council, submitted a brief supplementary report. Following a general discussion on the increased executive duties at the state headquarters, and the need for additional assistants, Dr. Brush moved that the Council employ W. M. Thomas, Columbus, formerly of Portsmouth. This motion was seconded by Dr. Rardin, and carried unanimously.

Dr. Goodman called attention to the fact that the following fourteen county medical societies have adopted a form resolution requesting a modification in the course of nurse training: Fulton, Hancock, Hardin, Henry, Morrow, Pike, Lucas, Belmont, Ross, Ottawa, Seneca, Wood and Wayne. The resolution is as follows:

RESOLUTIONS TO MODIFY THE LAWS AFFECTING  
TRAINED NURSES AND STUDENTS FOR NURSES'  
TRAINING SCHOOLS OF OHIO

The ..... Medical Society of ....., Ohio, in regular meeting assembled on ....., 1922, adopted the following resolutions, ordered same spread on the records of the Society, and a copy sent to the next regular meeting of the Ohio State Medical Society for action, which will convene.

*Whereas*, The present State law requiring a three-year training course for nurses before they are granted certificates tends to create a monopoly in the profession by making the period of training too long, thus keeping out many desirable young women who would take the course; and,

*Whereas*, The medical profession are all agreed that a two years' course is amply sufficient for the average young woman to become a competent trained nurse; and,

*Whereas*, The present state law also requires that applicants desiring to enter training schools must have completed one full year in High School or its equivalent, thus tending to debar young women who would otherwise be eligible and be desirable as students in the training schools; therefore, be it

*Resolved*, That this Society unanimously urges the modification of the said laws and recommends that the period of training for nurses be reduced to two years, and the entrance requirements be modified so that applicants shall not be required to have the first year's high school certificate, thus permitting young women who have completed the ordinary Eighth Grade school training to become eligible for entrance as students in the Nurses' Training Schools of Ohio and, be it

*Further Resolved*, That every member of this Society is hereby urged to use his personal influence with his representatives in the State Legislature to have the aforesaid laws modified as hereinbefore suggested, and that a copy of these Resolutions be forwarded to every member of the State Legislature, requesting him to give his respectful consideration and support to these changes in our present State laws regarding Trained Nurses and Nurses' Training Schools.

Following a general discussion in which members of Council opposed the adoption of resolutions without full consideration of the various factors contributing to the particular problems involved, upon motion, duly seconded, the following resolution on this subject was adopted unanimously by Council:

*"Whereas*, There has been much thought and discussion on the subject of nurse education, relative to preliminary educational requirements, subjects in curriculum and period of training, and and

*"Whereas*, the entire subject of nurse education is in the course of development, and

*"Whereas*, There is now under way a national movement for a definite standardization of nurse education with the possibility of shortening the period of training, therefore, be it

*"Resolved* that the Council authorize the President to appoint a special committee to confer with the official representatives of the State Association of Graduate Nurses, the Ohio Hospital Association and other groups and agencies interested in the question to the end that thorough consideration and unity of purpose may be brought to bear on the entire subject, with the idea of eliminating unnecessary subjects, if found, from the curriculum of nurse education, reducing the period of training, if practical, and overcoming the shortage of nurses, if possible, wherever such condition prevails."

On motion, duly seconded, Council adjourned to meet with the House of Delegates in session at 11:00 A. M., May 2, in the Ball Room of Gibson Hotel.

Council of the Ohio State Medical Association met with the House of Delegates and participated officially in the proceedings at the opening session at 11:00 A. M., Tuesday, May 2, in the Ball Room of the Gibson Hotel. Complete minutes of the House of Delegates published on page 434.

The Council of the Ohio State Medical Association met at 3:15 P. M., Wednesday, May 3, immediately following the second session of the House of Delegates, held in the East Foyer of the Ball Room, Gibson Hotel. Those present were the retiring President, Dr. Wells Teachnor, Treasurer Platter, Councilors Geier, Hussey, Updegraff, Stevenson, McClellan, Brush, and Goodman; and Executive Secretary Martin.

Upon motion by Dr. Hussey, duly seconded, Dr. Brush was selected as president pro-tem, in the absence of President Carothers who had been called away to preside at the general session for the annual orations at that hour.

Upon motion by Dr. Updegraff, duly seconded, Dr. Goodman was elected as secretary of Council.

There being no further business, on motion duly seconded, the Council adjourned to meet in Columbus on Sunday, July 2.

### Honors for Dr. Snively

Tribute in the form of a silver medal has been paid to Dr. H. H. Snively, state director of health, by officials of the Poland and Polish Society of the Red Cross. A letter accompanying the decoration from the society stated that the medal was awarded to Dr. Snively "for appreciation of his work which has contributed so much to the alleviation of suffering for the people of Poland in the first years of their independent existence."

## Registration at Annual Meeting Representative of All Sections of the State Showed Splendid Interest of the Ohio Profession

The eleven hundred members of the Ohio State Medical Association, guests and commercial exhibitors who registered at the seventy-sixth annual meeting in Cincinnati, May 2, 3 and 4, are singing the praises of the "party." There is no doubt that it will go down in history as one of the most successful meetings from every standpoint that the Association has enjoyed. From the opening session on Tuesday morning, through the sessions of the House of Delegates and scientific sections, luncheon meetings and entertainment features, to the closing joint session of sections on Thursday morning there was keen and sustained interest in every event.

Despite the fact that Cincinnati is not readily accessible to all parts of the state the registration list printed below shows that with the exception of six isolated counties every component society in the state was represented by one or more members, indicating a wide and active appreciation of the value of medical organization by the profession of Ohio. The following list includes the names of members and medical guests; it does not contain the large number of visiting ladies and exhibitors.

### ADAMS

*Members*—S. J. Ellison, L. H. Leonard, R. Y. Littleton, W. B. Loney, O. T. Sproull, Ray Vaughn.

### ALLEN

*Members*—A. F. Basinger, W. W. Beauchamp, E. G. Burton, C. H. Clark, G. R. Clayton, Emma Ernsberger, C. D. Gamble, V. H. Hay, J. R. Johnson, A. D. Knisley, D. W. T. McGriff, W. L. Neville, W. H. Parent, J. B. Poling, William Roush, A. S. Rudy, A. V. Sibert, O. S. Steiner, J. J. Sutter, J. R. Tillotson, J. R. Thomas, A. N. Wiseley, Jr., E. C. Yingling.

### ASHLAND

*Member*—George Riebel.

### ASHTABULA

*Members*—W. H. Leet, G. T. Wasson.

### ATHENS

*Members*—D. H. Biddle, T. A. Copeland, C. S. McDougall, J. T. Merwin, W. D. Porterfield, J. R. Sprague, E. I. Stanley.

### AUGLAIZE

*Members*—E. F. Heffner, R. C. Hunter, G. L. Lyne, C. P. McKee, N. V. Noble, S. H. Sibert, F. A. Shuffelton.

### BELMONT

*Members*—W. J. Arnold, C. W. Kirkland, C. W. Lose, J. S. McClellan, D. M. Murphy, R. H. Wilson, F. S. Wright.

### BROWN

*Members*—R. L. Chambers, A. W. Francis, R. B. Hannah, J. W. Kautz, E. W. Love, H. P. Shelton.

### BUTLER

*Members*—C. T. Atkinson, E. O. Bauer, H. J. Baker, D. M. Blizzard, F. W. Brosius, H. L. Burdsall, C. J. Chamberlin, R. Harvey Cook, G. M. Cummins, A. J. Dell, T. A. Dickey, F. M. Fitton, Merle Flenner, L. H. Frechtling, D. F. Gerber, Mabel E. Gardner, W. E. Griffith, W. D. Hancock, G. A. Hermann, L. S. Krauss, Henry Krone, H. M. Lowell, G. D. Lummis, Henrietta Puthoff-Miller, Mark Milliken, W. T. Shipe, W. K. Smith, H. H. Smith, M. L. Snyder, W. T. Stewart, E. T. Storer, K. R. Teachnor, W. M. Warner, N. H. Williams, F. P. Zeffass.

### CHAMPAIGN

*Members*—D. C. Houser, J. F. Stultz.

### CLARK

*Members*—F. P. Anzinger, W. E. Bright, P. E. Cromer, C. W. Evans, W. A. Hadley, F. A. Hartley, S. R. Hutchings, C. L. Jones, J. A. Link, A. R. Kent, Iva M. Lickly, T. W. Mahoney, W. C. Marshall, P. C. Marquart, C. L. Moore, W. B. Patton, A. H. Potter, C. L. Ramsey, R. R. Richison, J. H. Rinehart, W. M. Runyan, Benetta D. Titlow. *Guest*—George V. Sheridan.

### CLERMONT

*Members*—R. C. Belt, A. C. Christopher, J. M. Coleman, O. C. Davidson, J. L. Fomorin, W. J. Hughes, F. A. Ireton, W. E. Leever, F. H. Lever, Thomas Longworth, T. A. Mitchell, A. B. Rapp.

### CLINTON

*Members*—E. C. Briggs, G. K. Dennis, J. F. Fisher, Kelley Hale, C. E. Kinzel, Elizabeth Shrieves, C. A. Tribbet, G. W. Wire.

### COLUMBIANA

*Members*—Alfred Cobbs, W. N. Gilmore, A. J. Hill, J. M. King, Sr., E. C. Louthan, R. C. Smucker, H. K. Yaggi.

### COSHOCOTON

*Member*—B. O. Burkey.

### CRAWFORD

*Members*—W. G. Carlisle, J. G. Mannhardt, C. D. Morgan, E. R. Schoolfield, W. L. Yeomans.

### CUYAHOGA

*Members*—R. P. Albaugh, R. H. Birge, C. A. Black, M. E. Bland, M. A. Blankenhorn, A. B. Bruner, J. L. Bubis, J. E. Cogan, M. B. Cohen, A. G. Cranch, G. W. Crile, C. L. Cummer, H. L. Davis, Richard Dexter, Louis Domhoff, H. H. Drysdale, G. E. Follansbee, A. D. Finlayson, W.

D. Fullerton, H. J. Gerstenberger, F. C. Herrick, L. L. Hoskins, W. F. Hribal, W. H. Humiston, T. S. Jackson, F. J. Kern, F. G. Leonard, W. E. Lower, Myron Metzenbaum, J. R. McDowell, C. L. Nelson, John Phillips, L. A. Pomeroy, D. A. Prendergast, T. P. Shupe, C. W. Sione, A. Strauss, Charles Swan, H. M. Tarr, J. E. Tucker, R. K. Updegraff, Justin Waugh, F. J. Wood. *Guests*—M. W. Jacoby, H. J. Knapp, E. P. Neary, Guy Wells.

## DARKE

*Members*—M. M. Corwin, W. T. Fitzgerald, I. H. Hawes, E. G. Husted, Charles Wittenmayer, J. E. Monger, J. C. Poling, A. W. Rush, C. I. Stephen, O. P. Wolverton.

## DELAWARE

*Members*—W. E. Borden, C. W. Chidester, J. K. James, F. V. Miller.

## ERIE

*Member*—H. W. Lehrer.

## FAIRFIELD

*Member*—H. F. Bigony.

## FAYETTE

*Members*—G. W. Blakeley, C. C. Crum, A. S. Stemler, E. F. Todhunter.

## FRANKLIN

*Members*—John B. Alcorn, H. A. Baldwin, J. A. Beer, J. E. Beery, H. G. Beatty, L. C. Benkert, L. L. Bigelow, H. B. Blakey, M. W. Bland, H. E. Boucher, F. G. Boudreau, C. F. Bowen, Wayne Brehm, C. J. Burns, P. H. Charlton, K. A. Clouse, J. J. Coons, Andre Crotti, C. D. Dennis, V. A. Dodd, J. M. Dunn, J. D. Dunham, U. K. Essington, E. W. Euans, T. R. Fletcher, Fred Fletcher, J. Forman, J. A. Frank, E. E. Gaver, S. O. Giffin, S. J. Goodman, W. J. Gorey, E. A. Hamilton, C. S. Hamilton, H. C. Haney, G. T. Harding, Jr., I. B. Harris, H. L. Harris, G. A. Haveman, E. R. Hayhurst, E. D. Helfrich, A. G. Helmick, C. H. Hoffhine, Ross Hopkins, E. G. Horton, C. D. Hoy, L. P. Howell, M. E. Jones, G. W. Keil, B. R. Kirkendall, R. W. Kissane, R. E. Krigbaum, A. B. Landrum, F. F. Lawrence, E. F. McCampbell, A. B. McConagha, C. W. McGavran, J. W. Means, Hugh Means, W. H. Miller, C. M. Mooney, L. M. Murphy, L. W. Neiswender, R. G. Noble, W. E. Obetz, A. B. Olsen, Joseph Price, H. M. Platter, R. A. Ramsey, John Rauschkolb, J. M. Rector, Edward Reinert, Rush Robinson, C. E. Roderick, D. G. Sanor, Jr., Ernest Scott, E. J. Schwartz, A. H. Seeds, C. J. Shepard, P. D. Shriner, E. R. Shilling, H. H. Snively, C. J. Spohr, Robert Tarbell, Wells Teachnor, J. H. J. Upham, C. M. Valentine, W. S. Van Fossen, Frank Warner, W. J. Weaver, G. W. Williard, E. C. Wood, Ada V. Wright, C. H. Wyker. *Guests*—Gertrude E. Armstrong, E. W. Baird, J. E. Bauman, Fred Berry, C. J. Burns, C. W. Conley, R. G. Leland, Don K. Martin, Zoe McCaleb, E. W. McClure, C. S. Smith.

## GALLIA

*Member*—G. G. Kineon.

## GEAUGA

*Member*—F. S. Pomeroy.

## GREENE

*Members*—C. H. Denser, P. D. Espey, W. A. Galloway, R. H. Grube, W. M. Hartinger, Ben R. McClellan, C. G. McPherson, R. B. Reed.

## GUERNSEY

*Members*—A. G. Ringer, G. F. Swan.

## HAMILTON

*Members*—D. H. Abbott, W. R. Abbott, R. C. Allen, S. E. Allen, E. D. Allgaier, C. S. Amidon, M. N. Applegate, C. S. Ashfield, Katherine A. Astler, Emma J. Batchelor, O. V. Batson, E. N. Beatty, C. W. Beaman, A. J. Bell, W. H. Bell, F. M. Burns, J. E. Benjamin, Oscar Berghausen, Ruth G. Bernheim, C. W. Betzner, A. D. Birchard, L. M. Blocker, Emil Blunden, C. L. Bonifield, F. J. Boyd, W. N. Bragg, C. J. Broeman, W. L. Brodberger, H. A. Brown, J. E. Brown, J. C. Cadwallader, J. A. Caldwell, Elizabeth Campbell, R. G. Carothers, Robert Carothers, J. T. Clear, R. B. Cofield, C. G. Crisler, Nora Crotty, E. A. Curry, L. M. Cusher, G. E. Dash, D. J. Davies, J. L. DeCourcy, D. M. Denman, L. M. Denman, W. M. Doughty, A. G. Drury, C. S. Dryer, Bertha Deuch, R. R. DuCasse, C. E. Eha, C. K. Ervin, G. A. Fackler, Albert Fallar, Angela B. Farley, F. E. Fee, E. W. Fell, C. L. Ferguson, C. C. Fihe, Martin Fischer, T. V. Fitzpatrick, A. W. Foertmeyer, L. J. Fogel, Starr Ford, N. I. Fraid, Alfred Friedlander, W. L. Furste, W. A. Gardner, R. E. Gaston, O. P. Geier, A. E. Gillette, Wm. Gillespie, Bertha L. Glaeser, S. J. Goldberg, Leon Goldberg, H. M. Goodyear, W. J. Graf, J. V. Greenbaum, Walter Griess, C. Haarlammert, W. D. Haines, R. B. Hall, D. C. Handley, F. H. Harris, C. E. Hauser, Gustav Hausser, F. C. Heffner, R. C. Heflebower, L. W. Heizer, F. W. Hendley, W. C. Herman, L. G. Heyn, H. L. Higgins, Maude R. Hill, Elizabeth Hocker, C. A. Hoffing, A. P. Hofmann, L. P. Hottendorf, C. E. Howard, Charles Iliff, Raphael Isaacs, A. R. Johnston, D. A. Johnston, E. S. Johnston, I. D. Jones, R. C. Jones, F. A. Kautz, E. M. Keefe, W. D. Keller, W. C. Kendig, J. T. Kennedy, Edwin Khuon, Charles Kiely, Clarence King, J. C. Kunz, A. L. Knight, Mary S. Knight, E. T. Knoop, S. P. Kramer, A. G. Kreidler, L. J. Krouse, M. C. Labermeier, F. W. Lamb, F. H. Lamb, Sidney Lange, C. A. Langdale, Duke Lee, A. J. Light, W. T. Lindsay, L. P. Linss, B. F. Lyle, D. J. Lyle, C. W. Manss, Joseph Meitus, J. W. Miller, G. W. Miller, J. D. Miller, E. W. Mitchell, William Mithoefer, L. A. Molony, Gilbert Mombach, A. E. Moorbrink, R. S. Morris, C. P. McCord, H. D. McIntyre, G. F. McKim, F. H. MeMechan, C. E. Neal, C. A. Neal, E. H. Nieson, B. H. Nellans, A. W. Nelson, H. G. Nelson, E. A. North, M. A. O'Hare, A. E. Osmond, F. M. Oxley, Henry Page, C. T. Perin, Jr., W. H. Peters, F.

D. Phinney, J. E. Pirrung, E. O. Porter, W. D. Porter, J. L. Ransohoff, T. A. Ratliff, F. L. Rattermann, Helena T. Ratterman, William Ravine, A. Ravogli, C. A. L. Reed, A. F. Renneker, L. J. Renneker, G. B. Rhodes, S. G. Rothenberg, J. W. Rowe, Moses Salzer, N. L. Saltzman, Robert Sattler, W. E. Schenck, H. M. Schneider, Louis Schwab, O. S. Seidel, O. J. Seibert, P. J. Shank, R. A. Shank, Edmund Shields, C. E. Shinkle, L. H. Schriver, J. H. Schroeder, S. K. Siebler, G. O. Sikes, E. L. Silberstein, J. H. Skavlem, E. O. Smith, P. G. Smith, S. H. Smith, C. G. E. Speidel, E. B. Snyder, C. T. Souther, J. C. Staats, R. W. Staley, J. Stammel, Henry Stanberry, E. O. Straehley, Erwin Straehley, E. C. Steinharter, Robert Stevenson, T. M. Stewart, H. L. Stitt, W. H. Stix, Louis Stricker, A. E. W. Stueve, E. M. Strasser, F. U. Swing, S. C. Swartzel, E. O. Swartz, M. A. Tate, R. B. Tate, E. B. Tauber, W. A. Teveluwe, J. H. Thesing, G. B. Topmoeller, J. E. Townsley, J. L. Tuechter, M. H. Urner, C. B. Van Meter, J. D. Wakefield, H. C. Wayble, Dudley Webb, H. B. Weiss, T. H. Wenning, B. A. Williams, J. H. Wilms, M. E. Wilson, J. J. Winn, J. M. Withrow, C. E. Wooding, H. L. Woodward, P. M. Woodward, Philip Zenner, Samuel Zielonka. *Guests*—R. B. Blume, F. D. Conroy, L. J. Hendricks, T. D. Meguire, Mrs. E. W. Mitchell, M. D., W. C. Paul, M. F. Peterson, W. R. Rogers, Byron Stanton.

## HANCOCK

*Members*—J. A. Baker, Nelia B. Kennedy, J. C. Tritch.

## HARDIN

*Members*—J. B. K. Evans, A. S. McKitrick, C. C. McLaughlin, E. S. Protzman, R. G. Schuette, O. H. Tudor.

## HARRISON

*Member*—W. A. Zellars. *Guest*—H. G. Bonnell.

## HENRY

*Member*—T. M. Gehrett.

## HIGHLAND

*Members*—H. C. Bohl, H. W. Chaney, C. C. Cropper, J. T. Gibson, F. M. Granger, R. E. Holmes, J. C. Larkin, H. H. Lowe, W. C. Martindill, L. Nelson, W. G. Rhoten, W. B. Rhoads, W. H. Willson.

## HOCKING

*Member*—J. S. Cherrington.

## HURON

*Member*—H. M. Metcalf.

## JACKSON

*Members*—J. J. McClung, W. J. Ogier, W. H. Parker, A. G. Ray, C. A. Scurlock.

## JEFFERSON

*Members*—Reed Cranmer, Demarr Erskine, J. C. M. Floyd, S. J. Podlewski, C. B. Terwilligar.

## KNOX

*Members*—F. C. Anderson, G. D. Arndt, N. R. Eastman, F. C. Larimore, J. F. Lee, W. W. Pennell, J. D. Thomas.

## LAWRENCE

*Members*—Casper Burton, F. D. Campbell, O. H. Henninger, George King, W. F. Marting, N. K. Moxley, O. U. O'Neill, T. H. Remy, J. S. Wiseman.

## LICKING

*Members*—T. L. Baxter, H. B. Anderson, J. H. Cosner, C. B. Hatch, R. C. Mauger, E. A. Moore, J. R. McClure, D. M. Smith, J. P. H. Stedem.

## LOGAN

*Members*—E. R. Henning, F. B. Kaylor, M. L. Pratt, C. K. Startzman.

## LORAIN

*Members*—Waite Adair, S. V. Burley, Birt Garver, W. E. Hart, W. H. Hull, J. R. Pipes.

## LUCAS

*Members*—F. W. Alter, W. W. Alderdyce, W. W. Brand, B. G. Chollett, F. A. Cobb, L. R. Effler, S. D. Foster, John Gardiner, S. D. Giffen, E. B. Gillette, N. W. Gillette, H. L. Green, C. M. Harpster, Oscar Hasencamp, H. S. Hayford, Thomas Heatley, S. S. Hindman, Charles Koenig, L. A. Levison, Charles Lukens, C. H. Mills, C. W. Moots, C. S. Mundy, J. T. Murphy, E. J. McCormick, F. B. McNierney, C. S. Ordway, T. R. Ramsey, R. D. Robinson, A. H. Schade, C. D. Selby, W. R. Stephens, J. J. Sweeney, Dale Wilson, Theodore Zbinden.

## MADISON

*Members*—H. C. Christopher, G. M. Kerr, J. W. Parker, F. S. Postle, F. E. Rosnagle, H. P. Sparling, R. H. Trimble.

## MAHONING

*Members*—C. H. Beight, J. D. Boylan, W. D. Coy, R. W. Fenton, F. F. Monroe, Sidney McCurdy, W. E. Ranz, J. A. Sherbondy, O. J. Walker, H. E. Welch.

## MARION

*Members*—C. L. Baker, L. H. Britton, R. C. M. Lewis, H. K. Mouser, B. D. Osborn, C. W. Sawyer, D. O. Weeks.

## MEDINA

*Members*—C. J. Buckley, E. L. Crum.

## MEIGS

*Members*—D. B. Hartinger, P. A. Jividen, A. E. Lawrence.

## MERCER

*Members*—M. L. Downing, J. E. Hattery, L. M. Otis, W. H. Thompson.

## MIAMI

*Members*—Charles Baker, J. B. Barker, J. F. Beachler, M. M. Brubaker, J. R. Caywood, Warren Coleman, S. S. Gabriel, M. R. Haley, G. J. Hance, D. S. Hartman, Gainor Jennings, H. W. Kendall, I. C. Kiser, L. N. Lindenberger, J. E. Murray, G. E. McCullough, H. R. Pearson, E. A. Yates.

## MONTGOMERY

*Members*—E. R. Arn, R. C. Austin, E. A. Baber, F. S. Baron, B. W. Beatty, S. M. Beck, R. S. Binkley, E. E. Bohlender, Horace Bonner, L.

G. Bowers, A. B. Brower, R. A. Bunn, H. W. Burnett, C. E. Burgett, A. W. Carley, C. N. Chrisman, D. B. Conklin, M. E. Coy, E. R. Crew, T. H. Dickinson, F. J. Driscoll, H. V. Dutrow, Eleanora S. Everhard, W. A. Ewing, G. B. Evans, A. G. Farmer, Gertrude Felker, E. C. Fischbein, J. D. Fouts, G. G. Giffen, G. C. Gilfillen, G. D. Gohn, George Goodhue, F. C. Gray, T. L. Gregg, Curtiss Ginn, P. L. Kunckel, H. C. Haning, H. B. Harris, A. E. Hewitt, J. A. Hodkins, C. T. Hunt, E. M. Huston, H. R. Huston, L. M. Jones, C. S. Judy, C. E. Kerney, P. H. Kilbourne, Fred Kislig, A. L. Light, Grant Marthens, D. C. Mills, A. J. Moorman, H. H. McClellan, C. C. McLean, E. F. McSherry, F. C. Payne, A. O. Peters, Matthew Porter, M. Ryan, C. E. Shepard, C. D. Slagle, C. D. Smith, W. S. Smith, H. H. Springer, L. E. Stutsman, F. S. Thomson, W. B. Weaver, A. V. Weinberger. *Guests*—T. R. Baldrige, R. R. Bond, C. P. Grover, Leo Schram, F. I. Shroyer.

## MORGAN

*Member*—Emmett Fayen.

## MORROW

*Members*—W. C. Bennett, R. L. Pierce.

## MUSKINGUM

*Members*—E. C. Brush, E. R. Brush, H. R. Geyer, Beatrice Todd Hagen, D. J. Matthews, W. A. Melick, W. F. Sealover, C. P. Sellers, H. T. Sutton, T. L. Sutton, Granville Warburton.

## NOBLE

*Members*—J. L. Gray, G. H. Zimmerman.

## PAULDING

*Members*—C. E. Huston, W. L. McKinney.

## PERRY

*Member*—J. G. McDougal.

## PICKAWAY

*Members*—D. V. Courtright, G. R. Gardner, A. F. Kaler, J. A. Knight, Howard Jones, C. R. McConnell.

## PIKE

*Members*—O. C. Andre, L. M. Andre, I. P. Seiler, E. W. Tidd, L. E. Wills.

## PORTAGE

*Member*—W. B. Andrews.

## PREBLE

*Members*—W. I. Christian, C. H. Harris, A. C. Hunter, J. C. Ryder, H. Z. Silver.

## PUTNAM

*Members*—P. D. Bixel, Frank Light, A. F. Sheibley, B. E. Watterson, J. D. Watterson, W. S. Yeager.

## RICHLAND

*Members*—M. J. Davis, J. S. Hattery.

## ROSS

*Members*—R. E. Bower, W. W. Davis, A. H. Dunn, L. T. Franklin, J. L. Halstead, R. W. Holmes, G. S. Mytinger, G. E. Robbins, W. B. Smith, O. P. Tatman.

## SANDUSKY

*Members*—C. L. Fox, F. M. Kent, B. O. Kreilick, C. I. Kuntz.

## SCIOTO

*Members*—L. D. Allard, D. A. Berndt, T. C. Crawford, J. N. Ellison, J. W. Fitch, S. S. Halderman, J. D. Jordan, G. W. Martin, O. R. Mickelthwait, S. B. McKerrihan, W. A. Quinn, J. S. Rardin, H. F. Rapp, H. A. Schirman, O. D. Tatje, A. L. Test, C. W. Wendelken.

## SENECA

*Members*—R. F. Machamer, R. G. Steele.

## SHELBY

*Members*—Arlington Ailes, M. F. Hussey, G. E. Martin, D. R. Milliette, F. R. McVay, Arthur Silver.

## STARK

*Members*—D. F. Banker, J. R. Beiter, H. H. Bowman, L. A. Buchman, A. C. Brant, J. F. Campbell, J. P. DeWitt, E. M. Feiman, C. E. Fraunfelter, G. S. Hackett, F. E. Hart, V. E. Kaufman, F. G. King, G. L. King, L. E. Leavenworth, E. J. March, E. O. Morrow, L. F. Mutschmann, W. A. McConkey, H. P. Pomerene, C. A. Portz, R. J. Pumphrey, C. J. Schirack, R. T. Shipley, Robert Temple, J. S. Williams, G. F. Zininger. *Guest*—C. E. Exline.

## SUMMIT

*Members*—J. G. Blower, C. A. Bolich, H. A. Briscoe, G. M. Campbell, H. S. Davidson, E. B. Dyson, C. H. Franks, H. R. Heckert, H. W. Hogue, R. C. Kendig, D. B. Lowe, D. H. Morgan, D. M. McDonald, R. H. McKay, U. D. Seidel, D. D. Shira, J. E. Springer, G. W. Stauffer, D. W. Stevenson, C. E. Townsend.

## TRUMBULL

*Members*—H. A. Fiester, R. S. Hallock, R. R. Rogers, J. J. Tyler.

## TUSCARAWAS

*Members*—H. A. Coleman, E. C. Davis.

## UNION

*Members*—S. J. Bown, L. Henderson, P. D. Longbrake, C. D. Mills, Angus MacIvor, H. G. Southard.

## VAN WERT

*Members*—S. A. Edwards.

## VINTON

*Members*—A. A. Boal, W. R. Moore.

## WARREN

*Members*—B. H. Blair, H. M. Brown, Mary L. Cook, N. A. Hamilton, D. B. Hamilton, W. F. Moss, Leonard Mounts, C. G. Randall, A. C. Roberts, S. S. Stahl.

## WASHINGTON

*Members*—S. A. Cunningham, E. W. Hill, Jr., J. L. Mason, W. W. Sauer, A. H. Smith, A. G. Sturgiss.

## WAYNE

*Members*—A. C. Paul, G. W. Ryall, Jr. *Guests*—J. J. Kinney.

## WILLIAMS

*Members*—M. V. Replogle, J. A. Weitz, H. W. Wertz.

## WOOD

Member—H. J. Powell.

## WYANDOT

Members—G. W. Sampson, I. N. Zeis.

## OUT-OF-STATE GUESTS

*Illinois*—Herman M. Adler, J. W. Burns, J. F. Kelley, Chicago.

*Indiana*—Charles P. Emerson, Indianapolis; L. G. Cromer, Union City; Carl J. Schum, Brookville.

*Kentucky*—Henry Greenleaf, D. B. Virtue, Fort Thomas.

*Michigan*—F. F. Ferris, C. S. Oakman, H. L. D. Smith, Detroit.

*New York*—Samuel G. Gant, Elizabeth W. Wright, New York City; Edward E. Green, Brooklyn.

*Pennsylvania*—W. T. Pyle, Swissvale.

*South Dakota*—E. M. Morehouse, Yankton.

*West Virginia*—J. A. Gurhn, W. E. Neal, Huntington; W. A. M. Millan, Charleston; L. Miller, Flat Wood.

*Europe*—S. L. Mosek, Marienbad, Czechoslovakia.

## Echoes of the Convention

Visiting ladies at the seventy-sixth annual meeting will long remember the cordial hospitality which they were extended by the ladies' entertainment committee headed by Mrs. Robert Carothers, wife of the new president. The program started with a luncheon at the Business Men's Club, Tuesday noon. Following this the guests visited the home of Mrs. Charles P. Taft for a view of the splendid art collection, and in the evening there was an entertainment at the Hotel Gibson. On Wednesday morning the ladies were taken to visit the Rookwood Pottery and other places of interest. At noon they were guests at a luncheon at Fort Mitchell Country Club, Kentucky, and in the afternoon there was an automobile ride and tea at the residence of Dr. and Mrs. J. Louis Ransohoff.

Yes, those who registered at the seventy-sixth annual meeting received in addition to their badge and program, the usual armful of literature. But it was all interesting and worth while. First, there was a booklet from the Medical College of the University of Cincinnati, giving some facts about the school and inviting the conventionists to visit the college and the General Hospital. The Union Central Life Insurance Company, whose magnificent skyscraper is one of the show places of Cincinnati, presented the visitors with a helpful pamphlet containing a map of the city and a list of places of interest with directions for reaching them. The Civilian Rehabilitation Service distributed extra blanks for reporting the names of handicapped persons to that department. Et cetera.

The plan to secure reduced railroad rates on the trip home was an innovation at the seventy-sixth annual meeting. As previously announced in *The Journal* the arrangement with the Central Passenger Association required that 350 certificates for the special fare be submitted to the agent at the registration desk for validation before the reduced rate could be assured and the certificates returned to their purchasers. Due to delay in presenting the certificates the required number was not obtained until Wednesday afternoon, when a total of 362 were validated. Un-

fortunately a number had left the city before that time and lost the benefit of the special rate.

Guests at the luncheons for legislative committeemen on Tuesday, and for presidents and secretaries of county societies on Wednesday, are voting strong for the caterer at the Scottish Rite Cathedral where these functions were held. But more inspiring still were the talks by the organization leaders from the various counties. Dr. J. H. J. Upham, chairman of the Committee on Public Policy and Legislation, and Dr. Robert Carothers, the president-elect, presided at these affairs in splendid style.

The basement of the Hotel Gibson was cleverly converted into an exhibition hall and the displays of the commercial exhibitors were unusually attractive. Publication of the roster of exhibitors in the official program of the meeting made a big hit with the exhibitors and guests.

More than 300 guests attended the annual banquet on Wednesday evening. The speakers were Hon. Hugh Nichols, former chief justice of the Ohio Supreme Court; Former Judge Rufus B. Smith, chairman of the Board of Directors of Cincinnati University; Drs. Samuel E. Allen and Martin Fischer.

The annual orations by Dr. Charles Phillip Emerson, dean and professor of medicine, Indiana University School of Medicine, and Dr. Samuel Goodwin Gant, New York City, on the second afternoon of the meeting were well received. Dr. Emerson, who was scheduled to speak first, gave the arrangements committee a scare when his train failed to arrive in time for the opening of the session, but by the time Dr. Gant had spoken Dr. Emerson was on the job.

A word of thanks to the management of the Hotel Gibson (convention headquarters), and the Cincinnati Chamber of Commerce for their invaluable help. Throughout the meeting the Gibson overlooked no detail to insure every convenience. The Chamber of Commerce was helpful in many ways, not the least of which was the splendid corps of assistants furnished for the registration headquarters.

The programs of the scientific sections at the seventy-sixth annual meeting have been the sub-

ject of unlimited praise. The section officers are to be commended for the arrangement of programs of such high caliber.

A delightful luncheon at the Sinton Hotel on the second day of the seventy-sixth annual meeting celebrated the reunion of members of the class of 1897 of Ohio Medical University. Nineteen members were present and responded to toasts. The organization was made permanent and the time and meeting place chosen to coincide with the future meetings of the State Association. Dr. Kelly James, Delaware, is president, and Dr. E. A. Yates, secretary.

Health commissioners who attended the Ohio

State Medical Association meeting at Cincinnati had a luncheon on May 5 at the Business Men's Club. About thirty health commissioners were present, including Dr. H. H. Snively, State Director of Health, Dr. F. G. Boudreau and Dr. E. J. Schwartz, representing the State Department of Health. Dr. Snively presided. Each commissioner spoke of the situation in his district and discussed the work he was doing. The luncheon lasted from noon to four o'clock.

Alumni Association of Rush Medical College, Chicago, held a luncheon meeting at the Hotel Gibson, May 3. In recognition of his services to the college Dr. Carl Sawyer, Marion, was elected president of the association for life.

### Life Saving or Public Health

(Continued from page 404)

recovery or demise, whether he suffers from a communicable disease or from some other ailment, depends very largely upon the quality of service he receives from the doctor. It is well known that only a fraction of all deaths, a little less than 10 per cent., are due to communicable diseases, and that the public-health officer may claim decisive influence only in case of a minor part of even this ten per cent.

"The wise health officer undoubtedly appreciates the fact that the efficiency of his own work depends very largely upon the efficiency of the average doctor as well as upon an intelligent and responsible attitude of the public toward public health functions. It would seem important for the health officer to guard against an overdevelopment of health functions. This is apt to be followed by increased cost of work with decreased results. A balance must at all times be aimed at in the life-saving program. An overdevelopment of public-health functions which upsets this balance may seriously interfere with progress towards a lower death rate and a lower sickness rate."

### The Physician as a Guide

"It is particularly refreshing to note the reference to the family physician and his important place in the social fabric", declared the special committee of the House of Delegates in commending the statement of Dr. Wells Teachnor in his annual address at the Cincinnati meeting.

On this vital point the retiring president declared that:

"To insure the permanency and success of the family physician, the general practitioner, the profession as a whole must stand united on the principle of the domiciliary visit, the close and intimate contact with family life, the primary service to the ill and distress of the social structure.

"All proposals, all fads of paternalism or socialization which would destroy or interfere with such relationship or with the freedom of the public to choose its individual medical service, are fallacious and must not be permitted to materialize."

During the meeting there appeared an editorial in the *Cincinnati Enquirer* on the subject of "The Physician as a Guide", and in which a real compliment was paid to the hundreds of physicians and surgeons who were then in attendance at the medical convention in that city. In part, the editorial said:

"The intimate relationship between physician and patient constitutes a factor of vast importance in the development of social ideals. The physician is with us when we enter the world; he is with us when we close our eyes to enter into the unknown. He holds in higher degree than any other human being the faith and confidence of the multitudes. His close relationship with the family requires that he be a man of high character and purest motives. His confidence, like that of the priest and the lawyer, is a sacred, inviolable thing. It is his province to instruct youth in youth's perilous hour, to give to age those resources which enable it to meet the inevitable experience of death with physical and mental equanimity. He should be as solicitous in regard to public morals, civic progress and the unfolding of the national destiny as he is solicitous for the health and physical well-being of the individual who submits himself to his care.

"This conception of the physician's place, character and duty with reference to the community found emphasis in the remarks of one of the distinguished members of the association. Said he:

"Schools of medicine must develop broad gauge, far-sighted, skillful practitioners, able investigators and public-spirited citizens. By training and tendency the times demand that physicians be not only scientific men, but leading citizens with very definite responsibilities in guiding and directing public thought on public questions for which they should be peculiarly fitted."

"The patriarch Job would have made no disparaging remarks about physicians of that class. Fortunately, most of them belong to that class."



## Campaign of Diphtheria Prevention Begun by the State Department of Health with Demonstrations of Schick Test

The first gun and several others have been fired in the campaign being waged against diphtheria in Ohio by health officials. By the use of the Schick test and immunization with toxin-antitoxin it is hoped to accomplish here and perhaps exceed the rapid reduction in death and case rates that took place in New York when these methods were employed among school children.

To thoroughly familiarize the health commissioner of the state with these modern methods of diphtheria prevention, a series of demonstrations in various parts of the state have been arranged by the State Department of Health.

### DEMONSTRATION AT OHIO SOLDIERS AND SAILORS ORPHANS' HOME

The first of these demonstrations took place at the Ohio Soldiers and Sailors Orphans' Home, Xenia. The six hundred children at this institution were Schick-tested by Dr. F. G. Boudreau and his assistants from the State Department, and a meeting of health commissioners was called to witness the results. Permission to carry on this work was obtained from Colonel Garver, superintendent of the institution. State health officials were assisted by Dr. Middleton, institution physician. Mrs. Garver entertained the members of the medical staff of the institution and the visiting health commissioners at a luncheon, at which Dr. Messenger of Xenia presided. After luncheon Dr. Boudreau lectured on the Schick test and immunization with toxin-antitoxin to the physicians and health commissioners. A large number of children with the various types of reaction were shown. More than thirty health commissioners and physicians were present.

In an address to the guests Dr. W. A. Gallo-way, Xenia, gave the history of the institution with special reference to diphtheria. He showed that the disease had taken an unusual toll of the inmates. The reason for this was evident when the results of the Schick test were read and nearly forty per cent. of the entire population gave positive tests indicating lack of antitoxic immunity to diphtheria. The total number tested was 651, total number positive 254. The percentage of positives among the males was twenty-eight and among the females forty-nine. An unusual proportion of children over ten years of age gave positive results.

Following the Schick testing all susceptible children were given three injections of toxin-antitoxin, one a week for three weeks. Very few severe reactions were noted and no serious results of any kind occurred. Before the end of the present school year all susceptible children will be retested and the small number of children

who still give positive results will be given additional injections of toxin-antitoxin.

### INMATES OF FEEBLE-MINDED INSTITUTION SCHICK-TESTED

By arrangement with Dr. E. J. Emerick, superintendent of the State Institution for Feeble-Minded, Columbus, the inmates were Schick-tested by Drs. F. G. Boudreau, E. J. Schwartz, E. R. Shaffer and T. Mahoney. They were assisted by Dr. Kaiser, assistant to Dr. Emerick. The Columbus institution has been free from diphtheria for years and the results of the tests showed the reason. Only seventeen per cent. of the total population showed positive tests, indicating susceptibility. A total of 1,729 was tested and only 294 were positive. Ten per cent. of the males and nineteen per cent. of the females gave positive results. Dr. E. J. Emerick plans to immunize those who have shown susceptibility by giving them toxin-antitoxin.

### PREVENTION OF DIPHTHERIA AT CHILDREN'S HOMES

Inmates of children's homes in Belmont, Darke and Pike Counties have been Schick-tested by members of the staff of the State Department of Health. In all cases health commissioners and physicians were invited. The county medical societies attended in a body in Belmont and Darke Counties. Plans are under way to test and immunize the children at a number of other homes. The object of these demonstrations is primarily to protect the children, but an important secondary object is to familiarize health commissioners and physicians with the proper methods of performing and reading the tests. The demonstrations have been so arranged as to provide an opportunity for every health commissioner in the state to attend and assist.

### Understanding of Health Problems Needed

"The Social Aspects of Medicine" was the subject of an address by Dr. William S. Keller, president of the Cincinnati Social Hygiene Society, before students of Ohio Wesleyan College, Delaware, recently. "Many leaders in the field of medicine," Dr. Keller said, "are beginning to realize that aside from their responsibility to their individual patients, they also have responsibility to the state. It is of prime importance that our citizens be given an appreciative understanding of the more important aspects of health problems. Particularly should the young men and women in our universities, colleges and high schools become familiar with these problems since, in a few years, they will be the leaders in their communities."



## HOSPITAL NOTES

—Dr. John A. Toomey, physician and attorney, who has been connected with the Cleveland City Hospital for 12 years, is serving as acting superintendent of the hospital. The city welfare director has announced that a layman will probably be selected as the permanent head.

—The Community Hospital, McConnelsville, established and maintained by the women of the Community Civic Club of Malta-McConnelsville, was closed, at least temporarily, May 1. In the year in which the hospital was in existence more than 115 operations were performed and other cases were cared for there.

—A special department for research work and treatment of cancer will be established in the Jewish Hospital, Cincinnati, as the result of a gift of \$15,000 recently received. Much of the money will be expended for the purchase of X-Ray equipment.

—Instruction of children who are ill and confined in hospitals has been successfully tried out in St. Vincent's Hospital, Toledo, and may be extended to other institutions when the fall school term begins. A teacher from the public schools spends the time from 8 a. m. to 3:30 p. m. visiting the bedsides of the sick with books and other paraphernalia of instruction. The local board of education pays the teacher's salary on a basis that is a percentage worked out on the number of pupils taught each day and the number taught in a regular class, and the state pays the balance.

—A plan to centralize all children's medical institutions in Cincinnati around the College of Medicine and the General Hospital was started recently when it was announced that the new Home for the Friendless would be built opposite the Nurses' Home. It will be the first of several institutions to be built on the hospital site. Dr. William Gillespie, chief of the obstetrical service of the General Hospital, will serve in the same capacity for the Friendless Home, as will other members of the staff.

—Work on the new Children's Hospital of Columbus will be started early this summer. A campaign for \$300,000 with which to erect the hospital was carried on six years ago. When about \$144,000 had been subscribed the campaign failed because of a gift of a large sum of money left to the hospital about this time which, however, would not come to the hospital for 50 years, but at the same time mislead the public to believe that the hospital could have sufficient funds for present needs. With interest from the funds collected in the campaign a desirable city block has been purchased as a site for the new hospital.

## University Trustees Reaffirm Stand for Pay Wards

The board of trustees of the University of Cincinnati has adopted a resolution reaffirming its purpose to establish a pay ward at the General Hospital and to permit surgeons on the staff of the Medical College to operate on private patients there and to charge for the operations.

The resolution was adopted in answer to an objection raised five months ago by Dr. S. P. Kramer in an address before members of the Cincinnati Academy of Medicine. Dr. Kramer took exception to the policy of the board in establishing a pay ward at the General Hospital which, he said, had been built "for the benefit of persons unable to pay for medical service."

At the meeting referred to, Dr. Kramer, Dr. Louis Schwab and Dr. Walter R. Greiss were appointed members of a committee to investigate conditions at the Medical College and to report back to the Academy of Medicine at a future meeting.

A communication then was sent to the Board of Trustees of the University asking for the correspondence that passed between the board and the Carnegie and Rockefeller Foundations which recently endowed the Medical College and under which they are permitted to charge for private operations in a pay ward of the General Hospital.

Following is the resolution adopted by the board of trustees in which it sets forth its position:

*Whereas*, This board, under the powers conferred upon it by law and the charter of the city of Cincinnati, has by resolution previously adopted set aside Ward C-3 for the purpose of surgical research; and

*Whereas*, Such action was taken for the purpose of facilitating medical research, improving instruction in medicine and surgery in the hospital, and relieving without interfering with the proper care of the indigent, sick or injured taxpayers of the city from the burden of maintaining Ward C-3, the maintenance of which, together with the other parts of said hospital, have become a great burden upon such taxpayers; therefore be it

*Resolved*, That all the expenses of the equipment and maintenance of said Ward C-3 shall be paid out of the income of trust funds under the control of this board, except as such expenses may be borne in whole or in part by the patients admitted to said ward; and

*Resolved*, That the members of the surgical staff of the hospital are to be allowed to take private patients into said ward, said surgeons to be permitted to receive compensation from such patients; and

*Resolved*, That all matters referred to or provided for herein are to be governed by rules and regulations to be adopted from time to time by this board.

The board also adopted a resolution directing the secretary to furnish the committee of the Academy of Medicine with copies of the correspondence received from the Carnegie and Rockefeller Foundations and copies of the contracts entered into with the full-time professors in the Medical College.

*X-Ray,  
Radium,  
Removal of  
Foreign  
Bodies*

CHAS. F. BOWEN, M. D.  
344 East State Street  
Columbus, O.

## ACADEMIES AND COUNTY SOCIETIES

### CLEVELAND

(Lester Taylor, M.D., Sec'y.)

The 178th regular meeting of the Academy of Medicine of Cleveland, was held April 21, with the president, Dr. John Phillips, in the chair.

A paper was presented by Dr. Clyde L. Cummer, Cleveland, on "The Anemia of Late Syphilis". Dr. Cummer took up some points in the differential diagnosis between syphilitic anemia, leukemia, Banti's disease and Van Jaschs disease. He pointed out that there was no specific manifestation associated with syphilitic anemia and that each case required individualization. He showed that specific therapy when properly applied causes a regeneration of red blood cells, probably by stimulation of the bone marrow. Mercury would cause, at first, an increase of the red blood cells—later, a diminution. Arsenic causes a fall in the hemoglobin. He discussed the effects of transfusion splenectomy and the use of iron. Paper discussed by Drs. Hoover, Updegraff, and Barker, with discussion closed by Dr. Cummer.

The guest of the evening was Dr. L. F. Barker, Professor of Clinical Medicine, John Hopkins University Medical School, who spoke on the "Diagnosis and Treatment of Lethargic Encephalitis". He pointed out that the etiology of the disease was still obscure and that the pathology consisted of the non-suppurative inflammation of the midbrain and basal ganglia. He showed the difficulty of making a diagnosis in many cases because of the protean character of this disease. He outlined a common syndrome and reminded us that there were, doubtless, many obscure after-effects which should be laid to this disease. In discussing the treatment he pointed out the value of repeated lumbar punctures. Dr. Barker's talk was illustrated by lantern slides. He approached this subject from a background of an extremely wide experience and presented it in a way which was inimitable. His talk was extremely interesting and very useful and instructive to the largest attendance which the Academy has registered this year—250. Discussion by Drs. Bogart, Furrer, Kohn, Graber, Laffer and Stewart, closed by Dr. Barker.

In behalf of the Academy the president extended thanks to Dr. Barker for his talk, after which the meeting adjourned at 10:20 to the Medical Library where refreshments and a sociable time were enjoyed.

### COLUMBUS

(James A. Beer, M.D., Sec'y.)

At the regular meeting of Columbus Academy, April 24, "The Management of Diabetes Mellitus" was presented in a paper by Dr. C. W. McGavran. "The Treatment of Neisserian Pelvic Lesions"

was discussed in a paper by Dr. Fred Fletcher. Five names were added to the membership roll—making the total to date 354.

Of special interest to Organized Medicine was the rejection of a resolution by Dr. S. J. Goodman relative to lowering of standards for nurses.

The following resolution was introduced by Dr. H. M. Platter and unanimously adopted by the academy:

*Whereas*, there has been much thought and discussion on the subject of nurse education, relative to preliminary educational requirements, subjects in curriculum, and period of training, and

*Whereas*, the entire subject of nurse education is in the course of development, and

*Whereas*, there is now under way a national movement for a definite standardization of nurse education with the possibility of shortening the period of training. Therefore, be it

*Resolved* that it is the sense of the Columbus Academy of Medicine that the Council of the State Association should either appoint a special committee or authorize the Committee on Public Policy and Legislation to confer with official representatives of the State Association of Graduate Nurses, the Ohio Hospital Association and other groups and agencies interested in the question to the end that thorough consideration and unity of purpose may be brought to bear on the entire subject, with the idea of eliminating unnecessary subjects, if found, from the curriculum of nurse education, reducing the period of training, if practical, and overcoming the shortage of nurses, if possible, wherever such condition prevails.

#### FIRST DISTRICT

*Adams County* Medical Society held its first meeting of the year in West Union, April 19. With a large percentage of the membership present, a good program and an excellent dinner provided by the West Union members, the meeting was a decided success. "Do the Masses Consider Medicine a Science or a Cult?" was the interesting question discussed by Dr. L. H. Leonard, Manchester. Dr. C. J. Broeman, Cincinnati, gave an illustrated talk on "Radium."—O. T. Sproull, Secretary.

*Fayette County* Medical Society, in session at Washington C. H., April 14, reelected Dr. E. F. Todhunter, president, and Dr. Lucy W. Pine, secretary-treasurer. Dr. G. W. Blakeley is vice-president.

#### SECOND DISTRICT

*Darke County* Medical Society had an excellent meeting at St. Clair Memorial Hospital, Greenville, April 13, with 29 members and seven guests present. Drs. E. J. Gordon, Columbus, and E. D. Allgaier, Cincinnati, were the essayists of the occasion, the former speaking on "Present Day Methods in the Treatment of Pneumonia", and the latter on "Nerve Blocking in a Local Tonsillectomy". Following the delivery of the papers Dr. Allgaier demonstrated the technique of nerve blocking. The society held its May meeting at the court house on the 9th in connection with a clinic for crippled children. Drs. A. M. Steinfeld and H. D. Farrar,

Patients requiring hospitalization are treated at Mt. Carmel, Grant, Protestant, St. Francis, or McKinley Hospitals at the option of the physician or surgeon referring the patient.

**RADIUM  
TREATMENTS**

**BEN R. KIRKENDALL, M. D.**  
137 EAST STATE STREET,  
COLUMBUS, OHIO.

Columbus, were consultants at the clinic.—B. M. Metcalfe. Correspondent.

#### FIFTH DISTRICT

*Ashtabula County* Medical Society's 151st meeting was held at Brown Memorial Hospital, Conneaut, April 11, the occasion being the opening of the new hospital. It was a treat to visit this splendidly arranged and well located building, the former home of an old and esteemed citizen, Mr. Brown, who left it for hospital purposes. At an expense of \$75,000 it has been transferred into a modern hospital. Over 2,000 people are said to have visited the hospital on the opening day. Drs. F. E. Bunts and W. E. Lower, Cleveland, were guests of the hospital committee and gave brief talks to the medical society. The classical program of the evening was "Inadvisability of Relying on One Functional Test in Kidney Diseases", by Dr. S. Englander, Cleveland. The meeting was the largest the society has had from the point of attendance, 30 members being present.—J. J. Hogan, Secretary.

*Trumbull County* Medical Society held its monthly meeting April 19, in Warren. The meeting was well attended and a number of physicians were present from Niles, Girard, Newton Falls and other parts of the county. Miss Florence Mahatha, Trumbull County Chapter, American Red Cross, addressed the society on "Home Hygiene and Home Care of the Sick." D. M. Olds, executive of the Warren Boy Scouts, gave a talk on "The Boy Scout and Health." He pointed out the fact that ninety per cent. of Scout work is done in the open air, and asked the co-operation of the society in the Boy Scout First Aid Work.

The remainder of the program was arranged in conjunction with the Tuberculosis Clinic held in Warren by the State Board of Health under the auspices of Health Commissioners Thornburgh and Simpson and was devoted to a symposium on tuberculosis. The first speaker was Dr. J. A. Frank, chief of the bureau of tuberculosis, State Department of Health, who reviewed the work of this important department and stated that its major activity for the year was to hold clinics for educational and diagnostic purposes, the attempt being made to get the patient to the physician while in the incipient stage. He urged the cooperation of physicians in the follow-up work to be done on these cases. Talks by the clinic diagnosticians then followed. Dr. E. P. Edwards of Cleveland, spoke on the early diagnosis of tuberculosis and Dr. E. F. Griessinger of Cleveland, followed with a short talk on treatment. Dr. C. L. Hyde, superintendent, Springfield Lake Sanatorium, East Akron, closed the program with an interesting talk on the work of that institution. His address was illustrated with stereopticon and motion pictures.

A short business session followed the program

at which time Dr. G. C. Clisby of Kinsman and Dr. W. T. Lowry of Masury were elected to membership.—Jond D. Knox, Secretary.

#### SIXTH DISTRICT

*Ashland County* Medical Society had as its guest, April 25, Dr. S. Englander, Cleveland, who reported a case, with illustration, of a congenital peno-rectal fistula in an infant eight months old. Following the case report Dr. Englander read a paper on the "Inadvisability of Depending on One Test for Renal Function". His conclusion was that it is always advisable to have both an excretory and retention test before advising an operation on the genito-urinary organs.—L. G. Sheets, Secretary.

*Mahoning County* Medical Society enjoyed its annual banquet in Youngstown, April 8. For this event there convened 115 hungry physicians whose palates were delighted by a real turkey dinner, during which their ears were thrilled by sweet strains from the instruments of a mandolin club. After dinner the society listened to an address by Attorney W. J. Williams which put them into proper mood for the address of Dr. W. McKim Marriott, St. Louis. Dr. Marriott proved to be a most delightful speaker, discussing anhydremia and acidosis at some length, but reporting the results obtained at St. Louis with Lactic Acid Milk feeding in greater detail. At the regular meeting of the society on April 25 Dr. Armin Elsaesser presented a paper on "The Diagnosis of Goiter".—A. W. Thomas, Secretary.

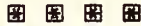
*Portage County* Medical Society, in session at Kent, April 6, transacted general business and heard an interesting paper on "The Diagnosis of Tuberculosis in Children" by Dr. R. D. Worden.—E. J. Widdecombe, Secretary.

*Summit County* Medical Society's interesting program on May 9, at the Peoples Hospital, included the following papers: "Pyelitis", by R. S. Friedley; "Diarrhea in Infancy", by J. M. Ulrich; "Ulceration of the Urethral Meatus in the Circumcised Male Child", by J. G. Kramer. The staff of the People's Hospital has opened its monthly clinics to all members of the Society. The society has organized an orchestra consisting of ten members, the number to be increased later. The conductor is Dr. A. D. Traul, who has had experience in that capacity and as a band instructor.—A. S. McCormick, Secretary.

*Wayne County* Medical Society met in Wooster, April 11. The meeting was an interesting one, well attended. Dr. John P. Tucker, Cleveland, read a valuable paper on "The General Diagnosis of Gastro-Intestinal Diseases", the discussion of which was opened by Dr. A. C. Smith. The paper brought out many questions which were satisfactorily answered by Dr. Tucker. On May 9 the society enjoyed one of the best meetings it has ever had. A dinner was given in honor of the three oldest medical men in Wayne County—Drs. J. H. Todd, H. A. Hart and J. H. Stoll, Wooster. The scientific paper of the

# Radium Laboratory

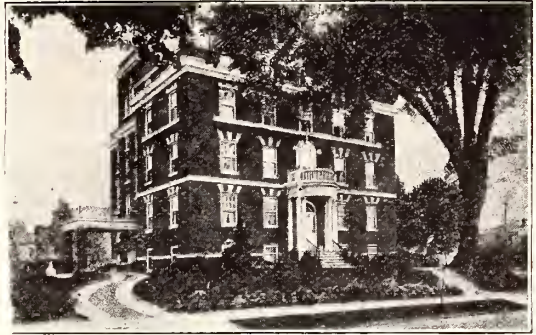
350 East State St., Cor. Grant Ave.  
Columbus, Ohio



Edward Reinert, Ph. G., M. D.  
R. R. Kable, Ph. B., M. D.

Citz. 9215

Bell, M. 7417



## The Holzer Hospital Gallipolis, Ohio

*Radium for all  
therapeutic  
uses*

# Radium Rental Service

Radium loaned to physicians at moderate rental fees, or patients may be referred to us for treatment if preferred.

Careful consideration will be given inquiries concerning cases in which the use of Radium is indicated.

### BOARD OF DIRECTORS

William L. Baum, M. D.    N. Sproat Heaney, M. D.    Frederick Menge, M. D.  
Louis E. Schmidt, M. D.    Thomas J. Watkins, M. D.

## The Physicians Radium Association

1110 Tower Building, 6 N. Michigan Ave.  
CHICAGO, ILL.

Telephones: Randolph 6897-6898

William L. Brown, Manager

occasion was given by Dr. J. J. Kurlander, Cleveland, on "Diagnosis and Treatment of Osteomyelitis." Resolutions of regret at the death of Dr. D. K. Jones, county health commissioner, were adopted.—O. G. Grady, Secretary.

#### EIGHTH DISTRICT

*Muskingum County* Academy of Medicine held its April meeting at the Zanesville Chamber of Commerce on the 5th. Papers were read by Dr. L. L. Bigelow, Columbus, on "Tubercular Adenitis", and by Dr. S. J. Goodman, Columbus, on "Treatment of Puerperal Sepsis." After the papers were freely discussed, a luncheon was served, completing a most enjoyable evening.—Beatrice T. Hagen, Secretary.

#### NINTH DISTRICT

*Gallia County* Medical Society met in regular session March 24. Two excellent papers were read and discussed with enthusiasm. Dr. H. L. Crary's paper on "The Value of Diagnostic Methods", reviewed our most modern resources in the way of laboratory and new instruments and warned against being too easily satisfied with a superficial examination. Dr. L. R. Hall had the subject "Some Practical Applications of Blood Chemistry." Chemical studies of the blood in connection with that of the urine in suspected diabetes was emphasized. Determination of sugar in the urine alone or its absence is not sufficient to learn the true status of the patient's case. Another helpful point made, was preoperative prognosis aided by chemical examination of blood to determine safety factor so far as kidney is concerned in prostatic obstruction.—Milo Wilson, Secretary.

#### Akron Medical Library Association

The Akron Medical Library Association has been organized with the following as officers: E. S. Underwood, president; J. H. Selby, first vice-president; C. R. Steinke, second vice-president; J. G. Gage, secretary, and G. M. Logan, treasurer. The new association is independent of the Summit County Medical Society and will be conducted after the plan of the Cleveland Medical Library Association. Dr. R. G. Pearce will be director of the building and equipment.

#### NEW BOOKS

*The Place of Version in Obstetrics*, by Irving W. Potter, M.D., F. A. C. S., Buffalo, New York. Obstetrician-in-Chief, Deaconess Hospital and St. Mary's Maternity Hospital; Attending Obstetrician, City Hospital; Consulting Obstetrician, Columbus Hospital, Buffalo Homeopathic Hospital, and Salvation Army Home. With 42 illustrations, 138 pages. C. V. Mosby Company, St. Louis. Price \$5.00.

*Management of the Sick Infant*, by Langley Porter, B.S., M.D., M. R. C. S., (Eng) L. R. C. P. (Lond.) Professor of clinical pediatrics, University of California Medical School; visiting physician, San Francisco Children's Hospital;

consulting pediatrician, Babies' Hospital, Oakland; consulting pediatrician, Mary's Help Hospital, San Francisco, and William E. Carter, M.D., assistant in pediatrics and chief of out patient department, University of California Medical School; attending physician, San Francisco Hospital, San Francisco. Illustrated. Price \$7.50, 654 pages. The C. V. Mosby Company, Publishers, 508 North Grand Ave., St. Louis, Mo.

*Radium Therapy*, by Frank Edward Simpson, A. B., M. D., professor of dermatology, Chicago Polyclinic; adjunct clinical professor of dermatology, Northwestern University Medical School; attending dermatologist to Mercy Hospital, Alexian Brothers Hospital, Henrotin Hospital, etc.; former president American Radium Society; former vice chairman, Section on Dermatology and Syphilology, American Medical Association; director of the Frank Edward Simpson Radium Institute. With 166 original engravings. Price \$7.00. C. V. Mosby Company, St. Louis, Mo., Publishers.

*Tuberculosis in Infancy and Childhood*, lectures delivered at the Children's Hospital, Philadelphia, under the auspices of the Philadelphia, Pediatric Society, by J. Claxton Gittings, M.D., Professor of Pediatrics in the Graduate School of Medicine, University of Pennsylvania; visiting physician at the Children's Hospital, Philadelphia; Assistant Pediatricist at the University Hospital, and Frank Crozer Knowles, M.D., Professor of Dermatology in the Jefferson Medical College; Clinical Professor of Dermatology in the Women's Medical College; Dermatologist to the Presbyterian and Children's Hospital; chief of the skin dispensary in the Pennsylvania Hospital, and Astley P. C. Ashhurst, M.D., Associate professor in surgery, School of Medicine, University of Pennsylvania. With 23 illustrations. 270 pages. Price \$5.00. J. B. Lippincott Company, Philadelphia, and London.

*The Healthy Child From Two to Seven. A Handbook for Parents, Nurses, and Workers for Child Welfare*, containing the fundamental principles of nutrition and physical care, including sections on child nature, training and education, and safeguarding the nervous system during the preschool years. By Francis Hamilton MacCarthy, M.D., Assistant Professor of Diseases of Children, Boston University, 226 pages. Price \$1.50. The MacMillan Company, New York.

The thirty-fifth annual meeting of the American Association of Obstetricians, Gynecologists and Abdominal Surgeons will be held at Albany, New York, September 19-21. Dr. James E. Davis, Detroit, is secretary of the organization.

Belmont, Greene, Muskingum and Sandusky County Medical Societies have adopted the form resolution on nurse education which seven northwestern Ohio counties had adopted previous to issuance of the *May Journal*.



# IODALBIN

a Protein-Iodine Compound  
for Internal Administration

**T**HE therapeutic effects for which you prescribe iodides are produced most readily by those iodine compounds that are easily split up in the body. It is the available iodine that does the work.

In the case of Iodalbin, contact with the intestinal juice severs the loose bonds that unite the iodine with the protein base.

That's what makes Iodalbin rapidly effective.

And besides being effective, its blandness makes it acceptable to sensitive patients. It is especially gratifying to those who object to the taste and nauseating effect of sodium or potassium iodide.

**PARKE, DAVIS  
& COMPANY**

*Tycos* **Sphygmomanometer**

**\$25.00** **\$25.00**

With Sterilizable Sleeve and Case

Office Type Sphygmomanometer, Fever Thermometers, Urinary Cassware

Portable Precise Dependable

Ask for Free 44 Page Blood Pressure Manual

*Taylor Instrument Companies*

ROCHESTER, N. Y.

S-189

# Cincinnati Radium Laboratory

22 West Seventh Street

**Needle, Tube and Plaque  
Applicators**



CHARLES GOOSMANN, M. D.

X-Ray Treatment When Indicated.

### Third Annual Clinic Held at Lima Hospital

Approximately 200 physicians and surgeons from Allen and nine other nearby counties assembled at St. Rita's Hospital, Lima, April 25, for the third annual clinic held under the auspices of the Allen County Academy of Medicine. Interesting medical, surgical and obstetrical cases formed the basis of discussion, and during the morning and afternoon sessions 30 operations were performed.

In the evening the regular meeting of the Allen County Academy of Medicine was held. The principal speaker for this occasion was Dr. Hugh Cabot, dean of the medical school at the University of Michigan, Ann Arbor, whose subject was "Natural History of Bladder Infections". Dr. Cabot also served in an advisory capacity at the clinic.

Dr. Charles H. Clark superintendent of the Lima State Hospital, presented several rare cases of mental disease which were brought to his attention at the state hospital.

A committee composed of Drs. W. L. Neville, V. H. Hay, M. A. Wagner, V. M. Parent, and A. C. Adams was in charge of arrangements for the clinic and meeting, with the program arrangements delegated to Drs. J. R. Tillotson, Alan Knisely, A. N. Wiseley and C. L. Steer.

### Diagnostic Clinic at Bellefontaine

A successful diagnostic clinic was held at Bellefontaine, April 7, under the joint auspices of the Bureau of Child Hygiene of the State Department of Health, and the Bellefontaine city and Logan County health departments. Dr. B. G. Chollett of Toledo was the consulting orthopedist, assisted by Dr. J. R. Tillotson of Lima. A total of 61 cases were examined and classified as follows:

Infantile paralysis .....	28
Joint tuberculosis .....	9
Infectious arthritis .....	5
Spastic cases .....	3
Rickets .....	2
Old fractures .....	5
Osteomyelitis .....	1
Slight scoliosis .....	4
Round shoulders .....	9
Miscellaneous .....	9
No deformity .....	6

The clinic was made a community affair and various organizations, including the City Union of King's Daughters, Women's Federated Clubs, Farm Bureau Association, and the Chamber of Commerce, assisted in numerous ways, and county officials gave their full cooperation and manifested their interest by a good attendance. Luncheon was served at noon to the children, examiners and helpers, and following the clinic the Logan County Medical Society held a dinner meeting at which representatives of the State Departments of Health, Education and Civilian Rehabilitation, who attended the clinic, were guests and gave informal talks.

# Medical Protective Service

is but an abbreviated term of the

## Golden Rule

Always a Good Guide to Follow.

A proper consciousness of its fullest meaning and sincere application is more apt to be with those who Specialize in Professional Protection Exclusively.



The Medical Protective Co.

of

Fort Wayne, Indiana

# Artificial Pneumothorax

in  
Pulmonary Tuberculosis



**LOUIS MARK, M. D.**  
327 East State Street  
Columbus, Ohio

**BARGAIN SALE OF ARMY OPERATING TABLES**

LESS THAN **1/2** PRICE

REGULAR PRICE \$40.00  
SALE PRICE \$19.75

GRASP THIS CHANCE

\$2.50 MONTHLY

\$19.75 REGULAR PRICE \$40.00

**\$2.25 WITH ORDER**  
**\$2.50 PER MONTH**

**10% OFF FOR CASH WITH ORDER**

*An exceptional bargain opportunity for doctors, surgeons and hospitals*

*An unquestioned \$40.00 value for the pre-war price of only \$19.75*

OUR tremendous purchase from U. S. Government of unused Army Operating Tables enables us to offer this cut-price bargain. Suitable for examining, treatment and operating. Adjusts easily. Made of steel enameled "snow white." Heel stirrups and leg holders free. Just \$2.25 brings it to you. Try it for 30 days; if not thoroughly satisfactory, return it and we will refund your money. If satisfied, send balance in 7 payments of \$2.50 each. If you prefer to pay cash, we allow 10% discount, making the net cash price \$17.78.

**A. S. ALOE CO.**  
570 OLIVE ST. ST. LOUIS, MO.

The Management of an Infant's Diet

## Diarrhea

The importance of nourishment in intestinal disturbances that are so common during the warm weather is now recognized by physicians, and it is also appreciated that the nutrition furnished must be somewhat different than the milk modification usually supplied to the normal infant.

Food elements that seem to be particularly well adapted, mixtures that are suitable to meet the usual conditions, and the general management of the diet, are described in our pamphlet—"The Feeding of Infants in Diarrhea"—a copy of which will be sent to any physician who desires to become familiar with a rational procedure in summer diarrhea.

Mellin's Food Company, Boston, Mass.

## Small Advertisements

**Physician Wanted**—To locate in South Solon, Madison County. The village, with a population of about 500, is without a resident physician and the nearest to be called are from six to ten miles distant. For information write Mr. J. R. Stroup, editor of *The South Solon Advance*, South Solon, Ohio.

**For Sale**—Established practice in Ohio city of 10,000. Doctor retiring because of illness. Office, equipment and residence if desired. Address Dr. J. W. Caines, Cuyahoga Falls, Ohio.

**For Sale**—In Ava, Ohio, property well equipped for physician. Address Dr. F. D. Bird, Port Washington, Ohio, (formerly located at Ava.)

**For Sale**—Office and residence, six squares from center of city with population of 62,000. Modern seven-room brick house with two adjoining office rooms; quartered oak finish. Double garage. Lot 50x189 feet. Good practice. Will introduce. Address R, care of *The Journal*.

**Location Wanted**—Competent physician desires city location, with or without real estate. Address E. F., care of *The Journal*.

**Wanted**—Practical nurse desires position as physician's assistant. Write W, care of *The Journal*.

**For Sale**—High Frequency Cabinet (Wappler) with auto-condensation chair: also a Viets bistat, the latter new, Harvard examination chair. For sale very reasonable as owner will discontinue practice. For particulars write 43 Central Square, Room 7, Youngstown, Ohio.

**For Sale**—Physician's home, office and garage, on fine lot in center of town of 1200. Located within forty miles of Cleveland on interurban and three main line railroads. Insurance appointments transferable. First class high school. Only one other doctor and competition light. Good reason for selling. Address C. D. B., care of *The Journal*.

**For Sale**—Surgeon's adjustable operating chair, at bargain price. Dr. A. J. Strain, 62 E. First St., London, Ohio.

**Wanted**—Offices and residence to gether. Will pay \$5,000 to \$10,000. Must be good location. Write the inducements, etc. Address H. P., care *The Journal*.

**For Sale**—Physician's office equipment. For information address Mrs. L. W. O., care of *The Journal*.

**Location**—Would like to sell reasonably, a good general and contract practice in beautiful location on Lake Erie. Address S., care *The Journal*.

## Plans for New Medical Building Ready

Last details of plans for the building of Western Reserve University's \$2,500,000 medical school have been settled, and actual construction will begin just as soon as labor conditions become settled and the building material markets are considered stabilized.

The money for the erection of the building, which will be one of the best of its kind in the country, is a gift of Samuel Mather, whose endowments to the university total more than \$4,000,000. The new edifice will be a unit of a proposed university hospital group.

## City Medical Organization

Drs. Russell Caton and C. H. King are president and secretary, respectively, of the Bucyrus Academy of Medicine. Practically all the physicians of the city are members of the organization which was effected recently for the consideration of local problems and is separate from the official Crawford County Medical Society. The academy has voted to support as a body the Bucyrus Chamber of Commerce, with the understanding that each member of the Academy should be a member of the Chamber of Commerce, and further contemplates the endorsement of any meritorious enterprise.

**D**o you believe that the fitting of trusses is a part of the Practice of Medicine? If so, send your patients needing trusses to

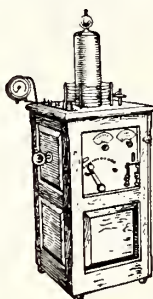
## The Columbus Truss &amp; Optical Co.

PARKER W. PHENEGER, M. D., Mgr.

We Specialize in  
Elastic Stockings Made to Measure

Office and Fitting Rooms

Suite 303-309 Rowlands Bldg., Broad and Third Sts.  
COLUMBUS, OHIO



**FREE**—"Diathermy as a Therapeutic Agent, Especially in the Treatment of Sprains, Fractures, Adhesions and Chronic Stiff and Painful Joints." BY

**E. C. Folkmar, M.D., D.S.S.**

Washington, D. C.

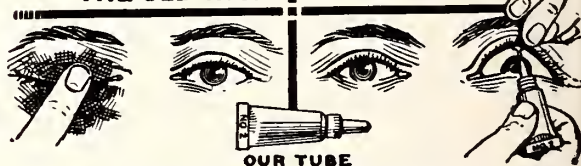
This instructive article and full details regarding the "HOGAN" High Frequency Apparatus sent on request.

**McIntosh Electrical Corp.**

Successors to McIntosh Battery & Optical Co. Est. 1879  
Main Office and Factory

McIntosh Bldg., 223-233 N. California Ave., Chicago, Ill.

## THE OLD WAY | THE NEW WAY



## Better Ocular Therapeutics

Can be obtained by the use of "M-E-S-Co" brand of Ophthalmic Ointments. Reasons: Selected Chemicals, Thorough Trituration, Perfect Incorporation, Sterilized Tubes, Belled and Strained Petroleum, Excellent Service, No Waste, No Dirty Salve Jar, Right Prices. Write for complete information  
**MANHATTAN EYE SALVE CO., Inc.**  
Louisville, Ky.



Our Manufacturing Laboratories at  
Bloomfield, N. J.

*Here's where genuine Atophan is manufactured by a special process completely precluding the possibility of unpleasant empyreumatic admixtures.*

This means a still further improved Atophan for your cases of Rheumatism, Gout, Neuralgia, Neuritis, Sciatica, Lumbago and "Retention" Headaches.

*Ample trial quantity and literature from*

**SCHERING & GLATZ, Inc.**

**150-152 Maiden Lane**

-

**NEW YORK**

## Fort Wayne Medical Laboratory, Inc.

(Established 1905)

**DR. BONNELLE W. RHAMY**

Manager and Director of Pathological and Serological Department

**DR. ROE J. MAIER**

Director of X-Ray and Radium Department

**PAUL H. ADAMS, B. S., Ch. E.**

Director of Industrial and Organic Chemistry Department

Equipped for making complete examinations of blood, urine, sputum, feces, spinal fluid, pathologic tissue, secretions and excretions of any character, and doing blood chemistry, protein sensitization, blood typing for transfusion, Wassermanns (ice box and heat), tuberculosis and gonorrheal complement fixation tests, making autogenous vaccines, dark field examination for spirochetes, basal metabolism, toxicology, medico-legal investigations, eugenic tests, and for making every test of clinical value for diagnostic study in medical and surgical cases.

Wassermanns Daily Except Sunday

All serologic tests \$5.00 each blood.

The X-Ray Department includes complete diagnostic and therapeutic X-Ray laboratory, with a new twenty-inch machine for deep therapy; radium in adequate amounts to meet all requirements of malignant and other diseases where indicated, and a complete ultra-violet ray equipment.

The Industrial and Organic Chemistry Department is equipped for any kind of chemical investigation, including medical, physiological and blood chemistry, toxicological and other medico-legal investigations, and the analysis of milk, water, seeds, fertilizers, feeds, iron, steel, ores, coal, oils, etc.

Fee bills and containers sent on request.

Special delivery postage insures prompt delivery of specimens.

327 WEST BERRY STREET

FORT WAYNE, INDIANA

(One block South from Interurban Station)

## DEATHS IN OHIO

*George B. M. Andre, M. D.*, Miami Medical College, Cincinnati, 1897; aged 58; member of the Ohio State Medical Association; died at his home in Wheelersburg, Scioto County, April 23.

*J. Alexander Davisson, M. D.*, Miami Medical College, Cincinnati, 1882; aged 64; member of the Ohio State Medical Association and Fellow of the American Medical Association; died at his home in Dayton, March 30, from arthritis. Dr. Davisson had practiced in Dayton since 1898. He was formerly on the consulting staff of Miami Valley Hospital; a censor of the Montgomery County Medical Society, and a member of the Dayton Board of Education. His widow survives.

*Russell Clifford Edwards, M. D.*, College of Physicians and Surgeons, Baltimore, 1892; aged 59; former member of the Ohio State Medical Association; died at his home in Newark, April 13, from paralysis. Dr. Edwards resided in Coshocton county until six years ago when he removed to Newark. He leaves his wife and daughter, one son and a brother, Dr. E. M. S. Edwards of Trinway.

*Dallas K. Jones, M. D.*, Cleveland College of Physicians and Surgeons, 1885; aged 62; member of the Ohio State Medical Association; died in Wooster, April 12, after a week's illness following an operation for relief of intestinal obstruction. Dr. Jones began practice in Canal Fulton and remained there until his removal to Wooster six years ago. When the Hughes-Griswold health law became effective he was chosen health commissioner of Wayne County, in which capacity he served successfully until the time of his death. Surviving are his widow and one son.

*J. T. Knox, M. D.*, Medical College of Ohio, Cincinnati, 1875; aged 76; died in Cincinnati, April 26. Dr. Knox practiced in Cincinnati for many years and is said to have been one of the first physicians in that vicinity to use X-ray apparatus. Two daughters survive him.

*Victor Emil Max Koehler, M. D.*, University of Leipsic, Germany, 1875; aged 69; former member of the Ohio State Medical Association; died in Cincinnati, March 16. Dr. Koehler was formerly an instructor in the polyclinic, Ohio Medical College.

*Rucius P. Langel, M. D.*, Medical College of Ohio, Cincinnati, 1880; aged 70; former member of the Ohio State Medical Association; died at his home in Celina, April 2, from apoplexy. He leaves two daughters and a son.

*Angus Alexander Mackintosh, M. D.*, Cleveland-Pulte Medical College, 1901; aged 56; died

URINE	BASAL METABOLISM
BLOOD	AUTOGENOUS
SPUTUM	VACCINES
EFFUSIONS	FAECES
STOMACH	GENITO-URINARY
CONTENTS	SURGICAL and
WASSERMANN &	GYNECOLOGICAL
NOGUCHI	PATHOLOGY
REACTIONS	DARK FIELD
GONORRHEAL	ILLUMINATING
COMPLEMENT	FOR
FIXATION TEST	SPIROCHETA
BLOOD CHEMISTRY	PALLIDA
PROTEIN	MEDICO-LEGAL
SENSITIZATION	POST MORTEM
TESTS	X-RAY

# LABORATORY

## Clinical and Pathological

**COLUMBUS, OHIO 370 East Town Street**

J. J. Coons, B. S., M. D., D. Sc.  
H. M. Brundage, M. D.  
Dorris Coss, B. S., M. S.  
Ruth Miller, B. S.

PROMPT SERVICE

Immediate Report on Frozen Sections of all Tumors.

# To Prevent Hydrophobia

Use

## Pasteur Treatment

With a

**Potent Product and Prompt Service**

**PRICE \$25.00**

Order from

**James McIlvaine Phillips, M. D.**

2057 N. High St.

Columbus,

Ohio

# LOESER'S INTRAVENOUS SOLUTIONS



Have made possible the rapidly increasing employment of Intravenous Medication

They are controlled by chemical, physical and biologic tests, to conform to definite high standards.

They permit direct medication with U.S.P. and standard remedies of established therapeutic value.

*Clinical Reports, Reprints, Price Lists  
and*

*"The Journal of Intravenous Therapy"  
will be sent to any physician  
on request.*

## New York Intravenous Laboratory

100 West 21st Street  
New York, N. Y.

*Producing Ethical Intravenous Solutions  
for the Medical Profession Exclusively.*



at his home in North Fairfield, April 18, after a brief illness. Dr. Mackintosh had practiced at North Fairfield for seven years. His widow and one son survive.

*John Joseph Murphy, M.D.*, University of Michigan Medical School, Ann Arbor, 1881; aged 71; member of the Ohio State Medical Association and Fellow of the American Medical Association; died at his home in Lima, April 13. Dr. Murphy was a native of Ireland, coming to this country at the age of 13. For 41 years he had been a practicing physician in Lima. He is survived by his widow, Dr. Mabel Dunn Murphy.

*Furman Epiphias Perry, M.D.*, Western Reserve University School of Medicine, 1888; aged 6; died at his home in Jefferson, March 12.

*Francis H. Schell, M.D.*, New York Homeopathic Medical College, 1866; aged 81; died at his home in Cincinnati, April 21. Dr. Schell was one of the oldest physicians in Cincinnati both in years and in point of service. He leaves three sons, one of whom is Dr. H. F. Schell, Cincinnati.

*William Getus Smith, M.D.*, Miami Medical College, Cincinnati, 1877; aged 67; member of the Ohio State Medical Association and Fellow of the American Medical Association; died at his home in Ravenna, April 7, from diabetes. Dr. Smith had practiced in Ravenna since 1891. He leaves one daughter and one son.

*Milton C. Sprague, M.D.*, Cincinnati College of Medicine and Surgery, 1874; aged 72; died at the home of his daughter in Columbus, March 24. Dr. Sprague's home was in Summerford, Madison County, where he spent his entire medical career prior to his retirement several years ago. One son and one daughter survive.

*Charles H. Wittenbrook, M.D.*, University of Pittsburgh School of Medicine, 1888; aged 67; died at his home in Canton, March 22, of Bright's disease. Dr. Wittenbrook was a native of Monroe County and practically a life-long resident of that county. For the past two years, however, he had resided in Canton. Besides his widow, he is survived by one son and three daughters.

*Henry Whisler, M.D.*, Starling Medical College, Cincinnati, 1876; aged 87; member of the Ohio State Medical Association; died at his home in Wilmington, March 24.

#### NURSE EXAMINATIONS

The Nurses' Examining Committee of the State Medical Board will hold an examination for nurse registration at Columbus, June 19-21. The practical examination will be held at Mt. Carmel on the first day, and the written examination at Memorial Hall on the last two days.

## SAVE MONEY ON YOUR X-RAY SUPPLIES

Get Our Price List and Discounts on Quantities Before You Purchase  
**HUNDREDS OF DOCTORS FIND WE SAVE THEM FROM 10% TO 25% ON X-RAY LABORATORY COSTS**

### Among the Many Articles Sold Are

- X-RAY PLATES.** These brands in stock for quick shipment. **PARAGON** Brand, for finest work; **UNIVERSAL** Brand, where price is important.
- X-RAY FILMS.** Duplitzed or Dental—all standard sizes. Eastman, Ilford or X-ograph metal backed. Fast or slow emulsion.
- BARIUM SULPHATE.** For stomach work. Finest grade. Low price.
- COOLIDGE X-RAY TUBES.** 5 Styles. 10 or 30 millamp.—Radiator (small bulb), or broad, medium or fine focus, large bulb. Lead Glass Shields for Radiator type.
- DEVELOPING TANKS.** 4 or 6 compartment stone, will end your dark room troubles. 5 sizes of Enameled Steel Tanks.
- DENTAL FILM MOUNTS.** Black or gray cardboard with celluloid window or all celluloid type, one to eleven film openings. Special list and samples on request. Price includes your name and address.
- DEVELOPER CHEMICALS.** Metol, Hydroquinone, Hypt, etc.
- INTENSIFYING SCREENS.** Patterson TE, or celluloid-backed screens. Reduce exposure to one-fourth or less. Double screens for film. All-metal Cassettes.
- LEADED GLOVES AND APRONS.** (New type glove, lower priced).
- FILING ENVELOPES** with printed X-Ray form. (For used plates). Order direct or through your dealer.

If You Have a Machine Get Your Name on Our Mailing List



**GEO. W. BRADY & CO.**

771 So. Western Ave.,  
Chicago

## Dares Haemoglobinometer

Candle lighted, or Electric lighted.  
We are accepting orders for prompt delivery.  
Write for booklet and prices.

## Tycos Office Sphygmomanometer

With 6 inch silvered dial.  
A distinct advance over the pocket type.  
Immediate delivery. Price \$37.50.

Surgical Instruments—Dressings,  
Pharmaceuticals, Biologicals

Your orders will receive prompt attention—  
"You will do better in Toledo."

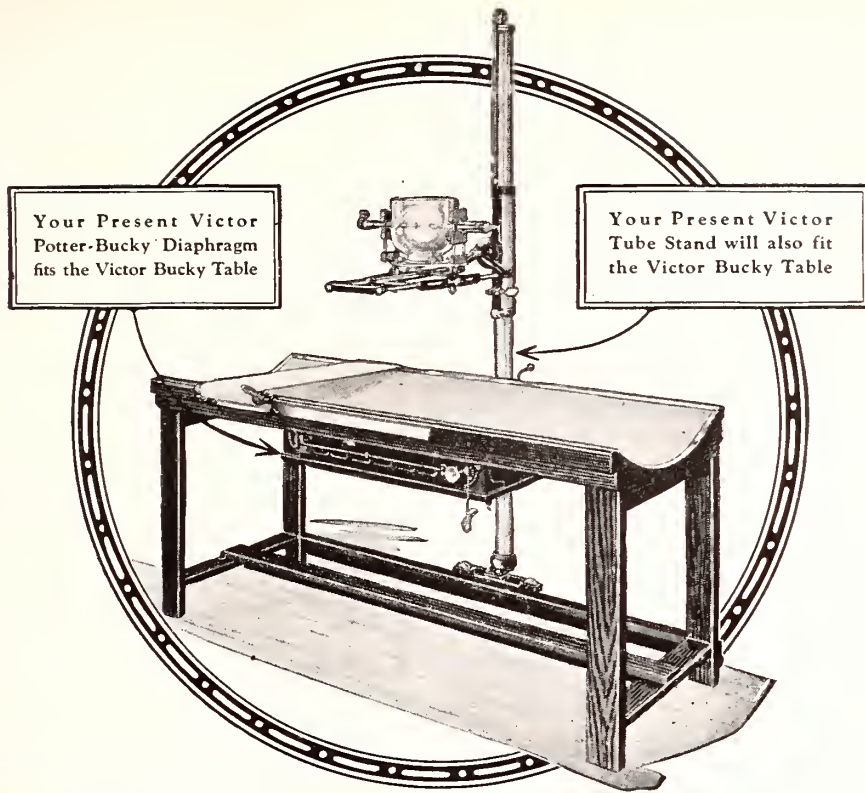
**The Rupp and Bowman Co.**

319 Superior St.

TOLEDO,

OHIO





## *Victor Improvements Will Fit Your Present Victor Apparatus*

**T**HE research systematically conducted by the Victor X-Ray Corporation results in the development of many improvements. No physician wishes the science of Roentgenology, so dependent on apparatus, to stand still.

But what of the physician who has bought a complete Victor equipment, only to find, a few months later, that improvements have been made? Must he install an entirely new equipment in order to keep abreast of the times?

It has been the policy of the Victor X-Ray Corporation, wherever possible, to design apparatus and their accessories so that *improvements may be adapted to existing apparatus* without the

necessity of discarding an entire equipment. In a word, Victor apparatus is standardized.

Take the Victor Bucky Table, for example. This table will readily accommodate the Victor Model Potter-Bucky Diaphragm; any Victor tube stand can also be attached in a few minutes. Thus, in instances where the X-Ray Laboratory already has the Victor Diaphragm and Tube Stand, the only expense involved is the table itself.


So, standardization of Victor apparatus makes it possible for the physician to take advantage of the latest developments of research without completely discarding his X-Ray equipment.

VICTOR X-RAY CORPORATION, Jackson Blvd. at Robey St., Chicago

*Territorial Sales and Service Stations:*

Columbus: 145 E. State St.



  
**NEWS NOTES of OHIO**

*Napoleon*—Dr. J. R. Bolles, a practicing physician at Holgate for the past ten years, has located here.

*Toledo*—Physicians on the east side of this city are considering the establishment of a doctors' exchange with an inter-communicating telephone system.

*Van Wert*—After an absence of 25 years, Dr. W. M. Hunter, who was raised in Van Wert County, has returned and opened offices for practice in this city. He comes from Hope, New Mexico.

*Toledo*—Dr. Charles D. Ury and Miss Hazel Schulz were married, April 22.

*Massillon*—News has been received at the Massillon State Hospital of the death in New York of Dr. E. A. Dyer, formerly of the Medical staff of the local institution. He recently resigned from the local position because of ill health.

*Dayton*—Dr. F. G. Barr, medical director of the National Cash Register Company, was the principal speaker at a recent meeting of the Exchange Club.

*Pomeroy*—The family of Dr. S. A. McCullough has joined him in East Liverpool, where he is now located as health commissioner for Columbiana County.

*Columbus*—The Homeopathic Medical Society of Ohio met in annual session here, May 9-10.

*Dover*—Dr. Samuel Shaweker has been elected president of the Dover Building and Loan Company.

*Tiffin*—Dr. G. S. Yingling, for many years a resident of this city, died April 25 in Fitzgerald, Georgia. During the past years he had made his home in St. Augustine, Florida.

*Bucyrus*—Dr. J. J. Martin has resigned as health commissioner of Crawford County and expects to leave early in June for California, where he will probably locate permanently. Dr. Martin has practiced here for 24 years.

*Lancaster*—Dr. Edward Herbst, physician at the Boys' Industrial School, has assumed his duties as a member of the staff of the United States Veterans' Bureau in Columbus. Dr. Frank McCafferty, recently of the medical staff of the Epileptic Hospital, Gallipolis, has succeeded him at the local institution.

*Cincinnati*—The Ohio Eclectic Medical Association held its annual meeting at the Hotel Gibson, May 16 and 17. On the evening preceding the opening of the convention Cincinnati Eclectic Medical College held graduation exercises for 34 students.

**Are You Specifying  
H. W. & D.  
Prescription Specialties?**

Ovarian Endocrines: Lutein—*Corpus Luteum*; Whole Ovary and Ovarian Residue Tablets and Solution Ampules.

Bulgara Tablets

Thyroid Tablets

Benzyl Antispasmodics: Solution Benzyl Benzoate Miscible; Solution Benzaldehyde and Benzyl Benzoate Miscible; Blobules of Benzyl Benzoate and Tablets of Benzyl Succinate.

Mercurochrome-220 Soluble

Enteric Glycotauro and Glycotauro with Cascara and Phenolphthalein Tablets.

**Hynson, Westcott & Dunning**  
BALTIMORE

**Luer Hypodermic Syringes**

2cc  
60c

20cc  
1.25

5cc  
75c

30cc  
1.50

10cc  
1.00

50cc  
2.25



All Glass

Made in U. S. A.

—To pay more is a waste of money—Quality and workmanship guaranteed second to none or money promptly refunded.

**Charles E. Findlay Co.**  
 Physicians' and Hospital Supplies  
 677 N. High Street Columbus, Ohio  
 Bell Phone, Main 6518

## Acid Phenylcinchoninic

The Ohio Medical Products Company offers to the Medical Profession

ACID PHENYLCINCHONINIC,  $C_{16}$ ,  $H_{11}$ ,  $O_2$ ,  $N$ , made in THE UNITED STATES and conforming strictly with standard requirements;—see U. S. Dispensatory, p. 54, 20th Edition.

ACID PHENYLCINCHONINIC is a valuable remedy; because it is a reliable, energetic and efficient eliminant, having especial reference to conditions requiring increase of uric acid out-put.

DOSE.—Acute conditions require large, initial doses; chronic conditions respond better and yield with smaller doses given continuously for a long time.

ALKALI BICARBONATES facilitate and hasten solution; therefore, they should be given together.

ACID PHENYLCINCHONINIC is now obtainable in tablets of one and five grains.

They are made in the laboratories of



1104-1108 N. High Street

Columbus, O.

## Ohio's Death Rate in 1921 Lowest in Thirteen Years

The Bureau of Vital Statistics, State Department of Health, has issued data on the mortality rate for the year 1921 which are exceedingly interesting and should prove helpful in preventive work. The death rate for the year was 11.4 per 1,000 population, the lowest since the department was established in 1908. Deaths numbered only 67,125 last year, against 73,846 in 1920.

Cities of the state had 41,182 deaths, with a rate of 11.34, and rural districts, 25,953, with a rate of 11.32, the urban and rural rate, therefore, being almost the same. In recent years the advantage had been more greatly in favor of the cities.

Of the five largest cities, Columbus had the highest infant mortality rate. These rates were: Columbus 80, Toledo 75, Cincinnati 74, Akron 68 and Cleveland 67. In these five cities 1268 children died before they were a week old, 1499 under a month, and 3202 under a year.

There were more deaths in January, 5942, than in any other month last year, and fewer in June, 4603.

Forty-one counties reported a death rate lower than the state rate, Summit County being the lowest, with 7.2, Auglaize next with 8.9, Gallia reported the highest rate, 16.8, Erie being next, with 14.6.

Gallipolis reported the highest rate, 31.6, Painesville next, with 21.3, and Lakewood, the lowest, 4.4, East Palestine next, with 6.4. The highest rate always goes to Gallipolis, owing to the State Epileptic Institution being located there.

For the first time, cancer was responsible for more deaths than tuberculosis. There was an increase in the number of deaths from typhoid fever, scarlet fever and diphtheria, other epidemic diseases showing a decrease. Automobile accidents and homicide continued on the increase, while railroad accidents and street car accidents showed a great decrease.

Deaths from alcoholism almost equaled those of the year 1919. In 1920 there were 54 deaths from alcoholism, but in 1921 there were 128, making alcoholism, according to the bureau's figures, one of the major ills.

Listed below are the number and rate of some of the more important causes of death for 1921, as compared with the previous year:

	1921	Rate	1920	Rate
Typhoid fever	532	8.9	436	7.5
Smallpox	13	.2	18	.3
Scarlet fever	427	7.2	373	6.4
Whooping cough	500	8.5	822	14.1
Diphtheria	1078	18.2	639	11.0
Tuberculosis total	5265	89.0	5932	102.0
Cancer total	5286	89.4	5135	88.3
Alcoholism	128	2.2	54	.9
Maternal causes	925	15.6	973	16.7
Railroad accidents	476	8.1	587	10.1
Street car accidents	117	1.9	148	2.5
Automobile accidents	738	12.5	718	12.3
Homicide total	464	7.8	419	7.2

## Our Business

is confined exclusively to the manufacture of Strictly High Grade Medicines and Pharmaceuticals for Physicians, Dispensing and Prescribing.



Our Offices and Laboratories are now located in our New Building, 330-336 Oak Street, one square north of Grant Hospital.

NO GOODS SOLD AT RETAIL

**The COLUMBUS PHARMACAL Co.**  
COLUMBUS, OHIO

## Every Physician

Is Interested In

## Physician's Supplies

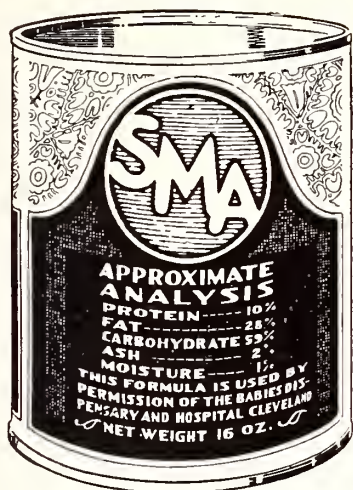
In dispensing, he requires a great variety in his office—in prescribing he uses the PRESCRIPTION DEPARTMENT that is UP-TO-DATE.

If you are unacquainted with our plan of handling the physician's requirements, you may profit by giving us an opportunity to show you what we can do.

## The Wendt Bristol Co.

47 South High St., Columbus, Ohio

**FINE PHARMACEUTICAL SPECIALTIES**



## A Pioneer in the Constant Use of Cod Liver Oil

Seven years ago, at the very beginning of the practical work in the development of a food to keep babies well, the anti-rachitic and anti-spasmophilic qualities of S.M.A.\* were provided for intentionally by the addition of "a liberal amount of cod liver oil".

### S. M. A.—A Food to Keep Babies Well

Since 1915 every quart of S. M. A. has contained and still contains sufficient cod liver oil not only to prevent, but also to cure rickets.

Every artificially fed infant should be given cod liver oil as a part of its food. Yet many mothers either neglect to do this, or find it impossible—to the detriment of the baby.

In the form of S. M. A. the infant not only gets an adequate amount of cod liver oil, but he likes it, and thrives on it.

Cod liver oil will be found acceptable to all infants and children when given in the form of S. M. A.

Hundreds of physicians have used S. M. A. with excellent results in thousands of cases, and the number is increasing steadily.

Try S. M. A. and you will find that

- (1) It is the same for the month-old baby and for the baby one year old.
- (2) It needs only the addition of boiled water to prepare it.
- (3) It absolutely prevents spasmophilia.
- (4) It makes happy, solid, breast-fed looking infants.

Write today for the S. M. A. bulletin for physicians.

\*H. J. Gerstenberger et al. I. Studies in the Adaptation of an Artificial Food to Human Milk. Am. J. Dis. Child. Vol. X, Pg. 249-265.

H. J. Gerstenberger et al. II. Studies in the Adaptation of an Artificial Food to Human Milk. (A Report of Three Years' Clinical Experience with the Feeding of S. M. A.) Am. J. Dis. Child. Vol. XVII, Pg. 1.

## THE LABORATORY PRODUCTS COMPANY

3829 CEDAR AVENUE

CLEVELAND, OHIO

### DISTRIBUTING AGENTS

#### CLEVELAND

The Telling-Belle Vernon Co.

#### AKRON

The Akron Pure Milk Co.

#### PHILADELPHIA

Abbott's Alderney Dairies Inc.  
Supplee-Wills-Jones Co.

#### DENVER

Windsor Farm Dairy Company

#### GREATER NEW YORK

Sheffield Farms Co., Inc.

#### DETROIT

Detroit Creamery Co.

#### INDIANAPOLIS

The Polk Sanitary Milk Co.

#### GREATER BOSTON

H. P. Hood's Sons Co.

#### PITTSBURGH

Rieck-McJunkin Dairy Co.

#### LOUISVILLE

D. H. Ewing's Sons

#### MILWAUKEE

Gridley Dairy Co.

#### MONTREAL

The Guaranteed Pure Milk Co.,  
Limited

#### WINNIPEG

Crescent Creamery Co.

## Nursing Bodies Convene in Dayton for Joint Program

A joint three-day convention of the Ohio State Association of Graduate Nurses and the Ohio State League of Nursing Education was held at the Miami Hotel, Dayton, April 26, 27 and 28. Laura R. Logan, Cincinnati General Hospital, and Claribel A. Wheeler, Mount Sinai Hospital, Cleveland, the presidents of the graduate nurses' organization and the nursing education body, respectively, presided at the sessions.

Advance of public health education, maintenance of standards in the nursing profession and obligations of citizenship placed upon women by the nineteenth amendment were some of the outstanding subjects discussed. Among the speakers were Henry Shepherd, Ph. D., University of Cincinnati; Frances Ott, R. N., chairman of the Private Duty Section, American Nurses' Association; Grace E. Allison, R. N., principal of Lakeside Hospital, Cleveland, school for nurses; Edna Foley, R. N., Chicago, well known public health worker; Fred Croxton, director of the Council of Social Agencies, Columbus; and Rev. D. F. Garland, former Dayton welfare director.

As a result of action taken by the Association of Graduate Nurses during the Dayton convention, a thorough study of the nursing situation in Ohio, with particular reference to public health work, will be undertaken. The board of directors was authorized to employ the necessary

experts to make a survey of nursing conditions in every section of the state.

Officials of the nursing association stated their belief that there is no shortage of nurses in Ohio at the present time, although there may be an uneven distribution. Latest figures from the bureau of nursing, State Department of Health, they said, showed 7,483 registered nurses in state, and 2,145 student nurses in recognized training schools. A report of the state bureau of nursing shows that at the present time there is one nurse to every two and eight-tenths patients in hospitals of the state, while one to every four patients is recognized as the required number.

The state law requires one year of high school training. Reports from twelve leading hospital training schools of the state, which require students to be high school graduates, indicate that a campaign of education, which has been conducted among high school graduates, seeking to have them enroll as trainees, is having good effects.

The following officers were elected for the year: President, Grace Allison, Cleveland; first vice president, Mary Jameison, Columbus; second vice president, Mary T. Deaver, Cincinnati; secretary, Grace Bentley, Cleveland; treasurer, Blanche Pfefferkorn, Cincinnati; trustees Laura Logan, Cincinnati, and Anna Gladwin, Akron.

### MEAD'S

## DIARRHOEA IN INFANTS

Summer Diarrhoea, Fermentative Diarrhoea, etc.

PROTEIN MILK is used in a large number of hospitals and by pediatricians in their private practice to correct diarrhoea in infants. Its value has been fully demonstrated by its use over a period of years. Formerly the preparation of Protein Milk in the home was complicated as well as expensive, which interfered with the doctor's orders being carried out.

### MEAD'S CASEC

A new preparation, known as CASEC, has been perfected by MEAD which makes it possible to do away with the complicated side of preparing Protein Milk. The ease with which Protein Milk can be prepared with Casec has made it practical and widened its use, and now physicians, nurses and mothers may prepare Protein Milk with Casec with the same ease and accuracy as the preparation of any other milk modification in the home. MEAD'S CASEC is a calcium-caseinate product prepared from the casein of fresh skimmed milk. Full description, analysis and directions for use will be furnished upon request.

MEAD'S  
DEXTRI-  
MALTOSE  
for average  
infant feeding.

**THE MEAD JOHNSON POLICY**

Mead's Infant Diet Materials are advertised only to physicians. No feeding directions accompany trade packages. Information regarding their use reaches the mother only by written instructions from her doctor on his private prescription blank. Literature furnished only to physicians.

MEAD'S  
CASEC  
for babies  
with diarrhoea.

## MEAD JOHNSON & COMPANY

## Evansville, Indiana

# MEDICAL ECONOMICS

PUBLIC HEALTH - SOCIAL WELFARE *and* ORGANIZATION PROBLEMS  
WITH EDITORIAL COMMENT *by* D. K. M.

## Ohio's Part in the A. M. A.

The medical profession of Ohio may well be proud of the leading part it played in molding policies and participation in the proceedings, both scientific and organization, at the recent annual meeting of the American Medical Association in St. Louis. From no other state except those immediately adjoining Missouri were there so many Fellows and members in attendance; the number registered from Ohio being 204.

In its representatives in the House of Delegates Ohio exhibited talent and leadership. One member of the Ohio delegation, Dr. J. H. J. Upham, again served as chairman of the important reference committee on legislation and public relations in the House of Delegates, and because of his distinguished and unselfish service over a period of many years, both in the Ohio State Association and the A. M. A., was honored by being appointed a member of the Judicial Council for a term of five years. This appointment by President de Schweinitz was received by unanimous concurrence by the House of Delegates.

The other Ohio delegates who participated prominently in the House of Delegates were Drs. G. E. Follansbee, Cleveland; W. D. Haines, Cincinnati; Ben R. McClellan, Xenia; C. D. Selby, Toledo, and Granville Warburton, Zanesville.

Largely pursuant to the recommendations from Ohio and to the activities of the delegates from this state the A. M. A. has adopted a definite policy on "state medicine"; will establish a legislative bureau with a branch in Washington; expects to promote a lay journal on public health with other means of keeping the public accurately informed on advances in medicine and for promoting the proper relation between the profession and the public; and through practical organization methods expects to bring the headquarters of the A. M. A. in more intimate relation, more directly representative of and responsive to the profession at large.

A more detailed account of the A. M. A. meeting with Ohio's part in the convention is found on page 507 of this issue.

## Administration of Workmen's Compensation

Unusual attention has been drawn to the operation of the Workmen's Compensation law in Ohio through the series of hearings held in various centers of population throughout the state by a special committee of the Cincinnati Chamber of Commerce, and by state-wide newspaper pub-

licity relative to the prosecution of physicians for making false claims in Industrial Commission cases.

While no one expects the operation of a large state department such as the Industrial Commission to be one hundred per cent. efficient, on the whole those directly interested in the operation of the law in this state during recent years have approved the policy and administration by the Commission. In the past no ill-considered amendments to the law have been hastily adopted, due to a policy of thorough cooperation between the Commission, the employers who maintain the fund, the employes who are directly interested in its operation and the medical profession, members of which are identified with each claim.

Either through the new relationship of the State Department of Industrial Relations to the Industrial Commission itself, or through the desire of certain individuals to secure publicity for themselves, an undue amount of newspaper comment has been made relative to cases in which physicians are alleged to have violated the law in claims for medical services. The publicity has been in effect a reflection upon the entire medical profession, and while approval should be given to the prosecution of individuals who fraudulently submit claims for medical services these extremely rare instances should not be made the occasion for unfavorable comment concerning the profession as a whole.

It is perhaps to be expected that out of the thousands of cases each month, one of two may have submitted fraudulent claims. These cases, however, should be handled as individual phases and not construed as typical of the attitude of the profession itself. Indeed the Commission needs the good will and cooperation of the medical profession more than the medical profession needs the Commission. The impression should not be gained, however, that the Industrial Commission itself, under the fair and judicious administration of Chairman T. J. Duffy, is responsible for unfair and unwarranted aspersions toward the medical profession.

Judging by the monthly report of claims filed with the Commission in May, industrial activity is on the up grade. During that month there was a total of 11,509 injury and death claims filed, an increase of 2,639 over April. There was disposed of during May a total of 11,587, an increase of 2,934 over April. In the state claims there were

10,425 injury claims, of which number 8,300 were medical claims only, the remainder being cases of compensation to injured employes.

Records indicate a gradual increase in the number of occupational disease claims filed, there having been a total of 350 cases up to May 31 since the law became operative last August. Dermatitis still holds the lead with 183 claims and lead poisoning is next with 117 claims.

#### Chiropractic Chicanery

In spite of complete adjudication of all legal questions involving the constitutionality of Ohio's medical and limited practice acts, the unlicensed chiropractors of Ohio through temporary injunctions, restraining orders, postponements and legal maneuvering still prevent the Ohio State Medical Board from enforcing the law.

It will be remembered that such organized obstruction to law enforcement was condemned emphatically by the Supreme Court of the United States (pages 33-331, *May Journal*; but before the state of Ohio through its legal agents, the State Medical Board, could proceed in prosecution under the per curiam from that court the chiropractors, pursuing their usual course for delay, secured a restraining order against the State Medical Board on April 6.

Postponement of the hearing on that order was made from May 5 to May 19, to June 4, to June 12. On the latter date the attorneys for the chiropractors filed a demurrer to the answer of the State Medical Board which had been made six weeks before, and there is no chance of a decision on the demurrer before some time in July.

Here is an anomalous situation of a group of law violators under statutes already upheld in their entirety, invoking a court of equity to prevent the state from protecting its citizens from unlawful practice.

It does seem that if law violators can continue to defy the law through such means as these, equal or greater rights should be invoked to uphold the law. It is up to the local courts and prosecutors to enforce these statutory requirements and to exact proper penalty through prosecution just as in all other cases of criminal liability, irrespective of the fact that legal technicalities at present prevent the Board and its agents from undertaking prosecution.

In the face of the expenditures being made by the chiropractors through their state organization for legal service and such, the statement attributed to B. J. Palmer (chiro mogul) that a national chiropractic defense fund of \$100,000 is to be used in "an organized war against 'unjust power' of the American Medical Association," is significant.

#### Sheppard-Towner in Ohio

As indicated in the official attitude of the State Department of Health of Ohio in defining a limi-

tation to its proper function, as set forth in the April issue of *The Journal*, the medical profession need not be alarmed in the present at least over the policy in this state in the application of the Sheppard-Towner maternity law and similar provisions.

Dr. H. H. Snively, state director of health, is of the opinion that the success of maternity and infant hygiene work depends on the attitude of the medical profession as indicated through the State Association and county societies, as well as the individual physicians practicing medicine in Ohio. It is the purpose of the State Department of Health to cooperate with organized medicine and with the individual physician, indicating that whatever work is undertaken will be so conducted that the best interests of the medical profession as well as those of the general public will be assured. From time to time as the plan of work in maternity and infant hygiene is developed details will be announced and fully explained. The greatest care will be exercised to keep the physicians informed so that they may know that they are considered as the most important factor in such an undertaking.

Authorities of the State Department of Health also emphasize that the general plan to be undertaken in this state, outlined in the February, 1922, *Journal*, will be almost entirely educational and that in no case will actual service be rendered or curative steps be taken except in indigent cases. Distribution of literature, educational lectures both to the profession and the laity, following a survey of local conditions will be the general plan of developing the work in this state.

In view of the resolutions on this subject by the House of Delegates of the American Medical Association, carried elsewhere in this issue, and following the formal action of the House of Delegates of the Ohio State Medical Association at the Cincinnati meeting, the opinion of Attorney General Allen of Massachusetts declaring the Sheppard-Towner maternity act unconstitutional is of interest. While the opinion, of course, has no effect at law, it will probably be the basis of suit in equity against the federal officials charged with the administration of the act and is expected to reach the United States Supreme Court for determination.

In presenting his opinion to the Massachusetts legislature the attorney general held:

(a) The Constitution does not give the Federal government power to regulate the internal affairs of any state such as would occur in the enforcement of the Maternity and Infancy Act, whereby the U. S. Children's Bureau would actually have control of internal affairs of the states.

(b) The act vests in the Federal government certain powers relating to maternity and infancy that manifestly fall within the scope of the police power reserved specifically to the states in the Constitution by the Tenth Amendment.

(c) It is illegal for the state government to



yield powers granted to them by the Constitution and such powers can only be granted to the Federal government through an amendment to the Constitution.

(d) The act cannot be legalized upon the ground that it comes within the scope of the "general welfare clause" of the Constitution as this clause conferred no power on Congress to enact legislation for general welfare but was placed there to limit the taxing power of the Federal government.

(e) The Maternity and Infancy statute is not an appropriation measure, but an attempted exercise of power over maternity and infancy, and is not even for the general welfare of the United States but only for certain states.

According to the United States Children's Bureau, 41 states have accepted the provisions of the federal maternity and infancy act which became a law November 23, 1921. Only 10 of these states, however, have accepted the act by legislative enactment, those being Delaware, Kentucky, Maryland, Minnesota, Mississippi, New Hampshire, New Jersey, New Mexico, Oregon and Virginia. On April 18 of this year the Federal Maternity and Infancy Board approved the plans of 23 states for the administration of the act.

#### Primary Legislative Candidates

A "bird's eye" view of the large field of legislative candidates in Ohio this year leads one to take an optimistic attitude *provided* the best of the candidates in each party are nominated and elected. If, however, from the unusually large field of political entres, a large proportion of the mediocre or "culls" are successful—God help the old Ship of State.

There's one sure thing about this primary system we have in Ohio—the outcome is largely a gamble.

If there ever was a time when physicians as leading citizens, should do their duty it is now. Participation in government is a grand thing, provided those who have the best interests of the public at heart, rather than those with selfish or sinister motives, succeed in selecting public servants.

Every "anti" group has its "slate" and even in some counties cult spokesmen as candidates for the legislature are running on "organization indorsement". A prominent laymen recently remarked:

"We sometimes wonder why our State Legislature does not follow the advice of physicians on matters concerning which our ablest men are agreed. We hope that the explanation is not to be found in the political cowardice of our senators and representatives. It is more probable that even when the conditions indicate that the best interests of the people would be served by the enactment of certain measures the legislator justifies his adverse vote on the assumption that the majority of the people do not want the proposed legislation. In other words, legislators

are apt to feel that they must reflect the wishes of the people rather than assume leadership. Now that physicians are showing more interest in legislative matters, there is less excuse for ignorance relating to measures which are for the benefit of the people."

As another observer says: "Legislators should first of all be honest, tactful as well as talented, with ability to defeat vicious bills. The latter is quite essential in these times."

A united effort by the profession, having for its object the welfare of the public on matters of health and medical service will not go unheeded by those in authority. A county medical society, because of the intimate relationship existing between its members and the public, is a potential force in shaping health legislation. The personal contact of the doctor with those under his care, places him in a position where he can wield considerable influence by well directed suggestions, for the advancement of all measures having for its object the health of the community and the placing of such persons in positions of authority as will see to the enforcement of existing laws. Thorough understanding within the profession, of its opportunities and potential influence as well as its duties and obligations to the public, can solve most any local problem.

#### The Duty of Vacation

The duty of vacation-taking is a double one, at least. Beyond question, physicians are the hardest workers in the community; their responsibilities and calls for service are not limited to the ordinary working hours of the day nor of the week day. The demands upon them frequently produce physical fatigue; and all the mental functions, intellectual and emotional, are put upon a strain, as with no other large class of men.

The duty, therefore, of finding periods of rest and recuperation becomes a necessity. The duty and necessity are physiologic and psychic; body and mind, both, need rest and change. However, often there appears to be a combination of internal and circumstantial reasons driving the practitioner to continue with his tasks twelve months of the year. The demands of patients, the fear of losing a percentage of clientele, narrow self interests, and the economic phase of the question too frequently deter the physician from taking a vacation.

Most assuredly, it would be beneficial, mentally and morally, to secure a change and rest of one or two months. The waste in eleven months is more than sufficient to carry one through a month's trip. With the will so to do, a vacation can be arranged. Seek the quiet and peace of the hilltops, the woods, or the seashore. Nearly every physician now has an automobile, and most delightful trips can be arranged.—F. C. H., in *The Pennsylvania Medical Journal*.

### Narcotic Registration

"The narcotic question is of great interest not only to the doctor but to the public and the nation as well. It is an economic problem of tremendous importance which becomes more acute as the medical profession loses its grip on control," says Dr. Lester D. Volk, Congressman from New York.

"The welfare of between 1,000,000 and 2,000,000 persons is at stake. More than \$61,000,000 is spent annually by addicts for drugs. The loss in wages of unemployed addicts amount to \$150,000,000 yearly.

"This does not include losses through theft and burglary, of the cost of suppression and punishment of crime, or the care and treatment of those who eventually become charges on the community.

"I have introduced a resolution in Congress asking for a full and free investigation of narcotic and addiction, the method of handling and treatment by physicians, institutions and sanitariums; the effectiveness of the present laws, rules and regulations to control smuggling, trafficking and abuse of narcotic drugs; and for the purpose of drafting legislation for the control of the evil.

"Every doctor, every druggist, every medical and pharmaceutical society, and every unbiased agency and organization looking toward a solution of this problem, should endorse my resolution. Suffering humanity requires it."

Dr. Volk declared that unless there is an open investigation of the entire narcotic situation the recently passed Jones-Miller law, referred to in last month's *Journal*, will fail of its purpose.

"This law was honestly drawn to prevent the importation of narcotics except for medicinal use," he says. "It is to prevent the misuse of drugs and to check smuggling.

Attention is called to the fact that the annual narcotic registration is due on this date, July 1.

There should be no delay in filling out the form and filing it this year. The bureau sent it out weeks in advance with a reminder to the practitioners in the state who register in Class 3 at the rate of \$3 yearly, to attend to this important matter right away.

Applicants are further reminded that all those who register in Class 3 are required to register in Class 5 in order to dispense or deal in untaxed narcotic preparations, although no additional tax is necessary for this registration.

Class 3 applicants will forward with their application an inventory of non-exempt narcotic drugs and preparations in their possession on the date of application. This is necessary before the stamp is issued from the Bureau allowing them to continue prescribing or using narcotics under the Harrison Act.

### Army Hospital at Camp Sherman

Camp Sherman, near Chillicothe, has been selected as the site for one of the new hospitals for neuro-psychiatric cases among veterans of the

World War. Other sites selected are Liberty, New York; Knoxville, Iowa; Tacoma, Washington; Muskogee, Oklahoma, and Livermore, California.

The Ohio hospital which is to serve Indiana and Kentucky as well as this state, is to cost \$1,500,000, it is announced, and is authorized under H. R. 11547 enacted during May which appropriated \$12,000,000 for additional hospital facilities for the U. S. Veterans' Bureau. Additional obligations not to exceed \$5,000,000 for hospital purposes are also authorized. This bill is supplemental to H. R. 10864 which became a law in April and which authorized \$17,000,000 for additional hospital facilities.

In commenting on the operation of the Veterans' Bureau relative to mental cases the *Ohio State Journal* says:

"There appears to be a very marked difference of opinion between the veterans' bureau and the officials of the American Legion over the number of mental cases that ought to be given attention. Unfortunately there has been a lack of agreement between these two agencies for many months. Much lost effort has resulted from these differences. The public sympathy is with the shell-shocked soldier. The man who met the hazard of war abroad and came home with nerves gone and mental condition clouded has a valid claim on the nation. That claim ought to be recognized. The veterans' bureau will not have discharged its duty to the ex-soldiers until every mental case has been cared for. The government ought to make it possible to have that done. The hospital at Camp Sherman is a step in the right direction. If others are necessary they should be taken.

"There was issued recently from the Legion headquarters in Indianapolis a statement that for months there had been an average of two suicides a day among the shell-shocked men who served in France. The Legion claims to have records showing four times the number of mental cases the veterans' bureau seems to have found. It has been an unwelcome development for the American public to note the discord and lack of harmony between these agencies. Mistakes were made in the veterans' bureau early in its history. It had a large task and underestimated it."

### Homeopathic College, As Such, Abolished

Through the action of the board of trustees of Ohio State University on June 19, just as this issue went to press, the College of Homeopathic Medicine of the University was abolished and a merger with the regular college of medicine authorized. The consolidation, which has been under consideration for many months, is expected to strengthen the State University as a center of medical teaching.

The two chairs of Homeopathy which are retained in the College of Medicine are professorships in Homeopathic practice and Homeopathic medicine, similar to the arrangements at Michigan, Minnesota, Iowa and California Universities.

It is said that the only distinct colleges in Homeopathy now remaining are the Hahnemann institutions, one each in Chicago, Philadelphia and New York.

## Syphilis of the Aorta\*

C. W. MCGAVRAN, M.D., and ERNEST SCOTT, M.D., Columbus

*Editor's Note.*—In the experience of Drs. McGavran and Scott the cardio-vascular system is the most vulnerable and most frequent point of systemic spirochetal attack. Every case of syphilis should be given immediate intensive and prolonged treatment and many of the otherwise unsuspected cardio-vascular cases should be considered from the syphilitic viewpoint. While physical findings are of great value in the recognition of aortitis, it often remains for the fluoroscope and Roentgenogram to clear up the diagnosis.

THE MOST CONSERVATIVE students of syphilis estimate that 5 per cent. of the general public of the United States is infected with this disease. Symmers, in studying 4880 autopsy cases at Bellevue Hospital, N. Y., placed the percentage of incidence at 6.5 per cent. The Wassermann statistics obtained by Levin, in examining 10,000 soldiers at Ft. Riley, show that 10.5 per cent. of the white and 18.3 per cent. of the colored troops gave positive reactions. Shamburg, using these figures as a basis, estimates that there are some 10,000,000 syphilitics in the United States. Warthin, after completing a most careful microscopical study of 750 autopsies occurring in the clinic of the University of Michigan, states that 40 per cent. showed definite lesions of syphilis. Such statistics as these certainly prove that syphilis is a most common disease among us.

### SYPHILIS AND VASCULAR DEGENERATION

The close relationship, existing between this disease and the vascular system, attracted attention soon after its appearance in medical history or in the closing years of the 15th century, immediately following the return of Columbus from his voyage of discovery to America. Morgagni, early in the 17th century, called attention to aneurism occurring in a syphilitic, and, in 1783, Lancisi published a book in which he clearly established the relationship of syphilis and aneurism. Chiari and Benda, in 1904, were the first authors to give an adequate histological description of the vascular changes of the disease, although Virchow, as early as 1858, had recognized the more acute and chronic forms of the disease microscopically. More recently Fordyce and Warthin have each given careful study to the more minute structural changes taking place in the disease and have recorded very accurate descriptions of its histo-pathology, and at the same time have clearly established the intimate relationship between its lesions and vascular degeneration. These demonstrations have been very generally accepted and at present most, if not all, of the lesions following syphilitic infection are being attributed to a primary involvement of the blood vessels. Larkin and Levy give expression to this view in the following language: "*Syphilis is being regarded as a disease the*

*manifest pathological changes of which have their origin in diseased blood vessels.*"

Of the vessels affected, probably the most common is the aorta. Levison, in 215 cases of syphilis, found 11.1 per cent. showing such involvement, while Lenz states that 25 per cent. of syphilitics die from aortitis,—including aneurism, angina, and aortic insufficiency.

### PATHOLOGY

The gross appearance of the syphilitic aorta is rather strikingly characteristic. It is most marked on the intimal surfaces of the ascending and transverse portions of the arch, fading in the dorsal region and usually stopping more or less abruptly at the diaphragm, although sometimes passing onward into the abdominal portion. Such an aorta shows an intima that is roughened and decidedly irregular. Such irregularities may be nodular or in the form of wrinkles and are of a pearly yellow opaque color. The endothelium over the affected areas usually retains its smooth and glistening appearance. Accompanying these changes there is frequently more or less dilatation of the aortic wall. Calcification is rarely present and fatty accumulation in the necrotic layers is much less marked than in other forms of atheroma.

The *microscopical examination* of such an aorta reveals lesions which have become well established and are now fully recognized as characteristic of syphilis. Contrasted with the gross changes described as occurring chiefly in the intima, the characteristic histological picture is found in the adventitia and the media. The vasa-vasorum show pronounced endarteritis and sclerosis. About these thickened vessels there is always an accompanying round-celled infiltration consisting chiefly of lymphoid and plasma cells, occasionally mononuclear and even giant cells are found in such an area. Within many of these cellular areas new blood vessels may be seen characterizing the lesion as a true productive inflammation; while in the older cases definite fibrosis replaces this infiltration about the vessels. Associated with these vascular changes there is a considerable fibrous thickening of the adventitia.

Within the media similar changes may be seen, the vasa-vasorum are thickened and surrounded by lymphocytes and plasma cells, and, dependent upon the lack of nutrition from such thickened vessels, the muscular and elastic fibers degenerate.

\*Read before the Section on Medicine of the Ohio State Medical Association, during the Diamond Jubilee Meeting, at Columbus, May 3-5, 1921.

The elastic fibers are frequently broken and tend to accumulate in groups and between these irregular elastic fibers the muscle becomes replaced by fibrous tissue. Such a process of breaking of the elastic fibers and the destruc-



Fig. 1. Thoracic aneurism with erosion of portion of the sternum and the 2nd, 3rd, 4th, and 5th ribs.

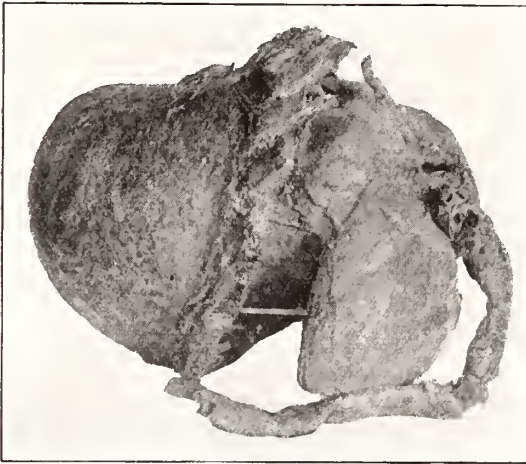


Fig. 2. The gross specimen removed from patient shown in Figure 1. Showing the origin of the aneurism from the ascending arch of the aorta. This aneurism measures 24x18 cm.

tion of the musculature so greatly weakens the wall that it may readily act as a predisposing factor in the development of aneurism. The intima under the microscope presents little that is entirely characteristic of syphilis. This membrane is thickened by a layer of rather dense hyaline fibrous tissue of varying thickness and is usually fat free. Calcification is rarely present and the inner elastic lamina shows many breaks in its fibers.

The *histo-pathology* of the syphilitic aorta then consists of inflammatory changes which are characterized by an endarteritis with subsequent round-celled infiltration of the vasa-vasorum and at least a partial occlusion of their lumen. As a result of these changes there is

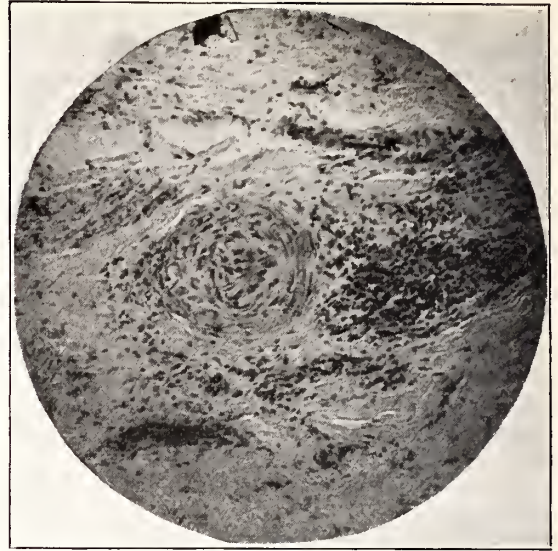


Fig. 3. Low power photo-micrograph showing the thickening of the vasa-vasorum, the fibrosis of the adventitial coat and the para-vascular infiltration or the lymphocytes, mononuclears and plasm cells.

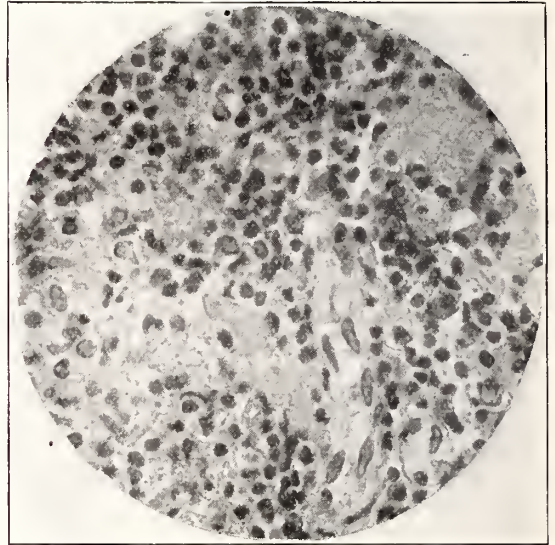


Fig. 4. High power photo-micrograph from one of the para-vascular areas of infiltration showing the cell type and also a new formation blood vessel indicating the inflammatory nature of the lesion.

degeneration of the musculature and elastic fibers of the media and an accompanying sub-intimal and adventitial fibrosis. Larkin and Levy state that "productive inflammation in the walls of the aorta is pathognomonic of syphilis" and with this view most pathologists agree.

Accompanying the involvement of the ascending portion of the aorta, the disease not infrequently extends to the aortic valves, producing a sub-acute or chronic endocarditis with thickening and contraction of the valve leaflets. This occurrence has become so well recognized that one author states that a pure aortic insufficiency is

always to be considered of syphilitic origin unless some definite infective origin can be proved.

Associated with these lesions of the aorta and aortic valves, there is frequently an involvement of the coronary vessels producing sclerosis and peri-arteritis with an accompanying myocardial degeneration, and in calling attention to the importance of this condition, Brooks and Carroll state that the "myocarditis depending upon peri-arteritis of the coronary vessels is the most frequent and important lesion in all of the stages of the disease," while Warthin insists that of the many factors in cardiac disease "syphilis is the most important", and further adds that "the heart and aorta are involved in every case of latent syphilis."

From the clinical standpoint the importance of these changes lies in the fact that the destruction of the elastic and muscular fibers of the media, and an increased arterial tension supply all of the etiological factors necessary for aortic dilatation and aneurism, and again the involvement of the aortic valves and the coronary arteries furnish the necessary background for various myocardial degenerations and endocarditis.

The magnitude of this subject was called to one of the writers' attention, in 1914, by the excellent contributions of R. C. Cabot on "Four Common Types of Heart Disease" and of Brooks and Carrol on "Treatment of Syphilis of the Heart". Since that time every cardio-vascular case that has come under his observation has been investigated from the standpoint of etiology, and much to his surprise many cases have been found to be of syphilitic origin, which prior to that time would have been classified merely as myocarditis, endocarditis or aortitis.

#### SYMPTOMS

Most cases of aortitis present a very definite symptom-complex which points directly towards cardio-vascular disease. There are a few, however, that present no symptoms that can be definitely ascribed to this disease and in which, during the process of a routine examination, an unmistakable aortitis is demonstrated. The following symptoms may be elicited and are mentioned in their order of frequency:—

*Pain* is the most frequent and constant symptom. This may vary from a slight feeling of substernal pressure to a severe lancinating pain. Often patients will place the hand over the sternum at the junction of the gladiolus and manubrium and say "no it is not a pain, just a feeling of pressure", and again they will complain of the pain being severe and cutting in character. It is often nocturnal, or at least more exaggerated during the night. The severity of the pain does not always correspond to the size of the aorta, or to the aneurismal pouch, for at times an immensely dilated aorta is found in which the patient complains of little or no distress. On the other hand there are instances in which pain is

most severe and the examination shows little actual increase in either the length or diameter of the aorta. Levison finds that this uncertainty and variability of the pain is of diagnostic value.

*Dyspnoea*, next to pain, is the most common symptom, and like pain, it varies in its degree.

*Cough* is a factor; often, being dry and non-productive. Every middle aged man or woman with a dry non-productive cough of several weeks duration should be examined carefully, the examiner having a possible aortitis in mind.

*Weakness, dizziness, and hoarseness* are other symptoms encountered.

#### POINTS IN EXAMINATION

In examining a patient for a suspected aortitis let each case be a unit within itself. Consider carefully the size and shape of the chest. Consider the density of the adjacent lung tissue, particularly the right upper lobe; also have in mind the possibility of the retraction of a fibroid phthisis uncovering the aorta causing it to appear more superficial. In addition widening of the arch, tympany and apparent closeness of the second aortic sound, diastolic impact, and murmurs are not infrequently observed.

As to the method of percussion used in determining the width of the aorta every examiner has a technique with which he is most familiar and which gives him the best results, and that is the method for him to use. To the author light palpatory percussion coming *from-without-in*, gives the best results. An aorta of over 8 cm. in width should be investigated carefully. Hoover very thoroughly covers the diagnosis of aortitis by physical signs alone but unfortunately all diagnosticians are not infallible, and often a rather extensive aortitis is brought out by fluoroscopic or radiographic examination that had been missed by percussion.

While in most instances twenty or more years have elapsed between the initial infection and the manifestation of cardio-vascular symptoms, one case in this series presented a very definite endocarditis within six weeks following the appearance of secondaries, and in another instance a most pronounced case of paroxysmal tachycardia was observed within 5 months following the initial lesion. *As a result of the observations it is our judgment that the time to look for syphilis of the heart is when syphilis is first recognized as syphilis and the patient is known to be luetic, from that time on watch for it as you would watch for a beginning endocarditis in a case of rheumatic fever.* This observation is entirely in accordance with that of Smith.

Inasmuch as most of our cases of cardio-vascular lues are found in those unfortunates who have had little or no treatment, the best preventative is intensive and prolonged treatment, beginning immediately after the recognition of syphilis. It is doubtful whether medical science

has as yet reached the point where one can say, that the treatment in a given case has been adequate and there is no longer danger of the development of cardio-vascular disease. The history of absence of an initial lesion cannot be relied upon. One is too often confronted with the statement "Impossible, Doctor, I have never had a disease in my life". In many instances these statements are honest, but these are the very cases, when presenting positive clinical signs, that respond best to treatment.

#### ILLUSTRATIVE CASE REPORTS

*Case 1.*—J. K., 44, stone mason, married, native of Switzerland, presented himself September 10, 1914, complaining of paroxysmal pre-cordial pain, radiating to left shoulder and left forearm; weakness; dyspnoea.

All of his life a hard worker, strong man, no serious illness; denies lues. Married 8 years ago to a widow, the mother of four healthy children by a former husband, since this marriage has given birth to three children, all of whom died before the third month, one covered with sores. In March, 1913, after much suffering from exposure and hard work (during the flood), patient began to have chest pain and dyspnoea, although he continued on with his work as a stone mason until October of that year, since that time has been unable to work.

*Physical examination* shows the classical signs of aortitis with aortic insufficiency; capillary pulsation; throbbing carotids; ill sustained pulse; high pulse pressure; enormously enlarged heart; (cardiac dullness being 18 cm. to the left and 3 cm. to the right of the mid sternal line at the level of the fifth space, and 10 cm. at the junction of the third costal cartilage with the sternum). Heart action irregular; extra systoles; and heart sounds replaced by murmurs. Diastolic murmur at second space to right, heard best at junction of fourth left costal cartilage with sternum and transmitted down sternum towards the apex. Systolic murmur heard all over pre-cordium, but best at apex (a relative mitral insufficiency). A double murmur over femoral; scar on penis, also one in left groin. Patient now admits that he had a sore 25 years ago, which was of two months duration and untreated.

Wassermann test a clean negative. Diagnosis of cardio-vascular lues was made and intensive anti-luetic treatment immediately instituted. The result has been marked. Certainly the patient has an aortitis with aortic insufficiency and always will have, but in a few weeks the heart became regular, the precordial pain and dyspnoea had disappeared and he gradually became stronger. Seven years have now passed and while he is not able to resume his work as a stone mason, he does some work, is fairly efficient, has no pain, and dyspnoea only upon severe exertion.

*Case 2.*—H. C. M., 54, (see Fig. 5), contractor, married, was first seen March 9, 1920, complain-

ing of dyspnoea and pre-cordial pain. About 27 years ago had a sore on penis which was diagnosed as non-specific. No secondaries recognized. Three years ago began to have pre-cordial pain which radiated up back of sternum and down the



Fig. 5. Radiograph of aneurism described in case No. 2.

left arm. This pain has gradually become more severe and is worse at night, interfering with sleep. Dyspnoea marked even after slight exertion.

*Physical examination* shows prominent temporals; capillary pulsation; palpable post-cervical and epitrochlear glands; supra-sternal pulsation, blood pressure 140/90; area of dullness  $9\frac{1}{2}$  cm. wide in region of manubrium; and cardiac dullness increased to left and downward. At the second space to the right a palpable diastolic impact is elicited. Auscultation reveals a double murmur which is transmitted down the sternum to the apex. Otherwise physical examination shows nothing remarkable.

*Fluoroscopic examination* shows a well defined tumor in mediastinum; Wassermann test a doubtful plus-minus. Diagnosis of cardio-vascular lues, aortitis, aneurism and aortic insufficiency is made. Under intensive anti-luetic treatment patient is much relieved, both as to the pre-cordial pain and the air hunger.

*Case 3.*—W. H., 43, shoe merchant, presents himself on April 21, 1919, complaining of slight hacking cough and a feeling of weight under the sternum.

Patient has been a healthy man and married in 1901. Six weeks after his marriage he contracted what was diagnosed as measles. The eruption remained for a long time and his throat was quite sore. Patient recovered slowly, lost

most of his hair and was greatly reduced in weight. His wife became pregnant twice and on each occasion gave birth to a still-born child. Greatly reduced in weight and strength she was seen in March, 1915, and in spite of a negative Wassermann test, was given large doses of arsenic with great benefit.

*Physical examination* in this patient is negative aside from slight widening of aortic arch (brought out more prominently under the Fluoroscopic examination) and a faint systolic bruit at third left space, not transmitted.

*Diagnosis:* Considering the above history, a diagnosis of syphilitic aortitis was made, although the Wassermann test was a clean negative. Intensive anti-luetic therapy, K. I., mercury and arseno-benzol, was instituted. Patient tolerated mercury well. The fact that after the first series of arseno-benzol the Wassermann test became positive one plus, is noteworthy. After one year of vigorous treatment patient feels well;



Fig. 6. Radiograph of aortitis described in report of case No. 4.

works hard; and the systolic bruit has entirely disappeared and the widening of the arch, if anything, is less pronounced.

*Case 4.*—E. D. P., 47, (See Fig. 6), waiter, colored, married, presented himself November 17, 1920, complaining of substernal pain of three months duration, loss in weight and strength. Has been twice married; one living and one still born child by first wife. Second wife has not been pregnant. Sore on penis 12 years ago, does not recall having had secondaries and took no treatment. Has lost 22 pounds in past four months. The substernal pain, very slight at first, is now quite severe and much worse at night. No dyspnoea, dizziness or cough.

*Physical examination* negative, except for cardio-vascular system. Radial arteries being just palpable, blood pressure 184/98. Percussion shows a uniformly dilated aorta, its width measuring 10 cm. This was confirmed by radiograph (see Fig. 6). Auscultation shows systolic murmur at base of heart. The second aortic being markedly accentuated but not tympanitic. No diastolic impact.

The Wassermann test is strongly positive.

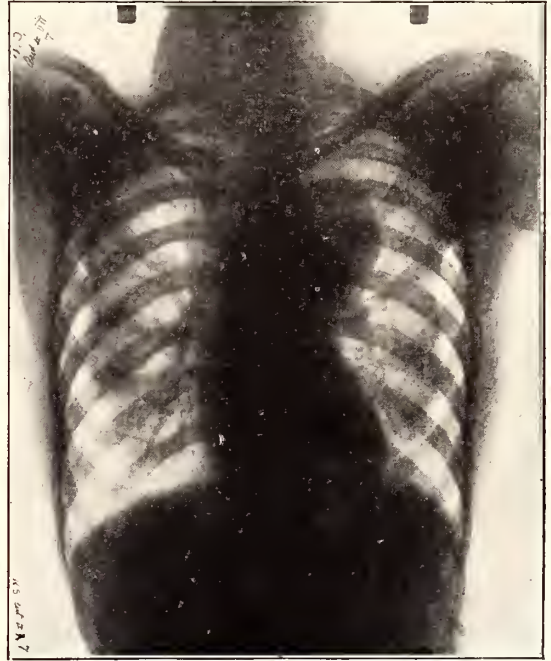


Fig. 7. Radiograph of aneurysm described in report of case No. 5.

*Diagnosis* of cardio-vascular lues, aortitis was made. Under intensive anti-luetic treatment his pain has disappeared. Aorta remains the same in size.

*Case 5.*—The following case illustrates the value of intensive treatment even in the advanced stage of aneurism. K. S., (see Fig. 7), colored, female, 37, housewife, was first seen January 9, 1918. She had been in bed for several weeks and had much pain in upper left chest which radiated down left arm. Pain was more severe at night; she had paroxysmal attacks of air hunger and at times orthopnea. Married at 24, was twice pregnant and each time miscarried at the fourth month without intervention. Eight years ago underwent operation for *cold abscess* on right shoulder which has never healed.

*Physical examination* shows a poorly nourished woman; marked inequality of pulses, the left radial being scarcely palpable. Open sore 2x8 cm. over right clavicle. Distinct pulsating tumor to left of sternum in region of second and third ribs. Tracheal tug is present. Area of dullness by light palpatory percussion shows mass to be 10 cm. in diameter. A double murmur is elicited.

Radiogram reveals a sacculated aneurism of transverse arch.

Wassermann test was strongly positive. Remarks at the time were as follows: "The history and physical findings are plainly those of syphilis. Patient has an aneurism of thoracic aorta and the prognosis is bad. Will inform patient as to the seriousness of her condition. Will place her on rigid anti-luetic treatment." That was three and one-half years ago. Patient has been on mercury and iodides constantly since that time and in addition she has had four series of injections of arseno-benzol, ten injections (0.2 grms. given a week apart) in each series.

The remarkable thing is that in a few weeks after beginning the treatment her pain entirely disappeared and in three months she was doing light housework, which she has been doing ever since. It is needless to say that her *cold sore* was healed within ten days after she started treatment. (Patient alive, free from pain and doing light house work at the time this proof is read, June 2nd, 1922.)

Case 6.—G. M., (see Fig. 8), female, 48, was seen September 23, 1920. Complained of lancinating substernal pain, more severe at night, dyspnoea, and weakness. Married twice, first at

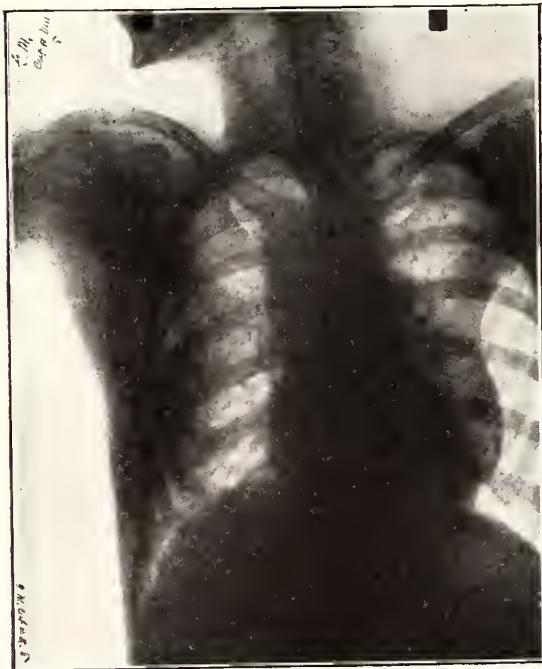


Fig. 8. Radiograph of aneurism described in report of case No. 6.

17, mother of five children, two of whom are living, one still-born child, one lived but a few hours, one died at four months of meningitis. Husband was a bad man, a drunkard. She was divorced at 28. Married second time at 33, no pregnancy since this second union. Husband 43, nine years ago, became paralyzed and lost the vision of his left eye. Six months ago patient

noticed weakness and began to have substernal pain which has increased in severity. Three weeks ago noticed a lump in upper chest which rapidly increased in size.

*Physical examination* shows an anxious expression, inequality of pulses, pulsating tumor under upper sternum, area of dullness 11 cm double murmur over tumor, marked tracheal tug.

Wassermann test was positive 4 plus. A diagnosis of cardio-vascular lues, aneurism transverse arch was made. Patient was sent to hospital and intensive anti-luetic treatment advised. Two injections of arseno-benzol were given which were followed by inunctions. She now has less pain and tumor has apparently not grown.

Case 7.—W. H. N. (see Fig. 9), laborer, married, referred by Drs. V. and W. on October 20, 1920, complaining of loss of voice. Family history negative. Patient had moderately severe typhoid at 26, and pneumonia at 38, otherwise no serious illness and had regarded himself as a healthy man. Venereal disease is denied. He has used tobacco in moderation, has not used alcohol. Married at 30, wife is mother of five children, no miscarriages. Has been working hard as a laborer in brick yard. Seven weeks ago suddenly lost his voice, now speaks only in a faint whisper. Simultaneously with the loss in voice he felt a sense of pressure back of sternum. This latter symptom lasted only two weeks. He feels perfectly well excepting for the disturbance in speech. Has had no pain, no dyspnoea, no cough, no dizziness, no weakness. Is working every day.

*Physical examination* shows hard calcified radials, high tension pulse, blood pressure 190/



Fig. 9. Radiograph of aneurism described in report of case No. 7.



118, moderate cardiac hypertrophy with area of aortic dullness of 15 cm., heart tones clear, second aortic not accentuated. Fluoroscopic and radiographic examination shows extensive uniform dilatation of aorta, (see Fig. 9).

Wassermann test was negative. This is an extensive non-specific aortitis.

#### SUMMARY

There are 90 cases of cardio-vascular syphilis included in this study exclusive of those manifesting brain lesions caused by syphilis of the cerebral vessels. In 44 or 49 per cent. the picture was that of syphilitic aortitis. Of these 12 or 13 per cent. had a definite picture of aortic insufficiency; 9 or 10 per cent. a picture of thoracic aneurism and 2 or 2.2 per cent. abdominal aneurism. In 21 or 23 per cent. the signs of coronary stenosis, (ischaemia manifested by paroxysms of air hunger or pre-cordial pain), were most marked. In 23 or 25 per cent. the signs of myocarditis were most pronounced and the following irregularities, extra systoles, auricular fibrillation, auricular flutter, heart block (partial and complete), pulse alterans and paroxysmal tachycardia have been observed. In 2 or 2.2 per cent. there was an ulcerative phlebitis.

The cardio-vascular system is the most vulnerable and most frequent point of spirochetal attack. Every case of syphilis should be given immediate intensive and prolonged treatment. Every means at our command should be exhausted in the endeavor to discover the etiological factor in any given cardio-vascular case. Many of the unsuspected cardio-vascular cases are due to syphilis. Physical findings are of great value in the recognition of aortitis, but it often remains for the fluoroscope and roentgenogram to clear up the diagnosis. The aorta in the non-specific cases was found to be dilated to a variable degree, in some instances the dilatation was extreme (see Fig. 9). In every instance, however, the dilatation was uniform. Coronary involvement with its diminution in size is frequently met with and is the most dangerous of all complications because of its effect upon the nutrition of the heart muscle and its tendency to incite thrombus formation. The myocarditis that has been observed and followed through to autopsy has been a nutritional change rather than a strictly syphilitic degeneration.

The blood pressure is of negative value as far as the diagnosis of a localized arteritis is concerned. Two of our cases of coronary sclerosis had systolic blood pressure of 104 and 146 respectively; while another, a large aneurism with hemorrhage into the pericardium, had a pressure of 280.

The Wassermann reaction should be considered as a valuable aid in the diagnosis of lues, but only as an aid. Nearly every positive reaction indicates syphilis but a negative reaction can

have no meaning. A great many (28 per cent.) of this series of cases, gave a negative Wassermann and yet they were clinically syphilitic. Some have come to autopsy and are unmistakably syphilis. When there is doubt give mercury and iodides, the therapeutic test is one of the most valuable diagnostic aids we have.

By intensive anti-luetic treatment in cardio-vascular cases, is meant, iodides in moderation; mercury, either intramuscular injections or by inunctions to the point of tolerance; and arsphenamin in small doses, 0.2 grams intra-venously, at weekly intervals, for a period of ten weeks; to be repeated from time to time.

In cases of cardiac insufficiency, arsphenamin is contra-indicated, but mercury, and iodides in conjunction with cardio tonics are often helpful.

We are indebted to Dr. J. H. Vorhees who made the radiographs of our cases. They were taken stereoscopically at a distance of 36 inches.

#### BIBLIOGRAPHY

- Bayet: *La Presse Medicale*, May 29, 1920.  
 Brooks and Carroll: *Jour. A. M. A.*, Vol. 63, p. 1456.  
 Cabot, R. C.: *Jour. A. M. A.*, Vol. 63, p. 1461.  
 Fordyce, J. A.: *Jour. Am. Sci.*, June, 1915, Vol. 149, p. 181.  
 Hoover: *Jour. A. M. A.*, 1920, Vol. 74, p. 226.  
 Lancisi: *Garrisons History of Med.*, 1914, 299.  
 Larkin and Levy: *Jour. Exper. Med.*, Vol. 23, p. 25, Jan., 1916.  
 Lenz: Cited by Fordyce; *Am. Jour. Med. Sci.*, Vol. 149, p. 251.  
 Levin, W.: *Jour. Lab. & Clin. Med.*, Vol. v., p. 93, Nov., 1919.  
 Levison, L. A.: *Amer. Jour. of Syphilis*, Vol. 2, p. 45, Jan., 1918.  
 Luce, M.: *Deutsche medezenische, Wochenschrift*, Jan. 15, 1920.  
 Smith, E.: *Am. J. of Syphilis*, July, 1920, p. 445.  
 Machenzie, Ivey: *Glasgow Med. Jour.*, Nov., 1919.  
 Morgagni: *Garrison's History of Med.*, 1914, p. 284.  
 Shamburg: *Progressive Med.*, Sept., 1920, p. 149.  
 Symmers, D.: *Jour. A. M. A.*, 1916, Vol. lxxvi, 1457.  
 Taylor, A. F.: *Am. Jour. Syphilis*, Jan., 1920, p. 38.  
 Vaques, Laubry and Donzelot: *La Presse Medicale*, May 29, 1920.

#### NEW AND NONOFFICIAL REMEDIES

In addition to the articles enumerated in the June issue, the following articles were accepted during April by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies: Intra Products Co.—Ven Sterile Solution Procaine 1 per cent.

During May the following articles were accepted: G. W. Carnrick Co.—Epinephrine—G. W. C. Co.; Epinephrine Chloride Solution—G. W. C. Co. Intra Products Co.—Phenolsulphonephthalein-Ipc; Ven Sterile Solution Phenolsulphonephthalein, 1cc. Lederle Antitoxin Laboratories:—Pollen Pollen Diagnostics—Lederle. H. K. Mulford Co.—Diphtheria Toxin-Antitoxin Mixture,—Mulford. National Aniline and Chemical Works—Neutral Acriflavine—Heyl; Tablets Neutral Acriflavine—Heyl 0.1 Gm. (1½ grs.); Neutral Acriflavine—Heyl Throat Tablets, National Aniline and Chemical Works.—Neutral Acriflavine—Heyl "Pro Injections" 0.5 Gm. vials; Neutral Acriflavine—Heyl "Pro Injections" 1.0 Gm. vials. Winthrop Chemical Co.—Luminal Tablets 1/4 grain.

## A Right Aortic Arch\*

REED O. BRIGHAM, Ph. D., M.D., Toledo

*Editor's Note.*—From a study of the subject, as well as from an extended experience in the anatomical laboratory, Dr. Brigham concludes that a right aortic arch is quite infrequently observed, but when it does occur it presents confusing clinical aspects. It may cause supra-sternal pulsations, on account of high position of the arch, paralysis of the right recurrent laryngeal nerve, or pressure upon the trachea and oesophagus.

THE ANOMALIES, which are observed in the arterial system, are of interest and worthy of record not only to the *anatomist* but also to the *clinician*. These congenital malformations usually receive scant notice because of the unwarranted assumption that they are incompatible with life, when quite the contrary is the truth. This fact has led the writer to present this contribution on abnormalities which involve the aortic arch. The specimen under consideration was observed in the Anatomical Laboratory of the University of Michigan, during the academic year of 1919-1920.

### EVOLUTION OF AORTIC VARIATIONS

This right aortic arch variation, or *mutation of nature*, can be explained satisfactorily by a study of its development. It is an interesting fact, that almost every irregularity, hitherto observed in the course and branching of the aorta in the *human subject*, represents the disposition which that vessel constantly exhibits in some of the *inferior animals*. Then the fact that ontogeny recapitulates phylogony offers a broader field for the review of the formation of the aortic arch. The etiology may be considered as a disturbance in the embryological development perhaps due to a mechanical disturbance or injury, or due to a reversion to an early phylogenetic type. This latter fact is of especial interest in a study of the right aortic arch which is the normal form in birds, while the left one is the normal one in the mammalia. These two forms being separate branches in the phylogenetic tree from the reptilian, which have both a left and a right arch. This is not a true reversion, in the case to be described, for a true one would be a double arch. Another theory which one must consider, is that of mutation, in which case the incident would tend to become permanent in the progeny, which fact would lead to interesting studies by means of the X-ray and necropsies, if possible, of his descendants. Further study might show that the right aortic arch appears through the human race in some type of a Mendelian ratio.

It is a well known fact that at an early stage in development the embryo possesses two ventral and two dorsal aortae, that the ventral and dorsal trunks are connected on either side by means of six brachial arch arteries. The first two

arches are usually lost but the third and the left fourth arches are retained, becoming the root portion of the internal carotid and the arcus aortae respectively. On the other hand both the ventral and dorsal aortae cephalad to the position of the third arches are persistent, the former to furnish the stem of the external carotid, whereas the ventral aortae between the third and fourth arches become the right and left common carotid artery. The corresponding parts of the dorsal aortae disappear so that now all of the blood that goes to the head courses by way of the ventral stem. The sixth arch is lost on either side beyond the origin of the corresponding pulmonary artery.

### THE SPECIMEN OBSERVED

The specimen of the right aortic arch, which is about to be described, is the first one observed in the Anatomical Laboratory of the University of Michigan during the dissection of about 1,400 cadavers, a fact showing the relative infrequency of incidence. This fact is further confirmed by the few reported instances found in the references appended in this paper.

The specimen herewith recorded was found in a male adult subject of about fifty years of age. There was no history of any clinical findings which could be attributed to the anomaly. Observations made during the dissection did not indicate any disturbances from malposition of the aortic arch. The heart was normal, measuring eight centimeters in length and eight centimeters in width at the base, and it occupied the normal position in the thorax.

The arch lay anterior and to the right of the trachea and oesophagus, as can be observed in Figure 1. The branches of the arch were a reversal of the normal, *namely*, a left innominate, which gave origin to the left subclavian and the left common carotid. On the right side the right subclavian and the right common carotid were given off. This reversal here was not accompanied by the transposition of any other organ of the body. The arch did not rise high above the heart as is sometimes the case. The descending aorta crossed the midsagittal plain obliquely to the left side before passing through the diaphragm.

The fibrous remains of the left arch were about four centimeters in length. It extended from the left subclavian artery to the descending aorta and passed downward and backward

\*From the Anatomical Laboratories of the University of Michigan.

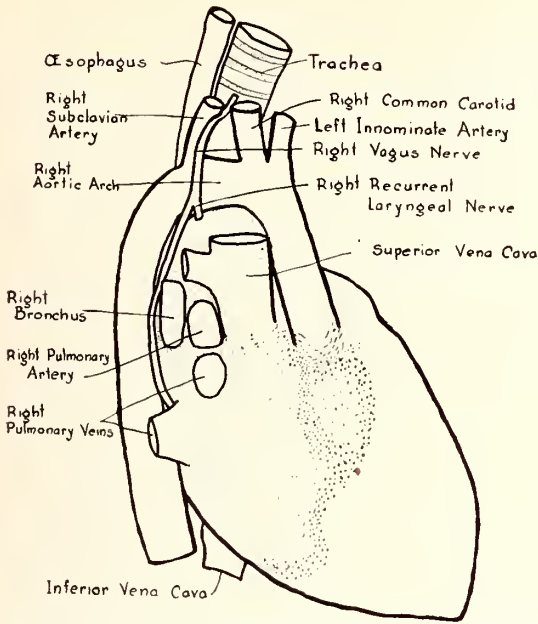


Figure 1. This drawing of the specimen reported represents a view of the right aspect of the heart and great vessels, showing the position of the right aortic arch and the great vessels arising from it.

to the left of the trachea, left recurrent laryngeal nerve and oesophagus.

The ligamentum ductus arteriosus was present on the left side about two centimeters below the fibrous remains of the left arch and was about twice its diameter. The ductus was about two centimeters in length. It united with the descending aorta about five millimeters distal to the attachment of the fibrous remains of the left aortic arch and communicated with the left pulmonary artery. The position of the ligamentum ductus arteriosus shows that it was the persistence of the left sixth brachial vessel.

The left recurrent laryngeal nerve passed around the ductus arteriosus. The right recurrent laryngeal nerve passed beneath the arch of the aorta.

#### OTHER REPORTED INSTANCES

A careful review of the literature shows about thirty-five reported cases of right aortic arch. The larger number of these being found in adults.

Abernethy (1793) reviews a case of a child about ten months of age, in which the aorta, after its emergence from the ventricle, extended its arch from left to right but afterwards pursued its ordinary course along the bodies of the dorsal vertebrae. It also showed a reversal of the main branches of the arch.

Turner (1862) reported a right aortic arch, in which he observed that the aorta showed a pouch-like trunk. He also reviewed other instances; one in which the ductus arteriosus was quite patent, and he further reviewed some reports in the literature. Thompson (1863) pre-

sented a similar case in which the left innominate artery arose from the left side of the arch and the descending aorta presented a dilated portion behind the oesophagus. Thompson believed that both arches were patent until a relatively late period of intra-uterine life. The reversal of the branches of the aorta was not found to be the common rule by these investigators. Krause (1868) in Henle's Anatomy reviews some twelve reports of a right aortic arch.

Brenner (1883) reports the observance of three instances of right aortic arch with pathological findings associated with them, and one in a child of three years of age.

Combes and Christopherson (1884) tell of a still-born child which revealed at autopsy a right aortic arch with no other abnormalities. The recurrent laryngeal nerve on the left was situated beneath the ductus arteriosus. The right and left common carotids arose directly from the arch. They further noted that in the Royal College of Surgeons there was not a reported parallel case, all others having a total transposition of viscera.

Dittrich (1886) reported instances of right aortic arches in adults, and one of these cases the aorta started as one then divided and passed to right and left, the right being the larger, and then united back of the oesophagus.

Herringham (1891) gave a careful review of the clinical history for one year preceding death and the necropsy findings of a case of right aortic arch. The patient had difficulty in swallowing and breathing and upon examination showed paralysis of the right recurrent laryngeal nerve. The necropsy revealed the fact that the aorta passed upward to the right of the trachea, and instead of crossing in front of it turned backward on its right side, and then crossed to the left behind the oesophagus, to reach the usual left side position at the diaphragm. From the first turn to the coeliac axis there was great dilatation. The right recurrent laryngeal nerve turned under the aortic arch instead of under the subclavian and had become thickened and adherent to the artery. The trachea was pushed sharply forward and there were no adhesions between the bronchi and the aorta.

Shaw (1897) reported an anomaly found in the laboratory of the Rush Medical School, in which there was a large right arch and a small left arch and these two united behind the oesophagus. The division took place three centimeters above the pericardial attachment.

Gross (1905) found a case in a child with the aorta branching to the right and the right recurrent laryngeal nerve under the arch. Hamdi (1906) reviewed a case in which the aorta turned to the right and showed a bifurcation and found this caused some disturbance in the oesophagus. Garnier and Villemin (1909) found an anomaly

in a foetus in which the aorta turned to the right.

Annan (1910) described a right aortic arch which passed around the trachea and oesophagus above the right bronchus and continued as the descending aorta on the left side. The right recurrent laryngeal nerve was hooked around it. The descending aorta crossed to the right side of the body and passed again back to the left side before reaching the diaphragm. He also noted that when the aorta descended on the right side of the body the viscera were transposed, but if it crosses back and descends on the left side the viscera were in normal position. The author calls attention in his paper to one other similar specimen found in the museum at Cambridge.

Gruber (1912) described an instance of a true right aortic arch with the branches similar to the case described in this paper, and with the right recurrent laryngeal nerve passing beneath the ductus arteriosus.

Three examples of right aortic arches in adults were presented by Reid (1914), and none of these showed any remnants of a left arch or any other anomalies in the body. One specimen showed the arch rising into the root of the neck, which probably gave rise to supra-sternal pulsation, and may have been due to the primitive position. In another specimen the left subclavian artery arose from the left innominate, while in the other two reported they arose from the aorta as is common. One of his specimens is similar to the one observed in this laboratory.

Gladstone (1915) presented two specimens of right aortic arches, one of which presented a persistent left duct of Cuvier.

#### SUMMARY

One may conclude from the above discussion and review of the literature that a right aortic arch is quite infrequently observed, but when it does occur it presents confusing clinical aspects.

It may cause supra-sternal pulsations, on account of high position of the arch, paralysis of the right recurrent laryngeal nerve, or pressure upon the trachea and oesophagus.

141 TWENTY-FIRST ST.

#### REFERENCES

- Abernethy, John: Account of Two Instances of Uncommon Formation in the Viscera of the Human Body. *Phil. Trans.* Vol. 83, pp. 295-297, 1793.
- Annan, John L.: A Right Aortic Arch. *Journ. Anat. Phys.*, Vol. xlv, p. 241, 1910.
- Brenner, Alexander: Ueber das Verhältniss des Nervus laryngeus inferior vagi zu einigen Aortenvarietäten des Menschen und zu dem Aortensystem der durch Lungen athmenden Wirbelthiere überhaupt. *Archiv. Anat.*, pp. 373-396, 1883.
- Combes, R. H. and Christopherson, C.: Transposition of the Aortic Arch. *St. Barth. Hosp. Rep. Lond.*, Vol. xx, pp. 273-277, 1884.
- Dittrich, Paul: Ueber Einige Variantenbildungen im Bereiche des Arcus Aortae. *Zeitschrift f. Heilkunde*, Vol. 7, pp. 65-71, 1886.
- Garnier, C. and Villemin, F.: Sur une anomalie tres rare des gros vaisseaux de la base du coeur chez un foetus humain. *Bibliograph. Anat.*, Vol. 19, p. 286, 1909.
- Gladstone, R. J.: Two Examples of Right Aortic Arch one of which Presented a Persistent left Duct of Cuvier. *Proc. Anat. Soc. Gt. Brit. and Irel. Lond.*, Vol. 20, 1915.
- Gross, Walter: Ein Fall von Agenesie der linken Lunge. *Beitrag. Path. Anat.*, Jena, Vol. 37, pp. 487-500, 1905.

Gruber, G. B.: Zwei Falle von Dextropositio des Aortenbogens. *Frankfurt Ztschr. Path. Wiesb.*, Vol. x, pp. 375-382, 1912.

Hamdi, von: Eine seltene Aortenomalie. *Deutsche medizinische (Leipzig) Wochenschrift*, Vol. 32, p. 1410, 1906.

Herringham, W. P.: An Account of a case where a Right Aortic Arch passed behind the Oesophagus to the left side and becoming dilated killed the patient by slow compression of the Trachea. *Tr. Clin. Soc. Lond.*, Vol. xxv, pp. 46-48, 1891.

Krause, K.: In Henle's *Handbuch d. Syst. Anatomie des Menschen*, 3 Teil, Branschweig, 1868.

Reid, Douglas, G.: Three Examples of Right Aortic Arch. *Journ. Anat. Phys.*, Vol. 48, pp. 174-181, 1914.

Shaw, D. Lee: An Aorta with a Double Arch. *Journ. Am. Med. Ass.*, Vol. 28, pp. 538-540, 1897.

Thompson, Allen: Description of the dissection of a case of Right Aortic Arch with remarks on that and allied malformations. *Glasgow Med. Journ.*, Vol. xl, pp. 1-16, 1863.

Turner, Wm.: On Irregularities of the Pulmonary Artery, Arch of the Aorta, and the Primary Branches of the Arch, with an attempt to illustrate their Mode of Origin by reference to Development. *Medico-Chirurgical Rev.*, Vol. 30, pp. 173-189, 1862. Also a Right Aortic Arch.—*Brit. For. Med. Rev.*, Vol. xxx, (Cited by Reid, 1914), 1862.

#### NEW AND NONOFFICIAL REMEDIES

Izal.—An albuminous emulsion containing not less than 50 per cent. of "izal oil", obtained in the destruction of bituminous coal, and consists essentially of monatomic phenols boiling between 205 and 300 C. Izal is practically free from phenol and cresols. Izal is a germicide and disinfectant. The germicidal efficiency is claimed to be twelve times as great as that of any equal quantity of phenol, but it is stated to be less toxic than phenol. The Abbott Laboratories, Chicago.

Powdered Protein Milk—Merrell-Soule.—Dry Protein Milk.—A modified milk preparation having a relatively high protein content and a relatively low carbohydrate content. Each 100 Gm. contains approximately: protein, 38 Gm.; butter fat, 27 Gm.; free lactic acid, 3 Gm., and ash, 5 Gm. Powdered protein milk is said to be useful for correcting intestinal disorders of infants and children. For the majority of conditions, powdered protein milk should be administered in small quantities according to the age and condition of the patient, after a period of starvation of from twelve to forty-eight hours. Merrell-Soule Sales Corp., Syracuse, N. Y.

Iothion.—Iopropane. — Di-Iodo-Hydroxy-Propane. Iothion contains from 77 to 80 per cent. of iodine. It is used when it is desired to obtain the systemic effect of iodides by external application. Iothion is used in the form of iothion oil, in solution in alcohol or glycerin, or in the form of ointments containing from 5 to 20 per cent. of iothion. Winthrop Chemical Company, Inc., New York (*Jour. A. M. A.*, May 13, 1922, p. 1459).

Streptococcus Vaccine Polyvalent (scarlatina). —A streptococcus vaccine (See New and Non-official Remedies, 1922, p. 308), marketed in packages of four 1 Cc. bulbs, each cubic centimeter containing 1,000 million killed streptococci isolated from scarlatina cases; also marketed in packages of 4 Cc. syringes, in 5 Cc. vials and in 20 Cc. vials. Parke, Davis and Co., Detroit, Mich.

## Megacolon\*

WM. H. FISHER, M.D., F. A. C. S., Toledo  
Surgeon to St. Vincent's Hospital

*Editor's Note.*—Viewing magacolon either as a congenital malformation or anatomical defect, both susceptible of pathological changes, it is questionable, in the opinion of Dr. Fisher, whether remedial measures are ever curative—palliative, yes. The earlier stages of the disease should be classed entirely as surgical entities. Operative procedures are least hazardous to life and offer more certain prospects of permanent recovery and minimized suffering of the patients. From this viewpoint the desiderata to be attained are first, the prevention of the acute magacolon; and second, in chronic cases to lessen the period of duration so that toxic products will not produce the degenerative changes so inimicable to life upon important organs, especially the heart.

### ILLUSTRATIVE CASE REPORTS

THE HISTORY and records of Case 1 were destroyed by fire, thus necessitating a report practically based upon the salient points retained by memory. No post-mortem was allowed, also making the case report of less importance from a purely scientific standpoint, but not materially detracting from its value from the clinical course and pathological state which rapidly developed.

On September 3, 1907, C—S—, a Syrian, aged 17, sought medical advice for persistent constipation, and on September 6 was admitted to the hospital suffering from intense abdominal pain, great distention of abdomen, persistent vomiting, high grade of toxæmia and unrelieved constipation.

An abdominal operation was immediately performed. General peritonitis was present, the peritoneal cavity being filled with gas and sanious fluid. The ascending colon was of prodigious size, filling the whole abdominal cavity. It was also necrotic in different areas, from pinhole points of which gas escaped. The dilatation ceased at the hepatic flexure. Search for a constriction or tumor revealed neither. An incision was made through the necrotic area, the bowel contents were removed, and a large drainage tube inserted. The patient died four or five hours later from the effects of toxæmia.

Clinically and pathologically this case represents *megacolon*. One is safe in presuming that this was a typical instance of Hirschsprung's disease of the colon of congenital origin, that persisted into adolescence, when ulceration of the mucous membrane with submucous abscess developed, and later necrosis of the bowel with perforation ensued.

CASE 2.—The subject of this record is a married woman of German extraction, aged 47, who has been under medical observation and surgical treatment during her whole life. Her family history is negative. There being no evidence of malignancy or dyscrasias. With the usual diseases of infancy she also had typhoid at 7; and was married at 17; being the mother of 14 children; and having had 2 miscarriages. Five children died of spasm within one month after birth.

A double salpingo-oophorectomy was performed in 1919. Two weeks later pneumonia developed, then followed polyuria and dysuria continuing for weeks; since which time the menses have ceased.

Three years preceding this operation she suffered continually from abdominal as well as lumbar and sacral pains radiating to the thighs and back around the lower ribs to the epigastrium. Constipation was marked, continuing from seven to eight days and necessitating cathartics and enemas. Then would follow exhausting diarrhoea. Coupled with these alternating symptoms, nausea, vomiting, and fainting spells were present; associated also with periodic immense distention of the abdomen, of indefinite duration, ranging from four to ten days. Following copious evacuations the acute painful distention would subside, but abdominal enlargement always remained present. During one of these attacks the patient was admitted to St. Vincent's Hospital on December 28, 1920.

The usual laboratory findings were negative.

The microscopic examination of faeces revealed numerous parasitic forms of *cercomonas hominis*, epithelial cells, pus cells, and fat droplets. X-ray gastro-intestinal examination showed dilatation of the colon without any definite point of obstruction. There is a large loop of bowel, from the first portion of pelvic colon, which goes clear around the abdomen like a second colon.

Having recovered from many of the subacute attacks the patient was decidedly opposed to operative intervention and insisted on medical treatment. This was instituted and improvement resulted. The acute distention subsided and the parasites disappeared from stools. Eight abscessed teeth were removed and patient left hospital in two weeks. An examination of faecal specimen at this time showed numerous portions of mucosa, dark in color, mucosal lining of bowel, as well as faintly positive occult blood.

Subsequent history:—The patient felt well for two months after her discharge and gained in weight. About six weeks ago however, she again began having generalized abdominal pain, more distention, constipation with alternating diarrhoea, nausea, and occasionally vomiting. She was readmitted to the hospital on April 14, 1921.

\*Read before the Academy of Medicine of Toledo, January 13, 1922.

For the next few days there was no improvement under medical treatment, distention of the abdomen increased and pain became more severe, so operation was desired and performed on April 18, 1921.

A median lower incision was made and much peritoneal fluid escaped. Examination disclosed beginning general peritonitis, the sigmoid hugely distended and filling the entire abdominal cavity. Its first appearance simulated volvulus but closer inspection demonstrated a constriction in juxta position to the former ovarian vessels. This constriction with the right oblique position of the sigmoid in the abdomen produced a decided angulation. The meso-sigmoid was much elongated, thickened and inflamed, the latter being augmented by incomplete torsion of the meso. The sigmoid was removed in its entirety and a lateral anastomosis done. Many intestinal adhesions were broken up, and owing to the infective infiltration of the meso-sigmoid, drainage of the pelvis was instituted. Convalescence was uneventful, with more or less distention of the bowels and occasional vomitus, which gradually subsided and the patient was discharged from the hospital on May 12, 1921.

*Present condition:*—The patient is in good health, with no intestinal disturbances.

*Pathological report:*—The specimen of the sigmoid was immensely distended and filled with a large amount of faeces and gas. Gross examination through the dilated portion shows hypertrophy of all layers. Section made from the wall of colon shows the serosa oedematous and hypertrophic with areas of round cell infiltration. There is also considerable hypertrophy of the muscularis, atrophy of the submucosa and round cell infiltration of the mucosa. Section from constricted area shows no evidence of malignancy, but the mucosa denuded over a large area with atrophy of the submucosa.

CASE 3.—Miss M—, aged 41, American, teacher. Family history negative, no tuberculosis, dyscrasias or malignancy present. Patient had the usual diseases of childhood; also pneumonia and in later life what was diagnosed as malaria. During the past few years of menstrual life has had menorrhagia due to uterine fibroid.

*Present history:*—For past two years and over the patient has complained of fatigue and exhaustion, abdominal pain in lower quadrant, periodic distention of the abdomen, and persistent diarrhoea with three or four evacuations in one hour; the upright position increasing desire and abdominal pain, while elevation of the hips or the reclining posture relieves both symptoms. Stools are watery, containing mucous and white flakes, occasionally tinted with blood.

Complete laboratory findings are negative. Gastro-intestinal examination shows dilatation of the sigmoid colon.

On December 27, 1921, abdominal operation disclosed a long and inflamed appendix, a

greatly distended sigmoid loop filling the peritoneal cavity, and a fairly large soft uterine myoma. No dilation of the descending colon existed but the distention of the sigmoid included the pelvic colon. The meso-sigmoid was ten inches in width from its attachment to the pelvic wall allowing extreme mobility of the sigmoid. Numerous scars presented on its inferior surface, but they were not sufficient to cause retraction. There was no thickening present. Some glandular nodes with large tortuous veins were also revealed.

Appendectomy and sigmoidectomy were performed with end to end anastomosis. Owing to the presence of low-grade peritonitis a drainage tube was inserted in the *cul-de-sac*. Following operation there was no leakage from the anastomosis. The patient died on the fourth day from toxæmia, with a temperature of 103 and pulse rate of 160 and over.

On opening the specimen gross examination showed hypertrophy of its walls, with distention due entirely to gas, small inspissated masses of faeces clung to mucous surface in different areas.

*Pathological examination:*—(1) Section through mesentery shows evidence of chronic inflammation with thickening of blood vessels and infiltration along lymphatics. (2) Section through the lymph nodes shows hyperplasia. (3) and (4) Section through the wall of the sigmoid shows an actively secreting mucosa with no evidence of inflammation. The submucosa is atrophic and the muscularis considerably thickened both in circular and longitudinal muscle bundles. The serosa shows dilated lymphatics and some congestion of blood vessels.

*Pathological diagnosis:*—Megacolon, not inflammatory. Mesentery, congestion and chronic inflammation. Appendix, chronic catarrhal inflammation, (Ramsey).

#### GENERAL CONSIDERATIONS

To assume a congenital origin for these two cases of *megasigmoid* would be questionable, but we must recognize a congenital anatomic disposition of the sigmoid (extreme length of meso and elongation of sigmoid).

The gross appearance, confirmed by laboratory findings, shows in both specimens the characteristics of megacolon (extreme dilation and muscular hypertrophy). In one the dilatation extended from the splenic flexure to the recto-sigmoid, in the other from the oral sigmoid to the lower rectum.

Secondary invaders had produced hyperplasia of the meso with associated peritoneal adhesions around the pelvis in the one, and in the other a low grade of peritonitis with the presence of effusion represented some infective process.

What, if any, influence, the soft myoma of the uterus had in hastening to a climax the symptom complex of the third case is conjectural. By pressure on the sympathetic nerve system it

might have increased the enervation of the sigmoid or have had some influence from the toxins generated.

Despite the fact that megacolon has engaged the earnest consideration of medical historians and observers for the past century, there are still many mooted questions regarding it that are of momentous import.

#### ETIOLOGY AND TREATMENT

The findings of the laboratory, the grouping of reported cases, the clinical manifestations, medical and surgical methods of treatment and mortality rates have been carefully reviewed by many observers and various conclusions drawn. The summary of these conclusions has eliminated many points of former debate, but there are two important questions that still engage the attention for proper elaboration:—

- (1) Etiology
- (2) Treatment.

The purpose of this paper is:

(1) To clinically classify megacolon in such a manner as to secure a better conception of the progressive changes of the disease.

(2) To show that infection plays an important secondary role in the manifestations of the disease both clinically and pathologically.

(3) To emphasize that the different grades or groups of megacolon should be considered as surgical entities.

The natural conclusions based upon an elaboration of the foregoing tenets will be of practical benefit to all concerned:—(a) To physicians and Roentgenologists; the early diagnosis and the recognition of the vital importance of megacolon; (b) to the surgeon; the degree of resistance to operative interference is indeterminate but that it is dependent upon the chronicity of the toxæmia. Upon this factor should be based accredited surgical technique that would be applicable to each type or stage of the disease; and (c) to the patient; the prevention of long continued toxæmia and its lethal effects, as well as the avoidance of acute megacolon.

In this manner only, in the moulding of these interests as one, may the mortality rate be lowered in this most protean of diseases.

Finney, in 1908, discussed nine different theories as causative factors in the production of megacolon and mentioned several others of lesser import. A review of the recent literature indicates that the views of many observers are still at variance but they seem to approach more and more to a semblance of unanimity.

In order to carry out the purpose of this paper it is necessary to call attention to *some* of the theories of causation of this disease that are advocated by recent writers.

Pfaundler and Schlossman, in 1908, distinguished two groups of cases; those presenting clinical manifestations at birth or shortly after,

and others at the time of weaning or at the beginning of accessory feeding.

In the first group they agreed with the conception of Mya that the condition was due to a congenital malformation of the colon, and from the clinical manifestation in the second group, they assumed a congenital anatomical disposition of the sigmoid flexure (unusual length and tortuosity).

The anatomical picture of Concetti distinguishes three types, which he designates as *microcolia* (simple lengthening), *ectolia* (ectasia of a more or less long section of the colon with or without compensatory dilation or hypertrophy of the portion lying next to it), and *megala-colon* (applying particularly to a general enlargement in the diameter of the lumen to a thickening of the intestinal wall).

Konjetzny, in 1911, wrote the following:—“The established facts tend to show that there is always some anatomical cause at the base of every megacolon, *viz.*, an anomaly of length or situation of the sigmoid colon. It is, therefore, an especially mechanical problem which must be solved to explain the pathogenesis of megacolon.”

At the autopsy of a child of 3 days old, Konjetzny discovered a very clear sigmoid megacolon. In this case there was clearly a mechanical occlusion by kink and formation of a secondary valve of the intestinal wall at the recto-sigmoid junction. According to Konjetzny it can never be admitted that in Hirschsprung's disease it is a question of congenital idiopathic dilatation, but rather of secondary dilatation of the sigmoid colon caused by a vicious position and especially an excess of length of this section of the intestine.

Navarro, in 1913, thought that all the theories put forward to explain the origin of megacolon were more or less faulty. Personally he ascribed the condition to a developmental failure in torsion of the large intestine, which was arrested in its evolution; also to a failure in consequence of the faulty attachment of the meso. These two defects explained without any trouble all varieties of megacolons; the ectasia would be total or segmentary according as the loop in which torsion has failed comprises the whole colon or only a part of it. It explains the still greater frequency of sigmoidal megacolon, because this evidently is the loop which normally is the last fixed.

Maggiore, in 1914, held that hypertrophy of the intestinal wall was a congenital malformation, related to the influence of a paternal infection as in two cases reported.

Forgue, in 1920, in a lengthy article writes, among other things, that certain recent acquisitions concerning Hirschsprung's disease have raised the problem of the relations of certain volvuli with megacolon of the sigmoid loop.

A mobile loop, with long narrow meso, is the anatomic condition which permits the ileo-pelvic

colon to rotate on its axis. Therefore, in the adult, this ileo-pelvic colon must preserve the type of free colon of the new-born, while any anomaly of length situation, or fixation, plays a first part in acquired tendency to rotation. Megacolon is due to volvulus; volvulus is due to meso-sigmoiditis; while the meso-sigmoiditis results from a congenital maldisposition of the sigmoid loop and its meso.

Dowd, in 1921, considered that two or more elements are active in many cases and considered three main theories for the etiology:

(1) That it was due to congenital defect in the development of the colon.

(2) That it was due to some form of mechanical obstruction, and that the colon hypertrophied and dilated in its efforts to overcome this obstruction, just as the heart hypertrophied and dilated when increased demands were made upon it.

(3) That it was due to spasm of the circular fibers in the lower part of the intestine, and that dilatation of the colon followed this spasm just as dilatation of the oesophagus followed cardio-spasm, or dilatation of the stomach followed pylorospasm.

Perthes considers that the characteristic of congenital idiopathic dilatation of the colon (true megacolon) is the ability to demonstrate, at operation or autopsy, some definite mechanical obstruction.

Duval says that pathological anatomy distinguishes several types of megacolon, the segmental dilatations and the total.

According to Konjetzny, Hirschsprung's disease ought to be considered as a clinical syndrome: the division into true megacolon and pseudomegacolon being incorrect, because true megacolon, considered as an idiopathic congenital lesion, is hypothetical only and not proved.

Hubabrd, quoting Barrington-Ward, says, "It is generally understood that cases where a definite obstruction is present do not belong under this classification. Occasionally, however, in the literature such a case is reported as one of Hirschsprung's disease. As the condition is of congenital origin, it naturally follows that clinically these cases are usually found in infants and young children. Occasionally some one with possibly a less marked condition grows up and the pathological condition is not recognized until adult life is reached."

With such diversified views of the etiology, necessarily dissension also exists regarding the conceptions of the classification of megacolon, the grades of which differ in the natural progress of the disease, while in the evolution of the disease itself, other elements are acquired.

These elements should be considered as *secondary manifestations* and according to the rapidity of their development, even so, they exercise a dominating influence upon that type of mega-

colon which represents itself. We should consider these elements of an infective type either generated in the wall of the bowel or from systemic infection. As Hirschsprung pointed out, ulcerative changes of the mucous membrane often occur in congenital megacolon leading to abscesses of the submucosa and severe cachexia. The prevalence of focal infections, the inherited and acquired dyscrasias in the adult, and the consequent lack of resistance, would predispose a selective influence of various micro-organisms, either of local or haematogenous origin, upon a congenital abnormal colon or small intestine.

The effects produced by these secondary elements are represented by either hyperplasia, adhesions, or inflammation, and tend to augment angulation, obstruction, and to favor increased distention, stasis, and toxæmia. Thus a vicious circle is created and the clinical syndrome presented at different times would harmonize with our conception of the progress of the disease. In this manner also we may synchronize the pathological findings in association with a primary anatomical or congenital maldisposition of the colon.

In the various grades of megacolon gastro-intestinal X-ray examination demonstrates a dilatation of the colon, while if sought for abdominal operation discloses not only dilatation but hypertrophy of the walls with some developmental or anatomical defect.

Associated with these conditions there is often the pathological picture of inflammatory processes affecting either the lumen of the bowel or its meso, represented by hyperplasia with or without retraction.

We have different degrees of dilatation of the colon, each represented by certain clinical symptoms in common, the severity dependent upon the progressive changes that ensue, and that ultimately lead to subacute manifestations and sometimes to an acute condition.

From the preceding evocation the following classification renders more comprehensive the clinical signs and symptoms in their significance and their relation to the stages of megacolon:—

(1) Chronic, with subacute exacerbations.

(2) Acute, representing obstruction of the bowel, immense distention, beginning necrosis, general peritonitis, and fatal toxæmia.

With this classification in mind it seems reasonable to assume that either an acute or chronic megacolon is of congenital origin and its stage of development is dependent upon the activity of secondary factors, whether *in utero*, infancy, adolescence, or adult life.

We must recognize the fact that all dilated colons with hypertrophy should be placed in the category of one or the other stages of megacolon. That it is only a question of time until evolutionary changes will produce the clinical syndrome significant of the disease symptoms referable to the large intestine that become aug-



mented and intensified by a periodicity of subacute exacerbations in the chronic stage and sometimes continuing in their progressive severity merge into the acute, just as in analogous organs so in this, a part affected by chronic changes is subject to subacute and acute manifestations.

Viewing megacolon either as a congenital malformation or anatomical defect, both susceptible of pathological changes, we question whether remedial measures are ever curative—palliative, yes.

A dilated colon with distention of the abdomen and constipation, is not always megacolon. The history of the case carefully considered, coupled with X-ray examinations render differential diagnosis positive. For the condition which is usually due to dietary indiscretions combined with spasm of circular muscle fibers is responsive to remedial measures. Not so the other which is resistant to all measures except in alleviation, and is associated with periodicity of recurrence, permanency of dilatation of colon with more or less constant distention of the abdomen, emaciation, invalidism and toxæmia.

These are the idiopathies of megacolon. The earlier stages of the disease should be classed entirely as surgical entities. Operative procedures are least hazardous to life and offer more certain prospect of permanent recovery and minimized suffering of the patients. From this viewpoint the desiderata to be attained are *first*, the prevention of the acute megacolon; and *second*, in chronic cases to lessen the period of duration so that toxic products will not produce the degenerative changes so inimicable to life upon important organs, especially the heart.

#### BIBLIOGRAPHY

- Finney: Surg. Gynec. & Obst., 1908, Vol. VI, p. 624.  
 Pfaundler and Schlossman: Dis. of Children, 1908, Vol. III, p. 156.  
 Konjetzny: Beitr. Z. Klin. Chir., 1911, Vol. lxxviii, p. 156.  
 Navarro: Bull. soc. de chir., Paris, 1913, Vol. xxxix, p. 444.  
 Maggiore: La Pediatria, 1914, Vol. xxii, p. 33.  
 Fergue: Quelques précisions au sujet de volvulus de l's iliaque, Presse med., 1920, Vol. xxviii, p. 21.  
 Dowd: Annals of Surg., 1921, Vol. lxxiv, p. 468.  
 Perthes: Archiv. f. Klin. Chir., 1905, Vol. lxxvii, p. 1.  
 Duval: Les résultats opératoires dans le traitement du Megacolon. Rev. de chirurgie., Paris, 1909, Vol. dl, p. 506.  
 Hubbard: Annals of Surg., 1916, Vol. lxiii, p. 349.

## Heart Disease in Pregnancy\*

W. G. DICE, M.D., Toledo

*Editor's Note.*—Dr. Dice considers that during pregnancy no cardiac murmur or irregularity is of itself an evidence of heart disease. Pregnancy, however, lessens the life expectancy of any woman with a chronic valvular or muscular lesion. Valve lesions of themselves do not constitute a bar to pregnancy, but the manner in which the heart does its work is all important. Every cardiopath is a cripple and her treatment throughout pregnancy and labor must be such as to spare the heart in every way. Caesarian section gives the best results both in uncompensated cases and in cases in which heart failure threatens during labor.

**J**UST AS THE examination of thousands of men for the army revealed, as never before, the presence of heart murmurs that did not mean organic disease of the heart, so the careful examination of women during pregnancy shows that many women have or are developing murmurs which are not dependent on heart lesions.

There are certain changes that take place in the heart and circulation during pregnancy familiar to all: in the early months, the quickening of the pulse; by the sixth month, the shortness of breath on exertion in many; and by the seventh or eighth month, the encroachment of the enlarging uterus alters the shape of the chest, broadens it out at the lower rib edge and with the widening of the chest circumference, the heart is displaced upwards, frequently out to an inch beyond the nipple line and the apex is pushed up to the fourth interspace. At this period also the pressure of the heavy uterus gives rise to edema of the legs and varicosities of the veins, more or less extensive. Formerly we were taught that the heart hypertrophied

during pregnancy but more careful observation, and with X-ray examination disproves this. With all these changes there arise murmurs, physiological or functional in character, found, it is estimated in 40 per cent. of pregnant women, and unless properly interpreted, they may lead to undue anxiety on the part of the physician and consequent unwise advice to the patient. No cardiac murmur or irregularity is of itself an evidence of heart disease.

#### INCIDENCE OF HEART LESIONS IN PREGNANCY

Newell states that valvular lesions as a result of chronic endocarditis can be demonstrated in from 1.5 to 2.5 per cent. of all pregnant women, the percentage varying according to the interpretation put on the presence of murmurs. The mortality from the various heart lesions differs greatly: mitral stenosis gives the highest mortality, 50 per cent.; uncompensated aortic disease, which is rare in pregnancy, 25 per cent.; while mitral regurgitation with no previous break in compensation shows an almost negligible mortality under proper care in the young and vigorous. *However the actual mortality does not tell the whole story in these cases with*

\*Read before the American Association of Obstetricians and Gynecologists, 1921.

true organic lesions, for whereas the patient may survive the pregnancy and labor, the extra strain thrown on the heart during this period is often the beginning of years of invalidism or the heart is left so crippled that she succumbs to later intercurrent disease which she might otherwise have survived.

Rarely in pregnancy does an acute endocarditis arise as a result of some septic process, as from acute articular rheumatism, influenza, tonsillitis or other infectious disease and such a complication is always a serious one and occurring late in pregnancy may prove fatal or if early, will lead to an abortion.

Late in pregnancy as a result of toxæmia, an acute dilatation of the right heart may take place and in addition to the increased blood pressure and albuminuria, there is added edema of the lungs, cyanosis and valvular murmurs.

In a recent case, seen in consultation, this condition occurred and the patient was in extremis; she weighed 230 pounds, had a blood pressure of 160, pulse was irregular, rapid, she could not lie down and had not been able to do so for two weeks, was cyanosed and gasping for breath. A Caesarian section was quickly done under gas and oxygen, the patient being in the semi-reclining position. A living child was delivered and while the mother was in critical condition for several weeks she ultimately made a good recovery and now does her usual work and last week no murmur could be heard.

More frequently there come to us patients with a history of a heart murmur or some heart lesion as a result of previous infection, and every such case requires the most painstaking examination along the lines that will later be outlined to determine the efficiency of the heart and actual condition present.

In getting the history of every obstetrical patient, careful inquiry should be made as to any past infection which may have damaged the heart valves or muscle and yet may have shown no symptoms during ordinary life but which might give rise to symptoms later under the burden of pregnancy and labor.

Pregnancy imposes more work on the heart in maintaining the placental and the general circulation against the increased intra-abdominal pressure and the increased weight of 20 to 50 pounds which the ordinary patient puts on during this period and this reveals the myocardial inefficiency as the later months approach.

Patients with a history of a heart murmur or disease come to consult us occasionally as to the advisability of marriage and child-bearing but more frequently they come after marriage and come to us pregnant, with a history of former heart trouble, not having consulted their physician as to this important step. Even when they have consulted a physician as to child-bearing they are illy advised, the physician making only cursory examination or not ap-

preciating all the dangers ahead in certain lesions. A case now under observation came after the fourth month with beginning decompensation from mitral stenosis, yet she had been advised that she could have two or three children if she wanted to.

#### MURMURS AND FUNCTIONAL EFFICIENCY

In examining patients, one should remember that a sound heart may have a murmur which is physiological or functional and therefore innocent, so it is important for the patient's peace of mind as well as your own to carefully differentiate the harmless from the dangerous murmurs. The significance of a murmur is based on the functional efficiency of the heart and on the presence or absence of other symptoms of cardiac disturbance. Detection of a mitral systolic murmur or any other murmur, the former being the most frequent, should cause us to consider carefully, the pulse rate, the rhythm, and the size of the heart; if the response of the heart to effort is good and the heart's size is not increased then the murmur is not significant and if the heart is increased in size but there is good response to effort, then pregnancy may be allowed. If the heart is enlarged and the response to effort is limited, pregnancy requires most careful consideration. If there is any question in regard to the advice that should be given, a competent heart specialist should be consulted.

*Physiological murmurs*, according to MacKenzie, are always systolic in time and it is impossible to tell the origin of most of them; they may be louder at the apex, base or mid-sternum and may vary with respiration or posture; are sometimes heard when lying down and disappear when rising or *vice versa*. As a rule *functional murmurs* are systolic in time and are heard with equal clearness over different parts of the heart and the murmur is usually soft and blowing. There is no accentuation of the second pulmonic sound and they may increase or decrease during pregnancy or may come and go.

A *rough murmur*, especially if accompanied by a purring tremor or a musical note, is indicative of a valvular lesion. The transmission of the murmur is also important; in actual organic murmurs, the smaller the leak, the louder the murmur.

Bearing all these things in mind, the physician in advising a cardiopath as to marriage and child-bearing should make certain that the heart is defective and should then endeavor to determine the efficiency of the heart. Every case of heart disease should be studied on its own merits.

Burckhardt and others have called attention to the importance of a continuously low blood pressure or pulse pressure as a symptom of an inefficient heart muscle, a muscle that is able to meet the demands of ordinary life but under the strain of labor gives way.

Webster has said that it is a safe generalization that a woman with a chronic cardiac lesion, *i.e.*, valvular or myocardial degeneration has, *caeteris paribus*, a shorter life expectancy if she becomes pregnant than if she does not and the risk increases with successive pregnancies. One occasionally sees a patient with a definite organic lesion go through pregnancy with no more discomfort than the average patient, but rarely through several pregnancies. *Given a pregnant woman with a definite cardiac lesion, her going through pregnancy and labor safely depends on the efficiency of her heart muscle.*

#### HEART FAILURE

Heart failure is a question of myocardial efficiency. The force of the heart is of two kinds: rest force and reserve force. The former is the force of the heart when a person is at rest and quiet, while the reserve force is called into play when effort is made. Heart failure begins by a diminution of the reserve force and shows itself by a limitation of the power of the heart to respond to effort. The first sign of heart failure is the patient's consciousness that efforts formerly made with ease and comfort now cause distress. As has been said, during pregnancy a healthy heart may show such a symptom from the burden of pregnancy, the encroachment of the uterus on the diaphragm, or increased weight; but usually this is without danger unless there is some previously unrecognized myocarditis. But this symptom when due to heart failure does not subside as quickly as when the heart is normal.

In beginning heart failure from organic disease, the patient is apt to notice first, as MacKenzie puts it "breathlessness with its associated phenomena in consequence of the stimulation of the respiratory reflex and she complains next of pain and its associated phenomena in consequence of exhaustion of heart muscle."

The breathlessness is due to the failure of the heart to supply sufficient blood to the respiratory center while the pain is due to the insufficient blood supply to the heart muscle.

Any woman who has suffered from these two symptoms during ordinary life should be advised against child-bearing or if pregnant, in most instances it is advisable to empty the uterus early, otherwise she will more than likely abort and her heart be left in still worse condition or if allowed to go on and decompensation occurs, she will probably lose her life.

If a patient with a definite lesion has never had a failure of compensation and if her age is such that she is apt to have good recuperative powers in the event of possible decompensation, if the lesion is a mitral regurgitation and not a stenosis, she can become pregnant or if pregnant may be allowed to continue, but she should be told the whole story, the importance of taking care of herself and of keeping under careful

supervision throughout the pregnancy as well as for some time afterwards, and should be warned of the dangers. Therefore valvular lesions of themselves do not constitute a bar to pregnancy but the manner in which the circulation is being and has been maintained.

Every patient with a history of cardiac trouble should be most pains-takingly examined before and after exercise, also in the morning after a night's rest before rising, so as to determine if there are any signs of passive congestion at the base of the lungs of the side on which she has been lying. If there are some subcrepitant râles to be heard at the base of the side on which she has been lying and these clear-up after a deep breath or two, they are not significant, but if the râles persist and there is a change in the percussion note of that side, it is an evidence of an inefficient heart muscle and pregnancy should be forbidden or if present, it should be interrupted.

Many heart cases will do fairly well until the sixth or seventh month; then, when digestive disturbances and abdominal distension give rise to pressure or toxic symptoms set in, the heart is embarrassed. Other factors also enter into the question of allowing pregnancy or continuing a pregnancy in these cases: as already intimated, the valve involved is important and the condition of the heart muscle; but the patient's general health, habits and social status must also be considered in determining one's course.

If the patient is poor and unable to have sufficient help with her housework or if she has other children to care for, the strain of pregnancy would be greater than if she is able to have every comfort. One of the greatest difficulties the physician has to contend with is to make cardiopaths realize that they are cripples, more so than if they are minus a leg and compelled to use a crutch or cane because their symptoms are more or less subjective and they do not appreciate that they come from overtaxing the heart, and so are rebellious at the restrictions that we put on their efforts.

#### CARE AND TREATMENT

During pregnancy a cardiopath requires more careful watching than a normal case for she is more prone to toxæmia, and digestive functions are more easily disturbed; she requires plenty of fresh air, a careful diet and most careful supervision of her exercise so that she will not overtax her heart; she must take plenty of rest but also exercise as well, according to the strength of her heart.

One must be ever on the alert, especially in the later months, for the first symptoms of impending heart failure. If any inefficiency of the heart muscle is evident, the patient should at once be put to bed and every thing done to restore the circulation. If the pulse rate is much increased digitalis in sufficient dosage to slow the pulse should be given. In auricular fibrilla-

tion the best effects of digitalis are obtained for here the heart failure is associated with rapid rate and many of the beats are inefficient.

While digitalis slows the heart, the individual beats are stronger and more effective. One should give sufficient dosage to get results; in a recent case, one dose of 60 minims was given, followed by 30 minims every three hours until the pulse was brought down to 80 and was then stopped on account of nausea but was resumed as soon as possible in smaller dose when the pulse went up again at all. Usually one needs to give 15 to 20 minims every three or four hours for from four to seven days to bring the pulse down to 60 or 70. Symptoms of overdose are nausea and vomiting and diarrhoea with a feeling of tightness across the chest and a drop of pulse rate. Patients should avoid everything that might throw a strain on the heart, mental worry, straining at stool or digestive disturbances, and should have small frequent meals and mild hypnotics for sleep, if needed.

The course for further action must depend on the period of pregnancy and whether there is a history of past broken compensation. Early in pregnancy, as soon as compensation has been re-established, the uterus should be emptied unless the heart responds promptly to treatment and the patient realizes the risk of continuing the pregnancy and can take the best of care of herself and is willing to take the risk, then pregnancy may be allowed to continue though frequently the child is lost anyhow through prematurity.

If there is a history of previous decompensation, the outlook for going through the pregnancy is bad. If the lesion is a mitral stenosis or a chronic myocarditis, the chances of the heart bearing the strain of the later months of pregnancy and labor is small. In mitral stenosis the termination of pregnancy is indicated when edema of the lungs persists in spite of sitting up in bed or if the pulse remains over 100 with palpitation on effort. As already stated, mitral stenosis is the most serious heart lesion; it is usually due to rheumatic endocarditis, and is often not noticed during the acute stage of the illness, for the stenosis does not begin until cicatrization has narrowed the orifice and often on account of scar formation, the lesion is progressive.

If, in any lesion, decompensation occurs late in pregnancy and if by careful treatment and nursing there is hope of getting a viable child, pregnancy may be allowed to continue if it will, and as soon as labor begins, everything must be done to reduce muscular strain. One's course of action will depend on whether the patient is a primipara or a multipara, the condition of the cervix and perineum and size of child; if a primipara, a Caesarian section will usually prove the best procedure.

When heart failure is so extreme as to threaten life, intervention is necessary at once; if premature labor does not set in and even this is dangerous, prompt Caesarian will often save the

life of both mother and child. In these extreme cases the heart failure is shown by the dropsy, enlarged liver, edema at the base of the lungs and cyanosis; each day that the pregnancy continues is fraught with danger and the patient's condition is desperate whether the pregnancy continues or not.

For anesthesia, ether is not safe and one should choose between gas and oxygen or a local anesthetic as advocated by Webster. In any case in which a Caesarian section is done, sterilization should also be done in order that the patient may not become pregnant again, if she survives the operation.

In a case with a definite heart lesion, without broken compensation one must realize that the labor may bring on heart failure and must so conduct the labor as to save the heart in every way. Morphine and scopolamine should be given during the first stage to quiet the patient and assist dilatation and so soon as the cervix is dilated or dilatable a version should be done or forceps applied and the second stage thus shortened.

Death may occur after the delivery of the child during or after the third stage from the change in the intra-abdominal pressure and consequent over-distension of the right heart. To forestall this, some have advised the gradual removal of the placenta thus allowing rather free loss of blood. Unless the loss of blood is too free, one should avoid the use of pituitrin and ergot. The use of sandbags weighing from 25 to 50 pounds has been advocated in order to maintain the intra-abdominal pressure but at all events a tight binder and compress should be applied and the patient should be most carefully watched after being returned to her bed. During the puerperium prolonged rest in bed with appropriate medication is indicated and the patient's activities for weeks must be carefully supervised. The question of nursing the child must be determined by the patient's general condition, the condition of the heart and her natural recuperative powers; those who have gone through with no break in compensation can usually nurse while those who have had decompensation will be the better for relief from this added strain.

#### CONCLUSIONS

1. During pregnancy, no cardiac murmur or irregularity is of itself an evidence of heart disease.
2. Pregnancy lessens the life expectancy of any woman with a chronic valvular or muscular lesion.
3. Valve lesions of themselves do not constitute a bar to pregnancy, but the manner in which the heart does its work is all important. Every cardiopath is a cripple and her treatment throughout pregnancy and labor must be such as to spare the heart in every way. Caesarian section gives the best results both in uncompensated cases and in cases in which heart failure threatens during labor.

## Headaches\*

CHARLES H. HAY, M.D., Cleveland

*Editor's Note.*—In order to successfully combat a painful sensation manifested by a patient, of whatever sort it may be, it is necessary first to obtain a clear insight into its sources of origin. The more deeply we are able to penetrate into these, says Dr. Hay, the more successful and effective will be our therapeutic measures. A fundamental principle in such an objective study is the analysis of the painful sensation into its various elements,—its relation to space and time, its characteristic qualitative shading, its area of distribution, and associated manifestations. By following such a routine it will often be possible to make a rapid diagnosis and obtain a point of departure for therapeutic measures,—especially in headaches.

**I**N ORDER TO successfully combat a painful sensation manifested by a patient, of whatever sort it may be, it is necessary first to obtain a clear insight into its sources of origin. The more deeply we are able to penetrate into these, the more successful and effective will be our therapeutic measures. A fundamental principle in such an objective study is the analysis of the painful sensation into its various elements,—its relation to space and to time, its characteristic qualitative shading, its area of distribution, and associated manifestations. By following such a routine it will often be possible to make a rapid diagnosis and obtain a point of departure for therapeutic measures.

### ANALYZING PAIN

The analysis of a pain may most suitably be commenced by determining its *topographical characteristics*. In order to do this it should be made a rule to have the patient point out exactly the spot in which the pain is felt, and specify if it is superficial or deep, and if the pain is confined to a small area or radiates. Vague statements such as a headache, or pain in the head are of little value. The extent of the area involved by the radiations of the pain frequently appears to be directly proportional to the intensity of the patient's neuropathic tendency.

A natural sequel to a consideration of the location of the pain is that of *the time of its appearance*. Not infrequently the onset of the pain is associated with a coryza, or with some definite hour of the day, for example, nocturnal or diurnal, or the intensity of the pain varies with the changes of the weather, a high or a low barometric pressure. *The duration of the pain* must also receive due attention.

The *quantitative variations* depend on the intensity of the sensitiveness of the registering apparatus, that is, the patient's physical characteristics, so that the same stimulus may be endurable to one, but may seriously disturb the physical equilibrium of another.

Experience shows that intense and persistent pain in the course of time nearly always leads to more or less serious disturbances in the condition of the body as a whole. Disorders of nutrition are produced, and loss of weight results. Gray hair and wrinkles appear early in life, and

premature aging from bone changes is frequently seen.

### HYPERTENSION HEADACHE

Headache may be due to increased pressure within the cranial cavity. Such as arteriosclerosis, hydrocephalus, tumors and active inflammations, with or without exudates, etc.

A peculiarity of the pain in hypertension headache from arterio sclerosis is its preference for the nape of the neck, as well as in its tendency to radiate to the region of the occiput, along the spinal column, and especially in the region between the shoulder blades. These patients frequently complain of feeling, "*as if the head would split open.*" This pain is somewhat or completely relieved by lying on the back supporting the head with the hands. Leaning forward, and straining at stool intensifies it.

Changes in the fundus of the eyes are particularly prominent. They may be partly or purely of a mechanical nature, such as dilations of the veins, or hemorrhages. There may be lymphatic changes and accumulation of the products of metabolism, and it may readily be assumed that in other nerves as well as the optic, alterations may develop with secondary neuralgias. Pressure pains may often be demonstrated over the distribution of the occiput and trigeminal nerves. Hiccough, coughing, vomiting, and abnormalities in pulse and respiration may also be symptoms. At times we have symptoms due to irritations of the optic and acoustic nerves, such as spots dancing before the eyes and buzzing in the ears as well as attacks of vertigo.

Headache from tumor, hydrocephalous, and acute inflammations are constant, day and night, and the position of the head exerts little or no influence on the pain. This type of headache will not be discussed here.

It might be well to call your attention to the frequency of the relationship between hypertension headache and constipation. Practically this is of great importance and theoretically it is as interesting. When hypertension headache appears in conjunction with constipation of long duration, for example, in chlorotic persons, together with other symptoms of intestinal intoxication like urticaria or acetoneuria, a causa-

tive connection immediately suggests itself, and as a matter of fact calomel is a sovereign remedy. I can also recall cases of, undoubted hypertension headache in cerebral tumor in which the administration of a laxative gave prompt relief and far surpassed the effect of the anti-neuralgics prescribed. The connection between constipation and headache is undeniable, but the explanation is pure theory. The widely supported toxin theory seems to me to be not very satisfactory, or at least not of itself all sufficient, in view of the suddenness with which the pain often ceases on evacuation of the bowels. Mechanical factors seem to me more significant. The role played by intestinal peristalsis as an accessory to the portal circulation might be thought of as well as the interference in the circulation in the domain of the superior vena cava that results through constipation and gas accumulation in the abdomen, owing to the pushing up of the diaphragm.

It might be well here to mention *nervous headaches*, *anaemia headaches*, *billious head-*

In the post-nasal region we have the optic, oculo-motor, the trochlear, the abducens, the nerve of Vidian, the ophthalmic nerve and maxillary division of the fifth, (the mandibular rarely.) All in close association with the post-ethmoid-sphenoid sinuses. Meckel's ganglion is in the upper portion of the sphenoid-maxillary fossa in close proximity to the sphenoid-palatine foramin.

The size and shape of the cavernous sinus, and the size of the paranasal cells have a good deal to do with the association of these nerves with the sphenoid sinus. It must also be borne in mind that the optic, maxillary division of the fifth, and the nerve of Vidian, run in bony grooves of their own, in close association with the sphenoid sinus. Externally to the sphenoid sinus, separated by an egg shell thickness of bone, is the optic nerve. Externally, and below is the maxillary nerve, and along the floor of the sphenoid sinus is the nerve of Vidian. I have seen skulls where these nerve trunks were nearly surrounded by the sphenoid sinus, and in wet

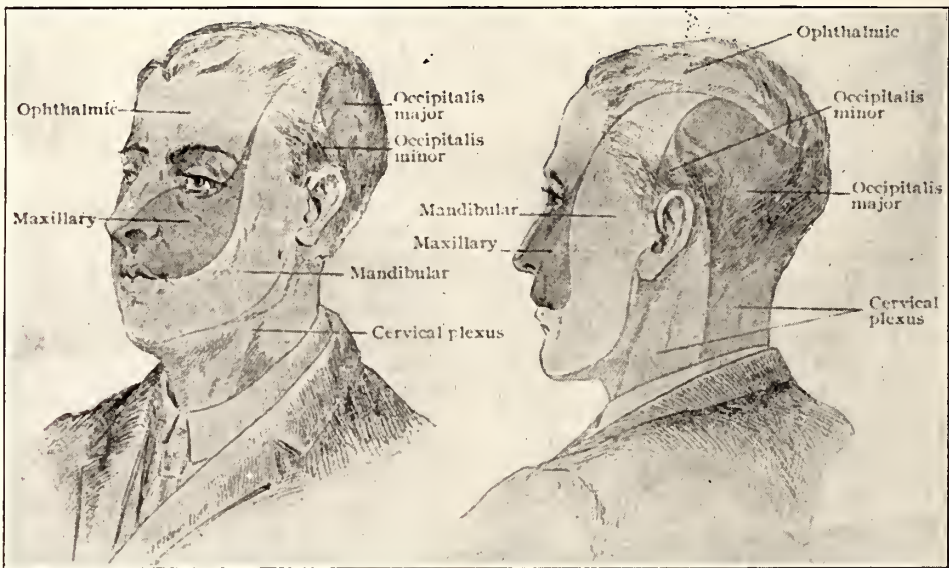


Fig. 1. Diagrams showing distribution of cutaneous branches of trigeminal and cervical spinal nerves (Piersol).

*aches*, *neurasthenia*, and *migraine*. These very designations involve a confession of ignorance.

#### SINUS HEADACHES

By familiarizing ourselves with the close association of the nerve trunks which pass out at the base of the skull, with the accessory sinuses of the nose, we will have found cause for a good many of the headaches of patients who come to us seeking relief.

These sinuses extend under the anterior and middle fossa of the skull often with an eggshell thickness of bone separating them. This is true of the optic canal and the lower and inner walls of the orbit.

specimens I have seen the upper part of the Vidian canal removed by necrosis, and the nerve suspended in the sphenoid sinus unprotected.

Should the sphenoid sinus extend high up and far into the wings of the sphenoid bone it will be closely associated with the ophthalmic and mandibular divisions of the fifth, where these nerves leave the skull. Such an association will cause headaches referred to the top of the head, (not so rare) and headaches of the mandibular, (very rare).

When the oculo-motor and abduces nerves come in close association with the post-ethmoid-sphenoid sinuses we may have paralysis of the recti muscles causing squint. *This explains why*

poor vision and squints in childhood may recur with each successive coryza and may be permanently relieved by a tonsil-adenectomy.

During childhood there may be a constant discharge from these sinuses during most of the winter months especially in children in whom the tonsils and adenoids have not been removed. The discharge varies in quantity. The consistency varies from a clear thin mucus, milky white mucus, to a thick yellow pus. At times this is very irritating, which is demonstrated by the irritation of the skin about the lip and nares from the secretions from the nose, pouring over it.

It is thought that the constant irritation of the soft and hard tissues from the secretion passing over them during coryzas, with or without periostitis, causes a thickening of these tissues which is called *hyperplasia*. No germ has been demonstrated in hyperplasia of these tissues.

This hyperplasia is common in both sexes alike. Owing to the thinness of the bones, it may be more troublesome in the female. Age has little influence. I have seen it highly developed in children of four, and I have seen it in a very mild degree in those of seventy. When one learns to recognize it, it seems that nearly every person is afflicted with it to some degree. Both sides of the nose are affected alike, though the patient may complain of discomfort from only one side.

When these hyperplastic deposits are located on the lateral wall of the sphenoid sinus and encroach on the maxillary nerve, and nerve of Vidian we will have a condition known as Sluder's *lower half headache*.

Sluder's *lower half headache* to be complete, is pain in and about the eye, the teeth, zygoma, temple, ear, (causing earache) over the mastoid, becoming most severe at a point 5 cm. back of the mastoid, nape of the neck, neck, occiput, shoulder, shoulder blades, arm, forearm, hand, and fingers, especially the thumb.

It seems that there is a direct relation between the severity of Sluder's *lower half headache* and the amount of hyperplasia seen in the postethmoidal-sphenoidal region. This may explain the reason these headaches are more frequent in adult life, and the natural rarifying of the bones after fifty gives these patients relief.

These headaches may be caused by the inflammatory process extending through the sinus wall, or the toxins permeating the thin bony walls of the sinuses, irritating the adjacent nerve trunks. Another factor of the bone change in the hyperplastic process with or without periostitis. This bone change may not be uniform in distribution but may consist of plaques in different locations along the bony canals. This bone change may take place around the openings of the sinuses and completely close them. It might take place at the var-

ious foraminae of the skull and cause pressure on these nerve trunks passing through them. Constant pressure on nerves causes pain. The location of pain in such cases depends on the location of these hyperplastic plaques.

When these plaques are localized about the optic canal and cause pressure on the optic nerve, vision will be impaired. This may develop slowly and take years for the symptoms to be very marked. Then, again, the patient may become rapidly blind with no changes in the disc. We may have a retinitis, optic neuritis, choroiditis, amblyopia asthenopia, choked disc, and muscle change.

In *hyperplastic sphenoiditis*, headache may be the only symptom complained of for years. At first it may occur only at the onset of a coryza and remain only during it. It is usually more severe in the night or morning and wears off during the day. The pain is more severe during a low barometric pressure. Later, with each coryza, the headache becomes more severe and lasts longer, until there is no time the patient is free from it and it has become a constant factor in the life of the patient. Failure to be relieved from his suffering the patient may be termed a *migraine* by his physician.

With the nerve of Vidian are fibers from the sympathetic which pass to the various spinal ganglion as far as the first dorsal. Vaso-motor fibers have been demonstrated to accompany the sympathetic nerve. The last cervical sympathetic ganglion sends fibers to the lungs, and the first dorsal sympathetic ganglion sends fibers to the heart. This may explain why with some coryzas, we have angina pectoris, asthma, bronchitis, also the harsh dry cough, so persistent in character, dilatation of the pupils, herpes about the lips and nares, also the red nose which may continue for several months until the sphenoiditis disappears. The frequency of the involvement of the maxillary, Vidian, and optic nerves, may be explained because the lower part of the sphenoid sinus, where these canals lie that carry these nerve trunks, is most frequently affected. It is my firm belief that a great majority of the headaches of whatever length of time standing, and diagnosed as *migraine*, that are met with in the general practice of medicine, are sphenoidal in origin. They may have lost all evidence of the local disease, which could have been readily recognized some months or years before.

These headaches are most usually preceded by a coryzas. During the acute attack the secretion may be profuse and vary in consistency from thin hot mucus, milky white mucus, to thick yellow pus. Then, again, the patient may have an acute attack of severe headache and the secretion will only moisten the adjacent tissues and can only be seen with the trained eye.

#### OCULAR HEADACHES

Headache, caused by refractive errors and lesions of the eyes, has been very interesting to

me, inasmuch as a satisfactory explanation seems somewhat theoretical. In cases of nerve depletion and lessened resistance, the constant exercise of the ciliary muscle and other muscles to keep the object in focus, may be cause for pain in various regions of the head, probably most usually in the temporal and occiput region, or about the eyes. Carefully studying this subject for years, I think in most cases where the patient consults the oculist for headache, he has a hyperplastic condition in the post-ethmoidal-sphenoidal region or sinusitis. After a few days the acute condition subsides and he credits the correction of his refractive error for his relief. At the onset of another acute attack the patient again consults his oculist and receives some form of treatment for the eyes. Again the latent period appears, and this is repeated until the patient becomes a constant sufferer, and not being able to get relief, resigns himself to his fate. The great majority of my cases give the above experience.

As strange as it may seem a myopic eye is seldom the cause of headaches, while hyper-myopia and astigmatism frequently cause it. This headache is usually more severe after using the eyes, but this must not be confused with headaches from a hyperplasia or sinusitis, for they, too, are more severe after long use of the eyes or attending a theatre. For this reason it might be well for a better understanding between the oculist and the rhinologist.

With an inflammation of Meckel's ganglion we may have pain simulating the inflammation of the Gasserian ganglion with a definite *tic douloureux*, and we may have profuse hydrorrhoea, either spasmodic or permanent, sneezing, vertigo, nausea, photophobia, blenorrhoea, Sluder's *lower half headache*, eye pain, protruding and staring eye, dilated pupil, professional cramp, shoulder pain, red nose and asthma.

In headaches, caused by inflammation of the ciliary ganglion, pain is localized on the upper orbit midway between the supra-orbital notch and the inner angle of the eye. This pain is very severe in character and constant. By way of treatment anti-neuralgics seem to have little or no effect.

Headache in the internal angle of the eye, over the nasal bone, increased by pressure at this point, is caused by the positive or negative pressure within the frontal sinus, from the presence of inflammation, or from the absorption of the oxygen from the air when the natural opening is closed. This closure may be the result of thickening of the mucous membrane lining the infundibulum, or spurs in this region, or the anterior end of the middle turbinate bone closing the passage-way. At times a deflected septum may occlude perfect drainage. This pain is exaggerated after the patient has been using the eyes, with the eyes inclined downward. The superior oblique muscle is put on a tension which drags on its tendinous

loop having its attachment on the nasal bone, at this, the thinnest point over the frontal sinus. Pain over this point is designated as *Ewing's sign* and is valuable in diagnosing pressure within the frontal sinus.

Pain, severe or dull in character, localized in the temporal region, and constant, is usually of ethmoidal or sphenoidal origin.

In maxillary sinusitis there is at first a sense of fullness and pressure beneath the orbit, and pain, more or less severe in character involving the whole side of the face. Sometimes there is a sense of pain upon mastication, the teeth feeling too long.

Then again we may have severe pain in the temporal region or in the median line extending from the bridge of the nose as far back as the top of the head and referred to in a spot the size of a small coin. An irrigation of the maxillary sinus usually gives immediate relief.

#### DIAGNOSIS

For diagnosis I use a lamp which gives a light resembling daylight in character. An arc lamp made by the Spencer Lens Company is very satisfactory. Neither the Welsbach nor the Mazda lamps seem to answer this purpose. X-rays and the present method of illumination are not to be relied upon, though they are an aid. It is impossible to determine the thickness of tissue, or the walls of the sinuses with an X-ray. It requires a well trained eye to be able to detect the minute changes in color and consistency of the mucous membrane of the nose. This must be done with accuracy if we expect to carry out our therapeutic measures successfully.

#### TREATMENT

For all coryzas accompanied with Sluder's *lower half headache* a calomel purge and douching the nose hourly with the following solution:

Sodium chloride	
Sodium bicarbonatis	aa 4.00 gm.
Saccharum lactis	12.0 gm.
Aquae dest.	qs. 500.0 cc.

in a Birmingham nasal douche will usually relieve headache quicker than the anti-neuralgic remedies.

For relieving the cough, prescribe a throat lozenge, and instruct the patient to keep the face downward, so that the discharge will run forward out of the nose. At night the patient is to sleep with the face downward. In children, too young for nasal irrigations, the cough can be controlled by turning the child on its face.

In all advanced cases, in which we have eye symptoms and headaches which are not relieved with the nasal douche, some form of nasal surgery should be resorted to. This should be done only after the utmost care and study of the patient's symptoms and a correct diagnosis is made. One should then operate only after he has acquired a certain amount of skill and de-



veloped a good technique. It takes study and training to become a diagnostician and acquire the necessary experience before performing any operations on the accessory sinuses of the nose, because there are so many unhappy consequences following indiscriminate and ill-advised operations on the accessory sinuses of the nose, and frequently these patients meet disaster. I will not dwell on the character of operation to be performed, because that must be determined by the judgment of the surgeon.

For inflammation of Meckel's ganglion and the ciliary ganglion, cocainization of these ganglions will give immediate relief. This relief may be temporary or it may be permanent. In cases in which the relief is temporary I inject these ganglion with a 5 per cent. solution of phenol in alcohol. One injection may suffice, if there is no sphenoiditis. If not, I inject again in a few days and a cure rarely requires more than three injections.

For headaches, caused by pressure in the frontal and ethmoidal sinuses, it is necessary to establish free drainage.

For Sluder's *lower half headache*, with or without eye symptoms and where the hyperplastic condition of the post-ethmoid-sphenoid sinuses is well advanced, free drainage of these sinuses by a radical post-ethmoidal-sphenoidal operation will give almost immediate relief. If the headaches and eye symptoms in these cases are caused from the inflammatory process extending through the sinus wall, or the toxins permeating the thin bony walls, the patient will be relieved in a very short time if not immediately. This relief will last as long as the opening remains, which is usually several years.

When the symptoms are caused by the pressure of the hyperplastic plaques on the nerve trunks, or the bone changes causing a narrowing of the canals through which these nerves trunks pass, any kind of therapy will be disappointing or at least very slowly satisfactory. Slight improvement will come after several months or years, but even as late as this it seems the result is well worth the effort it took to obtain.

Eye symptoms will slowly diminish, and headaches will be relieved enough so that the patient is free from pain most of the time. A coryza re-establishes the headaches more or less, but they are not severe and do not last long. This coryza may be so slight that the patient is not aware of it, and the acutely inflamed area can be seen only by a careful examination with the naso-pharyngoscope.

#### ILLUSTRATIVE CASE REPORTS

Permit me to illustrate some of the points alluded to with a few selected cases.

CASE 1.—Mrs. H. S., aged 50, came to me in January, 1921, complaining of Sluder's *lower half headache*. She gave a history of having had headaches for twenty-five years, during coryzas,

increasing in frequency and length of duration, until the last six months her headaches have been a constant factor. She also complained of blurring of vision, and a good deal of *dropping* in the throat. Examination showed marked hyperplasia in the post-ethmoidal-sphenoidal region, also of the middle turbinate and ethmoids. There was considerable milky mucus seen coming from the sphenoid sinus. A radical post-ethmoidal-sphenoidal operation gave her immediate relief from her headache and her eye symptoms. A month later she came to me saying that for the first time in years she could hear conversation at the table. Her deafness was probably caused from closure of the eustachean tubes, from a paralysis of the levator palati and extensor muscles, as well as from irritation of fibers from the seventh nerve.

CASE 2.—Mrs. B., aged 50, came to me in November, 1920, suffering from Sluder's *lower half headache* of both sides. She had been suffering frequently with coryzas associated with headaches, which became more severe until the past three months she has not at any time been free from them. During this time her hair had become almost white which she attributes to her continual suffering. Examination showed hyperplasia of the post-ethmoidal-sphenoidal region, also marked hyperplasia of the middle turbinates, and ethmoids. There was polyp degeneration of both sides. In this case I removed the polyps, ethmoids and did a radical post-ethmoidal-sphenoidal operation. Her headache was relieved immediately.

CASE 3.—Mrs. I., aged 30, came to me in November, 1920, complaining of headaches of the entire head and blurring of vision. This woman's bone changes were very marked. While only thirty years of age, she looked to be sixty. Her headaches began when she was seven years old, gradually getting more severe, until the past seven years headaches have been a constant factor in her life. During the last six months they have been so severe that she had not been able to sleep nights. During the day she was more comfortable. Examination showed a general hyperplasia of the tissues of the entire nose with marked bone changes. The radical, post-ethmoidal-sphenoidal operation was performed which gave her no immediate relief. After several months she began to notice her headaches were relieved enough so that she was free from them most of the time. Her eye symptoms have cleared up.

CASE 4.—Mrs. T., aged 23, came to me in July, 1919, complaining of headaches for several years, now almost constant, localized in the anterior angles of the nose, at a point giving a definite *Ewing's sign*. Examination showed a bony spur just below the bulla ethmoidalis, occluding drainage of the frontal sinus. This was removed and her relief was immediate.

CASE 5.—Mrs. W., aged 25, one afternoon

noticed a coryza followed in a few hours with severe headaches of both sides of her head, and a hard dry cough. In this case I gave her the customary calomel purge and instructed her to use the nasal douche. This she did and was relieved in a few hours.

CASE 6.—Mrs. H., aged 56, came to me in January, 1917, complaining of symptoms of inflammation of her right Gasserian ganglion with a definite *tic douloureux*. This she had had for three years increasing in severity. Each coryza exaggerated the pain. In this case the branches of the fifth nerve were injected with a 5 per cent. solution of phenol in alcohol by a local surgeon. This only exaggerated the discomfort. A few months later she had a Gasserian ganglion operation. This gave her complete relief for three years. Then after a coryza her pain returned. It was severe in character and remained constant. At this time she again consulted me. On examination I found she had a marked hyperplasia in the post-ethmoidal-sphenoidal region, but I could not see any discharge. This side of her head was analgesic. Cocainizing Meckel's ganglion on this side relieved her pain. After this I injected Meckel's ganglion with a 5 per cent. solution of phenol in alcohol. This one injection relieved her for a period of several months, when she returned with a recurrence of pain which followed a coryza. I again injected her Meckel's ganglion. This time it required three injections before the relief was permanent. At each coryza her pain returns, but she is kept comfortable with a few injections of Meckel's ganglion. She undoubtedly has a hyperplastic sphenoiditis as an underlying cause.

CASE 7.—Mrs. H., aged 40, came to me two years ago suffering from a coryza. This was complicated with a Sluder's *lower half headache*, profuse rhinorrhoea of this side. The discharge consisted of thin hot mucus, so profuse that she was continually drying her nose. Her lips and nares were quite painful from the irritation from the discharge, and the constant wiping of the nose it necessitated. She had severe and frequent sneezing. The eye on the affected side was reddened and seemed to protrude from the orbit. The dilated pupil gave a staring appearance and was bathed in profuse secretion. She complained of photophobia, even in the dark. Herpes appeared the second day, and the tip of her nose was quite red. There was no sinusitis. A single injection of Meckel's ganglion with a 5 per cent. solution of phenol in alcohol gave her almost instant relief. The herpes and red nose remained about a week. This patient comes to me occasionally for relief. It seems her condition is the result of a succession of social activities.

408 UNITED BANK BLDG.

#### REFERENCES

- Sluder: Headaches and Eye Disorders of Nasal Origin.  
 Chipman: Chronic Infections of Nasal Sinuses.  
 Vogel: Diagnosis of Diseases of Accessory Sinuses.  
 Ballinger: Diagnosis of Sinus Diseases.  
 Ridpath: Practical Points in Diagnosis of Sinusitis.  
 Getelman: Practical Points in Diagnosis and Treatment of Sinusitis.  
 Rudolph Schmidt: Pain.  
 Sluder: Diagnosis of Inflammatory Diseases of Accessory Sinuses of the Nose.

---



---

#### NEW AND NON-OFFICIAL REMEDIES

Typhoid-Paratyphoid Vaccine (Prophylactic). (See New and Nonofficial Remedies, 1922, p. 310). A typhoid vaccine marketed in packages of three 1 Cc. bulbs, the first dose containing 500 million killed typhoid bacteria, 375 million killed paratyphoid A and 375 million killed paratyphoid B bacteria; the second and third doses each containing 1,000 million killed typhoid bacteria, 750 million killed paratyphoid B bacterial respectively. Parke, Davis & Co., Detroit, Mich.

Pneumococcus Vaccine (4 Types). (See New and Nonofficial Remedies, 1922, p. 304).—A suspension of pneumococci, Types I, II, III and Group IV, in equal proportions, in physiologic solution of sodium chloride, preserved with cresol, 0.3 per cent. each cubic centimeter contains 3,000 million killed bacteria. Marketed in packages of four 1 Cc. bulbs; four 1 Cc. syringes; 5 Cc. vials and 20 Cc. vials, respectively. Parke, Davis and Co., Detroit, Mich.

Izal Disinfectant Powder.—Izal oil, 10 per cent.; naphthalene, 5 per cent.; inert, absorbent earth, 85 per cent. The Abbott Laboratories, Chicago.

Iothion Oil.—Iothion, 10 parts; chloroform, 10 parts; olive oil 80 parts. Winthrop Chemical Co., Inc., New York, (Jour. A. M. A., May 13, 1922, p. 1459).

Pertussis Vaccine.—A pertussis bacillus vaccine (See New and Nonofficial Remedies, 1922, p. 303), marketed in packages of four 1 Cc. bulbs, each cubic centimeter containing 4,000 million killed pertussis bacilli (Bordet); also marketed in packages of four 1 Cc. syringes, in 5 Cc. vials and 20 Cc. vials. Parke, Davis and Co., Detroit, Mich. (Jour. A. M. A., May 13, 1922, p. 1459).

Diphtheria Toxin—Antitoxin Mixture—Mulford.—Each Cc. of this mixture (See New and Nonofficial Remedies, 1922, p. 282), constitutes a single dose containing three lethal doses of toxin and 3.5 units of antitoxin. It is marketed in packages of three 1 Cc. vials; in packages of thirty 1 Cc. vials, and in packages of one 10 Cc. vial. H. K. Mulford Co., Philadelphia.

## The Rarity of Adult Contact Tuberculosis\*

STEPHEN A. DOUGLASS, M.D., Dayton

Director of the Tuberculosis Department, National Military Hospital, Ohio

*Editor's Note.*—Dr. Douglass maintains that the fear of the transmissibility of tuberculosis among adults can be termed a modern fetish, which permeates the medical profession with such conviction as to place the adult associates of tuberculous cases under suspicion, and to bar the tuberculous case from the general hospital, an absolutely unjustified ruling and a reflection on modern medical progress. Dr. Douglass brings a great deal of information to bear upon his contention and suggests remedial measures from his viewpoint of the problem for solution.

**I**N MEDICINE, as well as in the other arts, certain dogmas or conceptions are accepted on slight circumstantial grounds and have their sway, some for a long time, others, which we commonly call fads, for shorter periods. Tuberculosis, the most widespread of serious diseases, is endowed with certain fallacies, because it has been treated more as a social malady than as a pathological phenomenon.

### GENERAL CONSIDERATIONS

*The fear of the transmissibility of tuberculosis among adults can be termed a modern fetish, which permeates the medical profession with such conviction as to place the adult associates of tuberculous cases under suspicion, and to bar the tuberculous case from the general hospital, an absolutely unjustified ruling and a reflection on modern medical progress.* The accumulated data, relative to the routes of infection and the processes of protection in human tuberculosis, have advanced to such a degree that we now feel we have a fairly satisfactory understanding of the mechanism. The old dictums that "Everyone has a little tuberculosis", and that "One is as safe as the shell of his capsule", shown long ago by Naegeli and Burckhardt, have come to mean something tangible as demonstrated by the studies of pathologic anatomists, who routinely find evidences of healed and quiescent tuberculosis in practically all autopsies in adults. This has been further proved by routine Roentgenograms of the respiratory tract after its removal from the body. By means of the X-ray it has been possible to locate the evidences of healed tuberculosis with a readiness and accuracy not approached by the usual procedure of palpation and sectioning. Von Pirquet, Hamburger and Manteau, by the application of tuberculin, have shown clinically that practically all children over fourteen years living in cities, are infected and have become allergic, *i. e.*, hypersensitive to tuberculin.

The compliment fixation test applied to large groups of apparently well children, shows a considerable percentage giving positive reactions and careful physical examination will, many times, show clinical evidence of masked juvenile tuberculosis. The chest plate of an adult with-

out hilus enlargement and peri-bronchial thickening is exceedingly rare.

If we grant that from eighty per cent. upward of all adults are infected and that only eight per cent. of the total mortality from all causes is due to tuberculosis, it is readily seen that, in the great majority of individuals, the infection remains localized and causes no recognizable symptoms. It also demonstrates clearly that the human race possesses a high degree of immunity to tuberculosis as a disease, and that, under ordinary conditions of life the vast majority of persons can localize their infection and render it harmless to themselves.

### INFLUENCE OF ENVIRONMENT

The influence of environment, as a predisposing factor in clinical tuberculosis, has been pointed out by many writers. It is evident that environment determines whether or not the child will receive a tuberculous infection. It determines whether the infection will be a light, medium, or a massive one. It has much to do also with increasing or decreasing the resistance of the individual. It would seem then, that environment is the great factor in determining the degree of initial infection.

### UNIVERSALITY OF TUBERCULOUS INFECTION AND RARITY OF TUBERCULOSIS

It is to be decided whether, on the basis of an already existing tuberculous infection, the actual clinical cases occur as a result of additional infection from without or as a result of a metastatic auto-infection. In general it is possible in human beings that additional extraneous infections, if they ever do occur, produce a relative immunity and it is also apparent that the development of a clinical tuberculosis, in spite of an already existing relative immunity against new infection, lies in close relation to the quantity and quality of the first infection, and the factors that may inhibit for the moment the immunity and bring about a state of lessened resistance or anergy. The logical conclusion must be that tuberculosis is primarily a lymphatic disease, a disease of childhood attacking at the time of least resistance, of relatively low immunity, just as the other infections, and once a person becomes infected, he remains so to give expression to such infection by invasion of the lung if

\*Read before the Mississippi Valley Sanatorium Association, Columbus, Ohio, Sept. 13th, 1921.

conditions occur to unlock the lymphatics. During the period of latency or incubation there may be no symptoms whatever, and except for very specific tests, it would be impossible to know whether a person were infected or not. Infection is not incompatible with perfect health.

Tuberculous infection can, therefore, be regarded as universal, while tuberculosis relatively rare. The former condition, as Sewell so well states, signifies that "tubercle bacilli had penetrated the body and lie dormant somewhere, commonly within the lymphatic glands, usually after having excited only sufficient tissue reaction to clothe them with a specific envelope which we know as tubercle; certain definite but unknown changes stimulate the dormant tubercle bacilli inflaming them to active metabolism and reproduction, resulting in a progressive invasion of the tissues of the host, with such modifications of structure and function as to give rise to detectable signs and symptoms, which typify what we know and recognize as clinical tuberculosis."

#### THE QUESTION OF ADULT CONTACT INFECTION

To one, who for a decade has "lived, moved and had his being," among the tuberculous the question of the possibility of adult contact infection could not but be of rather constant interest. The anxiety of nurses and attendants has had constantly to be dispelled by the reassuring statement that people who lived and worked among the tuberculous were in no greater danger of *catching* tuberculosis, that is of developing active disease, than in any other pursuit. American sanatorium statistics on mortality and morbidity have proved this. The argument might be presented that the careful, rigidly enforced, prophylactic measures applied by the modern sanatorium are responsible for the rarity of the disease. This argument is dispelled by the fact that long before the discovery of the bacillus, before prophylactic measures were recognized or applied, the mortality among nurses and attendants in European institutions caring for tuberculous patients was not higher than the usual incidence in other institutions. In Brompton Hospital, London, even before the discovery of the tubercle bacillus, and at a time when few precautions were taken to prevent infection, incidences of tuberculosis among the help was found to be not greater than that in the community at large. In the Falkenstein Sanatorium, in Germany, and in Trudeau Sanatorium, in this country, no cases of tuberculosis, developing among help as a result of their work or environment, have been recorded.

Lenec did not believe tuberculosis to be a contact disease from man to man. In Wilson Fox's experience of over 27 years, there were only two instances of the possibility of married couples infecting each other. Webber in a much larger experience saw but nine possibilities, while West who was on the look-out found one

in the course of 25 years and that could hardly bear investigation.

In only five instances in my own series, did both husband and wife have tuberculous disease when 500 marital possibilities were considered. In no instance during the past decade has a physician, nurse or attendant contracted the disease at the Ohio State Sanatorium. Among 240 nurses employed in the Cincinnati Tuberculosis Sanatorium, only three developed tuberculosis and one of these diagnosed as tuberculosis gave a history of a previous activation. Toan, of the Michigan State Sanatorium, has made a careful survey of the subsequent histories of all the employes of that institution, nearly 1,000 were considered and in no instance could tuberculosis be regarded as contributory to the service.

Bichelonne, while studying the statistics of the military hospital at Amelie-les-Bains, noted that while 1,448 tuberculosis patients were admitted from 1895 to 1903, yet during this period of the 595 soldiers and nurses who carried out their duties in the hospital, not one had to be admitted or invalidated as suffering from tuberculosis.

Many of the men now in tuberculosis work in this country, as physicians in sanatoriums and tuberculosis hospitals, have regained their health in an environment of constant contact.

Morris Fishburg, in an article of the "Rarity of Conjugal Phthisis" states that tuberculosis is about as commonly encountered as Bright's disease, diabetes or cancer in both consorts. The question naturally arises, "Is it at all a contact disease for the adult?" The incidents we do hear about of the husband, the wife or nurse developing the disease from association or *contact*, simply sustains the fact that active adult tuberculosis is the lighting-up, the recrudescence of a latent lesion, a reactivation brought about by extraneous conditions of environment. We know that in the category of these conditions can be listed the intercurrent infections, metabolic diseases, over-work, long hours, worry, alcoholism, frequent pregnancies, poor hygienic and many other conditions.

To illustrate this point, a few years ago there occurred in Paris a *near epidemic* of active pulmonary tuberculosis among firemen and Prof. Robin was assigned to put an end to it. He undertook the matter providing he would have *carte blanche* to do as he pleased and this was his method:—He raised the wages, lowered the hours, and increased the number of firemen and this was the end of the *epidemic*.

So it would appear that the reduction of tuberculosis is largely an economic matter and not strictly a medical problem at all, for apparently the human body is capable of resisting even super-implantation providing too much stress is not placed on the organism.

Adult contact tuberculosis is rare. All observations and all experimental work point to

the conclusion that infection of an adult, if it occurs at all, can only do so under very special and unusual circumstances. For several centuries we have passed through tuberculosis crusades. In some countries they have taken on the appearance of actual persecutions of the unfortunates. During later years these crusades have donned the educational garb and have borne fruit.

#### REMEDIAL MEASURES

We must still place in the front our inadequate measures of prevention. Hygienic education to limit the occasion of an infection. Isolation and hygienic treatment must also be carried on. Increase of individual power of resistance must be promoted by elevation of the general standard of healthful living. Society, guided by the best medical thought, continues to enlarge and perfect these necessary arms but they can never win the battle unaided. When an organic cause of disease is limited in its ravages in the human family, we may, in the light of ex-

perience, hope to limit it, even to eradicate it for all practical purposes, but when it affects, with slight modification, many forms of animal life, the effort at eradication can have only a temporary or localized effect. Given the increasing commingling of humanity, social, national and racial; given the increasing dependence of humanity on animal food products, especially on animal milk—at the age of greatest susceptibility to tuberculosis, and given the necessary imperfect application of all laws and measures of general prevention of tuberculosis, we must realize why science has thus far had to wage a war offering few victories. The evidence of partial victory is revealed in the result of the educational campaign, and in the results of modern sanatorium treatment, together with the statistical revelation of a diminishing death-rate in the countries where hygienic laws have been made and intelligently enforced. In this we find reason enough to continue and to increase the effort.

## Ether in Tuberculosis\*

C. R. COATE, M.D., Pleasant Hill

*Editor's Note.*—Since the original suggestion of Dr. Savage on the use of ether in tuberculosis, some years ago, ether therapy has been used in various other septic and infectious conditions with considerable success. Hence the interest that attaches to Dr. Coate's presentation of his clinical observations on the success following ether therapy in incipient tuberculosis.

**I**N PRESENTING this article I wish to give a few of my observations on using ether anesthesia in the treatment of tuberculosis. I am very conscious of the fact that this subject has been much discussed and the method of treatment criticized by the medical profession at large. And I am also aware that only a few of us, in the face of this open and general opposition, have taken the pains to carefully test it out for ourselves.

If you will investigate the source of this opposition, you will find it springing mostly from those connected with our sanitariums. Not that I am opposed to the sanitariums and condemn what they are doing for the large numbers of tubercular patients, because their work is certainly worthy of our respect and earnest cooperation, especially in treating many cases that are not fit subjects for etherization. My purpose is only to give you a few of my own limited observations, and if possible to show you that the use of ether anesthesia in treating tuberculosis, has not had a square deal. In making this last statement. I mean that it has usually been tried out only in the class of cases that nothing short of a miracle would save from death; and then used only because everything else had failed.

About a year ago, here in our own society, I

remember hearing a doctor make this statement: "In our sanitarium we have tried ether in a few cases, but it did no good and they soon died, therefore we abandoned its use." That statement in itself shows that he had not used it in a case where there was any chance for results, neither was there any authority advising its use in such cases.

#### \* FUNDAMENTAL CONSIDERATIONS

The following are a few of the fundamental points to be remembered in connection with the use of ether therapy in tuberculosis:—

1. All preliminary preparations should be made just as though you were going into a surgical operation. Stomach and bowels should be empty, and ether given carefully, bringing anesthesia to the surgical point where reflexes are abolished. But no narcotic should be given previously, as is often the custom before operations.

2. Ether should be administered to the patient as early as possible in the course of the disease, because if you wait until there is a mixed infection of pus-producing organisms, you will have waited too long to get the charming results you would have gotten if the administration of ether had been tried at an earlier stage.

3. Ether does not destroy the various strains of pus-producing cocci.

4. Tuberculosis, in the end, usually becomes

\*Read before the Miami County Medical Society, December, 1921.

septicaemia, and your patient dies often from the toxins of other germs; such as the laboratory examination of sputum reveals. In fact, it often takes several specimens for examination before the tubercle bacillus can be found, but there are always an abundance of staphylococci, streptococci and other organisms.

5. Pulmonary tuberculosis, unless treated early, will not give the charming results, which are obtained in tuberculosis of other parts of the body, because of the following reasons. Most other parts of the body are not so easily invaded by other infective organisms but we are continually breathing a germ laden air into our already infected lungs thus constantly subjecting them to mixed infections.

6. The administration of ether should not be stopped until the patient's body has had time to become thoroughly saturated with ether. These patients usually take their anesthesia nicely, and that being the case, it should be continued for 45 to 60 minutes.

#### ILLUSTRATIVE CASE REPORTS

I have given ether only to a limited number of cases, and I do not wish to leave the impression that I refuse to use ether and all established means of treating them aside from ether. The following are a few of the cases to which I wish to direct your attention.

Two cases having pulmonary hemorrhage in the early stage of tuberculosis. The patients were kept in bed until all the blood was absorbed and expectorated, and until the lungs had time to clear up, which was about 10 to 14 days after the hemorrhage. At this time the patient in each case was given ether for about 45 minutes.

Several very noticeable things happened:—

1. The temperature dropped to normal in less than 24 hours and remained normal thereafter.
2. The cough rapidly improved.
3. The appetite became ravenous after nausea from the anesthesia was gone.
4. Both patients began to increase in weight and strength and came back to normal just as rapidly as possible.

These patients were treated two and three years ago, and today both are enjoying good health. Only one etherization was given to each.

One case of tuberculosis of the spine, of several months standing. Patient showed a very marked curvature, much pain, accompanied with an afternoon temperature of 100° to 101°, and had lost 20 pounds in weight. The X-ray showed two sections of spine in lumbar region involved. Fever and pain very rapidly improved after the anesthesia. Also appetite was soon back to normal. Today, 2½ years after, the man is well and stout and weighs 50 pounds more than he ever weighed before and is doing all kinds of farm work.

The first case in which I observed the effect

of ether in tuberculosis, was one of miliary type, involving both the pleura and peritoneum. I had tapped this patient twice and removed 3 pints of serum at one time from pleural sac, and about 2 weeks later 1 quart. The patient did not improve much for the next few weeks, still ran a little fever, had poor appetite and lost in weight, although no more fluid seemed to form in the chest. But the next thing that happened was an intestinal obstruction. During the operation we found about 18 inches of the bowel (small intestine) was choked off. The patient was under ether, of course, for the operation, and before our eyes were the tubercles which covered the whole abdominal viscera, and of course made our diagnosis positive. This patient made a speedy recovery from his operation, and also from his tuberculosis, of which he had not been improving, for the few weeks previous to operation and taking of ether.

Here is proof that it is not the letting of air into abdomen that cures tubercular peritonitis, because the pleurisy improved just the same and as rapidly as the peritonitis did.

Another case I wish to report, is one of tubercular nodules deeply seated in the calf of the leg. I observed this case for several weeks not knowing what I was dealing with. It gradually spread until it was very hard and firm, and extended about half way around the leg. There were also a few other smaller nodules beginning to appear. The condition was causing a great deal of discomfort to the patient, and interfering with the circulation in the foot, as it was swelling considerably. The mass was very hard and tense, the skin red and firmly adherent. The X-ray showed the bone was not involved and the Wassermann test was negative.

At this time I sought the counsel of two other doctors, and to say the least, we were all puzzled about the proper handling of the case.

We feared a malignancy, but in order to confirm our diagnosis, we removed a section from the growth and sent it to the laboratory, and received the following report: "Section shows infiltration with lymphocytes, and endothelial leucocytes and many small tubercles with giant cells. Pathological diagnosis—tuberculosis."

Right then and there I said to myself, here is where I will settle this thing in my own mind once and for all. If ether does not cure this case I will never use it again. Now let me tell you what happened. I gave ether and no other treatment whatsoever. No change was noticed for about 2 weeks, and then the skin began to wrinkle, the mass began to grow smaller, redness of skin was lessening, and at the end of one month the limb was markedly improved. At this time a second anesthesia was given, and in another month there was nothing to be seen except a scar where the section had been removed for laboratory diagnosis. The other smaller nodules all disappeared also. It is needless to say that I

was pleased, and also convinced, that the ether was wholly responsible for this change.


I have used ether in several cases of pulmonary tuberculosis, in its early stages, and I was almost astonished at the promptness in which improvement began.

But I am also going to tell you what happened in some other cases, for they are not here to tell for themselves, (as the ones previously reported) but have gone on to join the innumerable throng. They were those far-advanced types of pulmonary tuberculosis, wasted down, with large cavities, and septic from mixed infection. I no longer give ether to this class of cases. If proper care and conditions cannot be obtained at home, send them to the sanitarium where they can have every possible help and comfort.

#### CONCLUSIONS

In closing let me urge you to watch for the early signs of tuberculosis, and to tell your patients the nature of their ailment. If you do not, it is impossible to get the best results from your efforts, as they won't take the proper care unless they realize the seriousness of their disease.

This paper was not presented to cover the broad subject of tuberculosis but only to urge you to try out for yourselves, with unbiased minds, a simple measure, that has proved itself very helpful, if used properly, and which, in my mind, is one of the most valuable therapeutic agents at hand in treating the early stages of all forms of tuberculosis.



## NEWS NOTES OF OHIO

*Cleveland*—Drs. M. A. Blankenhorn and Roy W. Scott have been appointed members of the American Society for Clinical Investigation.

*Xenia*—Dr. D. E. Spahr has purchased a 22-acre farm near here which he expects to devote to the raising of silver foxes, a new industry in this section.

*Cincinnati*—Dr. Frank D. Pinney was among 58 applicants awarded United States citizenship in the federal court here recently. Dr. Pinney immigrated from Canada in 1895.

*Lima*—Dr. Edgar J. Curtis has been appointed physician for the Allen County Children's Home, succeeding Dr. J. B. Vail, resigned.

*Akron*—Dr. Elmer L. Mather of this city, and Miss Ruth Fairfield of Elkhart, Indiana, were married, May 7.

*Zanesville*—Dr. and Mrs. E. R. Brush are members of a party of 40 surgeons and their families enjoying a clinical tour abroad. They will visit England, Scotland, Holland, Belgium, France, Switzerland, Italy, Austria and Germany, returning to America September 1.

*Bowling Green*—Dr. Franklin L. Sterling, for the past seven years a physician at Cygnet, has located here.

*Cincinnati*—Dr. Mont R. Reid, formerly of Johns Hopkins University, has become associate professor of surgery at the University of Cincinnati.

*Columbus*—Dr. Mary D. Crane is the new president of the Woman's Medical Club of this city. Dr. Emilie Gorrell is vice-president, and Dr. Elsa LaVeque, secretary-treasurer.

*Mt. Vernon*—Dr. Frank C. Larimore, dean of the medical profession in Knox County and a former president of the Ohio State Medical Association, was honor guest at a dinner attended by

members of the Knox County Society and their families recently. Dr. Larimore has been in active practice 53 years.

*Fremont*—Dr. D. W. Philo has returned to his home here after completing an eight months' course in radiology at the University of Pennsylvania.

*Cincinnati*—Dr. John M. Withrow, president of the local board of education, was elected president of the Ohio State Association of School Boards at its first annual meeting.

*Columbus*—Dr. M. D. Godfrey, formerly of this city, is a member of the Hoover relief organization in Russia.

*Curtice*—The marriage of Dr. Martin Lorenzen of this village to Miss Pearl A. Bush of Howell, Michigan, took place June 10.

### Medical Lectures Feature Commencement Events

Commencement events at Ohio State University this year included an innovation in the form of a series of special medical and surgical clinics, June 8, 9, and 10. The clinics were widely attended by graduates of not only the present school but of its antecedent schools, the Columbus Medical College, Starling Medical College, Ohio Medical University and Starling-Ohio Medical College, and it is expected that the plan will develop into a traditional week of post-graduate clinics at commencement time when the new medical science building and general hospital are erected on the university campus.

The series included seventeen lectures. Speakers on the first day were Drs. J. H. J. Upham, E. J. Gordon, Charles S. Hamilton, H. O. Bratton, J. J. Coons, S. A. Hatfield, Ernest Scott, Philip J. Reel, V. A. Dodd and Luke V. Zartman; on the second day, Drs. J. D. Dunham, J. W. Sheetz, L. L. Bigelow, I. B. Harris, J. W. Means, E. A. Hamilton, C. L. Spohr and C. S. Smith; and on the third day, Drs. Yeatman Wardlow, Fred Fletcher, R. G. Hoskins, H. B. Blakey and Joseph Leist.



Council of the Ohio State Medical Association makes its bow. The members, designated by numbers corresponding to the districts which they represent, are: 1. Otto P. Geier, Cincinnati. 2. M. F. Hussey, Sidney. 3. R. R. Hendershott, Tiffin. 4. C. W. Waggoner, Toledo. 5. R. K. Updegraff, Cleveland. 6. D. W. Stevenson, Akron. 7. J. S. McClellan, Bellaire. 8. Edmund R. Brush, Zanesville. 9. I. P. Seiler, Piketon. 10. S. J. Goodman, Columbus. Drs. Geier and Seiler are the new members of Council, having been elected at the Cincinnati annual meeting.



## Pronouncement of Policies and the Establishment of New Organization Activities Feature Ohio's Participation in A. M. A. Meeting

The culmination of effort on the part of leaders in the Ohio State Medical Association for closer coordination of the constituent state associations of the A. M. A. and for expansion of activities for the benefit of the profession at large is reflected in the deliberations and official action of the A. M. A. House of Delegates at the St. Louis meeting late in May.

It will be remembered that at the Boston meeting of the A. M. A. in 1921, Dr. J. H. J. Upham, a delegate from Ohio, on behalf of the Ohio State Medical Association introduced a resolution on policy and activity advocating the establishment of a national legislative bureau, expansion of public educational efforts on health and medical practice, a lay public health journal, and closer relationship and cooperation through the state associations and closer contact with other organizations interested in health problems. (This resolution was reproduced in the July, 1921, issue of this *Journal*.)

As chairman of the vitally important committee on legislation and public relations of the House of Delegates at the recent St. Louis meeting Dr. Upham's report as follows was officially adopted:

### CENTRAL LEGISLATIVE BUREAU

"The committee recognizes in the several reports of officers, and in the report of the Council on Health and Public Instruction, a consensus of opinion that a central bureau should be established for the consideration of all legislative matters pertaining to medicine or the practice of medicine, and of the public health, relieving the Council on Health and Public Instruction of these duties, which must be carried out in view of the extension of the functions of the Council in the matter of public education, and it is recommended:

"1. That the trustees be memorialized to establish a bureau of this character, under whatever name, with such wholesale assistance as may be necessary, the duties of which shall pertain to legislative matters and medicolegal problems in which the whole medical profession may be interested, and which shall be to (a) coordinate the activities of the several constituent state associations; (b) ascertain and crystallize the opinions of the medical profession and the said constituent state associations, and (c) represent the American Medical Association.

"In this connection, your committee desires to point to the desirability of the national organization reflecting the will of the great bulk of the medical profession, and that the bureau contemplated and these recommendations should act in matters of general policy, following instructions of the House of Delegates, or in emergencies following expression of opinion from the proper authorities of the several constituent associations."

This same proposal was approved by the reference committee on hygiene and public health which "endorses the movement for establishing a legislative and legal bureau." Approval was also given by the reference committee on report of officers.

### OHIO'S RESOLUTION

At the session of the House of Delegates on the day preceding the above action, Dr. George E. Follansbee, Cleveland, on behalf of the Ohio delegation had introduced the following resolution:

"WHEREAS, Medical Science intimately touches all phases of human conduct, social welfare and matters involving human life and happiness, and

WHEREAS, It is the duty of the medical profession through the American Medical Association to lead the way in these movements looking toward disease prevention, health preservation and public welfare, and

"WHEREAS, The effectiveness of organized medicine as a national institution has been hampered by conflicting programs of activity in the various state medical associations, largely due to lack of full information on subjects of national scope and general importance, and

"WHEREAS, Through a tendency in government to emphasize social and criminal aspects and to submerge medical

### A. M. A. Election

George E. de Schweinitz, Philadelphia, installed as President

President-elect—Ray Lyman Wilbur, San Francisco.

Vice-President—Willard Bartlett, St. Louis.

Secretary—Alexander R. Craig, Chicago.

Treasurer—Austin A. Haden, Chicago.

Speaker House of Delegates—F. C. Warnshuis, Grand Rapids.

Vice-Speaker House of Delegates—Rock Sleyster, Wauwatosa, Wisconsin.

Board of Trustees (reelected)—A. R. Mitchell, Lincoln, Nebraska; D. Chester Brown, Danbury, Connecticut; Oscar Dowling, Shreveport, Louisiana.

Meeting place 1923—San Francisco, June 25-29.

aspects in medico-social and medico-economic problems, therefore, be it

"RESOLVED, That the House of Delegates authorize the establishment in Washington of a full-time bureau of the American Medical Association for the purpose of representing and expressing the viewpoint and ideas of the profession, not alone before Congress but in constant touch with the many federal bureaus and departments whose functions, policies and procedure affect in innumerable ways the medical profession in its practice and in its relation to the public, and further be it

"RESOLVED, That such bureau be authorized to cooperate with other professional groups, public, semi-public and private agencies in any way interested in the same problems in health and welfare with which the medical profession is directly concerned, and be it further

"RESOLVED, That such bureau be authorized and instructed to maintain constant contact with the membership at large through the executive headquarters of each constituent and component state medical association, to the end that the united sentiment of medical organization may be actual and effective."

### STATE MEDICINE

Realizing the necessity for establishing a definite, general policy on "state medicine" and "state practice of medicine," the Ohio State Medical Association had already defined the proper limitation of the state in these matters (first editorial article in the April, 1922, *Journal*). On behalf of the Ohio delegation Dr. C. D. Selby, Toledo, introduced the following resolution at the opening session in St. Louis:

"WHEREAS, Public health administration has for its purpose the prevention of disease, the promotion of health and the education of the public in these matters, and

"WHEREAS, The medical profession pledges itself to the support of official activities in the realm of public health

### Dr. Upham On Judicial Council

The name of Dr. J. H. J. Upham, Columbus, was proposed in nomination for the office of trustee in the A. M. A. by Dr. George E. Follansbee, who presented most creditably the merits of Ohio's candidate. On account of the disposition of the organization to re-elect the trustees whose terms expired this year, in view of the large problems now being solved, a defeat, but accompanied by honor and credit, was inevitable. On nomination by the incoming president, Dr. George E. de Schweinitz, Dr. Upham was unanimously selected as a member of the Judicial Council for a term of five years to succeed Dr. Rudolph Winslow of Baltimore. The other members of the Judicial Council are: Drs. M. L. Harris, Chicago; W. S. Thayer, Baltimore; I. C. Chase, Fort Worth, and J. N. Hall, Denver.

and welfare which are based on sound scientific experience, but

"WHEREAS, Excessive restrictions, over-burdensome regulations, state practice of medicine, health insurance, paternalism, in whatever guise or for whatever ostensible purpose, are wrong and should be opposed, and

"WHEREAS, A definite although general policy in the proper limitation of public health administration activities is necessary; Therefore be it

"RESOLVED, That the American Medical Association endorses the policy of continuing and extending the educational program toward the prevention of disease, and toward informing the public in fundamental health subjects; that it approves educational activities which warn the public to discriminate against the dangerous, incompetent and unqualified practitioners, whose unsound and unscientific methods of practice exploit sickness for commercial gain, and

"RESOLVED, That the proper functions of the state in health activities are educational and preventive, that the American Medical Association is unalterably opposed to the actual treatment of disease as a function of public officials; of the providing of treatment from public funds, except in the

(a) Institutional care of the public wards;

(b) The treatment of the indigent;

(c) The treatment of those whose treatment is directly essential to prevention, and

(d) The inspection, recognition, and recommending the correction of common defects of school children, as a primary feature in health education."

Four other resolutions on the same general subject were also introduced and on recommendation of the reference committee of the House of Delegates a modified resolution introduced by Dr. James F. Rooney of New York, in which "state medicine" is opposed by the A. M. A. and in which the term "state medicine" is defined for the purpose of this resolution to be any form of "medical treatment provided, conducted, controlled or subsidized by the federal or any state government, or municipality, excepting such service as is provided by the Army, Navy or Public Health Service, and that which is necessary for the control of communicable, diseases, the treatment of mental disease, the treatment of the indigent sick, and such other services as may be approved by any administered under the direction of or by a local county medical society, and are not disapproved by the state medical society of which it is a component part."

#### SHEPPARD-TOWNER

On the question of the Sheppard-Towner Bill the following resolution, introduced by Dr. Charles E. Humiston of Illinois, was adopted:

"WHEREAS, The Sheppard-Towner law is a product of political expediency and is not in the interest of the public welfare, and

"WHEREAS, The Sheppard-Towner law is an imported socialistic scheme unsuited to our form of government, and

"WHEREAS, The Sheppard-Towner law unjustly and inequitably taxes the people of some of the states for the benefit of the people of other states for purposes which are lawful charges only upon the people of the said other states, and

WHEREAS, The Sheppard-Towner law does not become operative in the various states until the states themselves have passed enabling legislation. Therefore, be it

"RESOLVED, That the American Medical Association disapprove the Sheppard-Towner law as a type of undesirable legislation which should be discouraged."

#### PROHIBITION AND MEDICAL ALCOHOL

The policy of the A. M. A. toward the administration of the Volstead Act was established through adoption of the following resolution:

"WHEREAS, The medical profession has been subjected to criticism and unfavorable comment because of present conditions associated with the enforcement of the Volstead law, and

"WHEREAS, The results of a referendum conducted by The Journal of the American Medical Association, covering 54,000 physicians, indicates that 51 per cent. of physicians consider whisky 'necessary' in the practice of medicine, and

"WHEREAS, The dosage, method, frequency and duration of administration of this drug in any given case is a problem of scientific therapeutics and is not to be determined by legal or arbitrary dictum, and

"WHEREAS, The experience of physicians, as reported in The Journal, indicates that the present method of control, limitation of quantity and frequency of administration, licensure and supply of a satisfactory product constitutes a serious interference with the practice of medicine by those physicians who are convinced of the value of alcohol in medical practice. Therefore, be it

"RESOLVED, That the House of Delegates of the American Medical Association, in convention assembled, representing a membership of over 89,000 physicians, appeals to the Secretary of the Treasury and to the Congress of the United States for relief from the present unsatisfactory conditions, and recommends that provisions be made for supplying bonded whisky, for medicinal use only, at a fixed retail price to be established by the government."

#### COMPOSITION OF HOUSE OF DELEGATES

The following compromise resolution introduced by Dr. Upham proposing an amendment to the A. M. A. constitution must lie over until next year:

"Sec. 2. Composition.—The House of Delegates is composed of delegates elected by the constituent associations and of delegates from the Medical Departments of the Army and Navy, and the Public Health Service, appointed by the Surgeon General of the respective departments, and of section delegates elected by the sections of the scientific assembly.

"The section delegates shall have the privilege of the floor, but only the right to vote on matters directly affecting the activities of the sections. The trustees shall be ex-officio members of the House of Delegates, but without the right to vote.

"Sec. 3. The total unrestricted voting membership of the House of Delegates shall not exceed 150. The Medical Departments of the Army and Navy, and the United States Public Health Service shall each be entitled to one delegate, and the remainder shall be apportioned among the constituent associations in proportion to their actual membership as hereinafter provided in the By-Laws. The scientific sections shall each be entitled to one section delegate; should the right of the section delegates to vote be challenged on a question before the House, decision shall be made by a ruling of the Speaker, subject to the approval of the House."

#### PRINCIPLES OF ETHICS

The following resolution was introduced by Dr. Ben R. McClellan, Xenia, on behalf of the Ohio delegation:

"RESOLVED, That the following supplement be made to the Principles of Ethics of the American Medical Association:

#### THE RELATION OF THE PUBLIC TO THE PROFESSION

"Section 1. Any individual, or any institution, private or public, or corporation, or association, or group of individuals under whatever name, which shall solicit patients by circulars or advertisements to the general public, shall be considered to act contrary to the best interests of the profession and the public, and shall be deemed unworthy of the approval and support of the regular medical profession.

"Section 2. Any individual, or any institution, private or

public, or corporation or association, or group of individuals under whatever name, which has for its purpose to, or which actually does, unfairly advertise a small group of physicians to the detriment of the whole profession, shall be deemed unworthy of the approval and support of the regular medical profession.

"Section 3. Any individual, or any institution, private or public, or corporation, or association, or group of individuals under, whatever name, which shall solicit or collect funds under the guise of charity and then offer free medical treatment to persons able to pay for such medical services and thus pauperize such recipients of charity, and rob them of their self-reliance, shall be deemed unworthy of the approval and support of the regular medical profession."

On recommendation by the reference committee on amendments relative to the same subject the following addition to the Principles of Ethics, suggested by the Judicial Council, was adopted:

"Solicitation of patients by physicians as individuals, or collectively in groups by whatsoever name these be called, or by institutions or organizations, whether by circulars or advertisements, or by personal communication, is unprofessional. That does not prohibit ethical institutions from a legitimate advertisement of local, physical and special class--if any--of patients accommodated. It is equally unprofessional to procure patients by indirection through solicitors or agents of any kind, or by indirect advertisement, or by furnishing or inspiring newspaper or magazine comments concerning cases in which the physician has been or is concerned. All other like self-laudations defy the traditions and lower the tone of any profession, and so are intolerable. The most worthy and effective advertisement possible, even for a young physician, and especially with his brother physicians, is the establishment of a well-merited reputation for professional ability and fidelity. This cannot be forced, but must be the outcome of character and conduct. The publication or circulation of ordinary simple business cards, being a matter of personal or local custom, and sometimes of convenience, is not per se improper. As implied, it is unprofessional to disregard local customs and offend recognized ideals in publishing or circulating such cards.

"It is unprofessional to promote radical cures; to boast of cures and secret methods of treatment or remedies; to exhibit certificates of skill or of success in treatment of disease; or to employ any methods to gain the attention of the public for the purpose of obtaining patients."

#### HEALTH EDUCATION IN THE SCHOOLS

On the question of a uniform and comprehensive plan for health education in the public schools along the lines frequently advocated in *The Journal*, a sub-committee of the Council on Health and Public Instruction reported favorably with recommendation for cooperation between medical organization and school authorities.

Withal the proceedings indicated a thorough realization of the many new problems confronting the medical profession and a sincere desire through cohesive and cooperative organization to meet them successfully.

The Ohio delegates through their keen appreciation of all issues and their sincere efforts during the conference established for the Ohio profession an inevitable place in national councils of organized medicine.

Ohio's delegates were: Drs. J. H. J. Upham, Columbus; Ben R. McClellan, Xenia; G. E. Follansbee, Cleveland; C. D. Selby, Toledo; Granville Warburton, Zanesville, and W. D. Haines, Cincinnati.

Among the Ohio Fellows and members who were prominent on the scientific program were: Drs. John Phillips, C. Lee Graber, H. G. Sloan, G. W. Crile, W. B. Chamberlin, H. J. Gerstenberger, H. T. Karsner, H. N. Cole, J. R. Driver, W. T. Corlett, W. E. Lower, H. O. Feiss, E. I. McKesson, Cleveland; Alfred Friendlander, Moses Salzer, Otto P. Geier, R. B. Cofield, Cincinnati; R. G. Hoskins, Columbus; F. H. Mc-

Mechan, Avon Lake; H. J. Parkhurst, B. G. Chollett, Toledo, and H. R. Conn, Akron.

The Ohio registration, in full, follows:

**Akron**—C. L. Baskin, H. R. Conn, J. G. Grant, C. E. Held, H. J. Leslie, J. S. Millard, B. E. Miller, W. A. Parks. **Avon Lake**—F. H. McMechan. **Bryan**—A. Snyder. **Camden**—J. W. Coombs. **Canton**—C. E. Abell, D. F. Banker, J. P. DeWitt, W. A. McConkey, H. P. Pomerene, A. B. Walker, H. Welland, G. F. Zinninger. **Chillicothe**—D. A. Perrin.

**Cincinnati**—C. H. Abbott, J. E. Benjamin, Oscar Berghausen, C. J. Broeman, R. B. Cofield, C. E. Cone, D. J. Davies, Carroll DeCourcy, J. L. DeCourcy, R. R. DuCasse, Kennon Dunham, E. W. Enz, M. H. Fischer, Albert Fuller, Alfred Friedlander, Otto P. Geier, H. M. Goodyear, Chas. Gooman, J. V. Greenebaum, J. E. Greiwe, W. D. Haines, C. Miller, C. E. Howard, D. E. Jackson, Edwin Khuon, Mary S. Knight, F. H. Lamb, H. W. MacMillan, J. W. Miller, Roger S. Morris, Allan Ramsey, J. Louis Ransohoff, C. A. L. Reed, Samuel Rothenberg, Moses Salzer, H. M. Schneider, J. H. Schroeder, E. O. Smith.

**Cleveland**—E. R. Brooks, W. B. Chamberlin, H. N. Cole, W. T. Corlett, A. G. Cranch, G. W. Crile, C. L. Cummer, F. J. Doran, J. R. Driver, W. E. Dwyer, R. W. Elliott, J. E. Fisher, G. E. Follansbee, F. J. Gallagher, O. L. Goehle, C. L. Graber, P. A. Hall, H. E. Heston, C. F. Hoover, Samuel Iglauer, W. I. LeFevre, F. G. Leonard, W. J. Manning, Robert J. May, H. G. McCarty, M. B. Morgan, C. F. Nelson, J. H. Norrick, C. A. O'Connell, John Phillips, D. A. Prendergast, W. J. Quigley, A. W. Sage, A. G. Schlink, H. A. Schlink, O. M. Shirey, W. C. Stoner, H. M. Tarr, J. J. Thomas, C. H. Verovitz, I. S. Yoder.

**Columbus**—F. G. Boudreau, M. Bronson, I. G. Clark, R. G. Hoskins, W. I. Jones, B. R. Kirkendall, F. F. Lawrence, R. G. Leland, C. W. McGavran, G. W. Miller, C. D. Postle, John Rauschkolb, E. R. Shilling, H. H. Sively, J. H. J. Upham. **Coshocton**—E. C. Carr. **Cuyahoga Falls**—Roy Barnwell.

**Dayton**—L. G. Bowers, D. B. Conklin, G. B. Evans, E. M. Huston, L. N. Jones, J. G. Marthens, J. A. Mattison, C. C. McLean, Matthew Porter, W. S. Smith. **Delaware**—H. L. Canright. **Delphos**—N. E. Brundage. **East Palestine**—P. C. Hartford. **Foster**—W. F. Moss. **Franklin**—S. S. Stahl. **Gallopis**—E. G. Lupton. **Greenville**—E. G. Husted. **Hancock**—R. Miller. **Leetonia**—F. W. Dixon. **Lima**—J. R. Thomas, M. A. Wagner. **Lodi**—E. L. Crum, J. E. Waite.

**Marion**—R. C. M. Lewis. **Massillon**—J. D. Holsten. **Miamisburg**—C. T. Hunt. **Middletown**—W. H. Williams, H. S. Murat. **Montpelier**—H. W. Wertz. **Mt. Vernon**—W. W. Pennell. **Newark**—H. B. Anderson, E. A. Moore. **New Philadelphia**—J. V. Taylor. **Oxford**—R. H. Cook. **Piqua**—M. R. Haley. **Port Clinton**—H. J. Pool. **Portsmouth**—S. D. Ruggles. **Raymond**—C. A. Thompson. **Rossford**—J. C. Gallagher. **Salem**—A. J. Hill, F. T. Miles. **Shelby**—B. H. Mofatt. **Sidney**—Arlington Ailes, M. F. Hussey. **Steubenville**—J. K. Biddle, J. E. Miller.

**Tiffin**—P. J. Leahy. **Toledo**—P. Bruce Brockway, B. G. Chollett, T. M. Crinnion, R. P. Daniels, J. A. Duncan, John Gardiner, W. J. Gillette, Oscar Hasencamp, Thomas Heatley, Dalton Kahn, J. G. Keller, M. J. Larkin, L. A. Levison, E. J. McCormick, E. I. McKesson, C. W. Moats, W. A. Neill, H. J. Parkhurst, R. D. Robinson, A. H. Schade, C. D. Selby.

**Van Wert**—L. E. Ladd. **Vaughnsville**—C. P. Lemley. **Versailles**—W. C. Gutermuth. **Washington C. H.**—R. E. Brown. **Waverly**—F. C. McClanahan. **Westboro**—C. A. Tribbett. **West Union**—Ray Vaughn. **Wilmington**—E. C. Briggs. **Kelley Hale**. **Woodsfield**—H. P. Gillespie. **Wooster**—A. C. Smith. **Xenia**—Ben R. McClellan. **Yellow Springs**—G. H. Bigelow. **Youngstown**—C. C. Booth, W. H. Bunn. **Zanesville**—F. A. Axline, C. U. Hanna, Maurice Loebell, H. T. Sutton, Granville Warburton.

#### Santa Gets Early Start

Plans for the 1922 sale of Red Cross Christmas seals during the Christmas season in Ohio were formulated at a recent conference between Robert G. Paterson, secretary of the Ohio Public Health Association, and B. G. Eaves, campaign director of the National Tuberculosis Association, in Columbus. Over a billion copies of the 1922 seal will be printed. The design is a radical departure from those used in previous years. It shows a Christmas tree in white in the left foreground with a double-barred cross in front of it. In the right foreground is a mother and child. At the bottom of the seal are the words "For Health" and at the top in the upper right-hand corner are the numerals "1922."

## DEATHS IN OHIO

*E. V. B. Buckingham, M.D.*, University of Michigan, 1864; Miami Medical College, 1872; aged 83; former member of the Ohio State, American Medical Association, died at his home in Willard, June 5, with cancer of the stomach.

*John Logan Caldwell, M.D.*, Cincinnati College of Medicine and Surgery, 1874; aged 79; died at his home in Rayland, Jefferson County, May 8, following an illness with paralysis. He is survived by his wife and four children, one of whom is Dr. John Caldwell of Steubenville.

*Charles Snyder, M.D.*, Medical College of Ohio, Cincinnati, 1870; aged 73; died at his home in London, June 2, from paralysis. Dr. Snyder had been an invalid for five years.

*Walter Austin Tims, M.D.*, Cleveland University of Medicine, 1888; aged 59; member of the Ohio State Medical Association and Fellow of the American Medical Association; died at his home in Cleveland, May 19. Dr. Tims was at one time superintendent of Huron Road Hospital.

*Thomas J. Calkins, M.D.*, Georgetown University School of Medicine, Washington, D. C., 1900; aged 52; former member of the Ohio State Medical Association; died in Toledo, May 8, following a general breakdown. Dr. Calkins' home was in Cleveland. He was a member of the staff of St. Alexis Hospital. He was nationally known for his activities in behalf of the Irish republic. Two sisters and two brothers survive.

*William Ross Clark, M.D.*, Columbus Medical College, 1881; aged 64; member of the Ohio State Medical Association; died at his home in East Liverpool, May 22, from apoplexy. Dr. Clark had practiced in East Liverpool for 30 years. He leaves two sisters.

*Harry Charles Gabriel, M.D.*, Starling Medical College, Columbus, 1894; aged 55; former member of the Ohio State Medical Association; died at the home of his sister in Beckley, West Virginia, June 2, after an attack of heart trouble. Dr. Gabriel lived in Columbus for about 40 years. He had been a member of the staff of the Athens State Hospital, obtaining leave absence from his position there four months ago due to ill health.

*I. Irving Good, M.D.*, Western Reserve University School of Medicine, Cleveland, 1892; aged 57; member of the Ohio State Medical Association; died in Battle Creek, Michigan, May 25, after an illness of several months. Dr. Good's home was in Bellevue, Ohio. He leaves his widow and one daughter.

*John W. Lilly, M.D.*, Starling Medical College, Columbus, 1882; aged 65; died at his home in

Toledo, May 25, after an illness of three months' duration. Dr. Lilly was well known as an artist, having illustrated a number of medical books. He is survived by his wife and a son.

*Thomas Franklin Reed*, Western Reserve University School of Medicine, 1893; aged 52; member of the Ohio State Medical Association and Fellow of the American Medical Association; died at his home near Massillon, May 27. Dr. Reed had practiced in Massillon for many years. He leaves his wife and two children.

*Daniel Buttrick Smith*, University of Wooster, Medical Department, Cleveland, 1867; aged 82; member of the Ohio State Medical Association and Fellow of the American Medical Association; died at his home in Cleveland Heights, May 19. Six weeks before his death Dr. Smith retired after fifty-five years' continuous practice, during which time he taught at Western Reserve, Wooster, Charity Hospital Medical College and the Cleveland College of Physicians and Surgeons, serving also as staff physician of five Cleveland hospitals. He was a member of the local school board for 12 years and once served as its president.

*John Woodson Caines, M.D.*, Baltimore Medical College, 1905; aged 42; former member of the Ohio State Medical Association; died at his home in Cuyahoga Falls, June 5. Dr. Caines served during the World War as a lieutenant in the Medical Corps of the Army.

*Clarence S. Latham, M.D.*, Starling Medical College, Columbus, 1905; aged 41; member of the Ohio State Medical Association and Fellow of the American Medical Association; died at his home in Hamilton, June 2, from heart disease. Dr. Latham had practiced in Hamilton since 1912. He was born at Hilliard, Ohio, and his body was returned to that village for interment. He is survived by his widow.

### Dr. Goddard Resigns

On the resignation of Dr. H. H. Goddard as director of the State Bureau of Juvenile Research, in June, Dr. E. M. Baehr, psychiatrist for the Department of Welfare, became head of the bureau. Dr. Goddard will become professor of abnormal psychology at Ohio State University in the fall. He has been director of the Bureau of Juvenile Research since 1917, before which he was superintendent of the Training School for Feeble-Minded Children at Vineland, N. J. In his new capacity his connection with the bureau will not be entirely severed as cases referred to the bureau will be used as clinical material in the University classes.

Under a reorganization of the bureau it is probable that greater attention will be given to the medical and physical phases of subnormal mentality and juvenile delinquency, along the lines recommended by the special legislative committee in a report published in the August, 1921, issue of *The Journal*. The comprehensive report of the former State Board of Administration published in the November, 1921 issue of *The Journal* is also of interest in this connection.

## The Pioneer Doctor of Ohio\*

D. TODD GILLIAM, M.D., Columbus

THE pioneer doctor of Ohio, in common with other pioneers, came with axe and gun, a sturdy frame, a brave heart, lots of good, hard sense and little learning. His armamentarium consisted of a few crude drugs, roots and herbs, a bountiful supply of calomel, a lancet, a few cupping glasses, or in lieu of which he could use a tumbler or teacup, and, if specially well equipped, he possessed a few crude surgical instruments and possibly a jar of leeches. All these things, or as many of them as possible, he carried in his saddle-bags, which, if he was fortunate enough to own a horse, he laid across the saddle, or in the absence of such a luxury, he carried across his arm. The saddle-bags of that day, as we shall presently see, were not the neat, leather pockets of today, but veritable bags of liberal proportions into which herbs, leaves, roots, barks, flowers and buds were thrown promiscuously. Fragile wares such as bottles, vials, for leeches, tinctures and the like were incased in wrappings or carried in the pocket. The doctor's pockets were always bulging. There were no alkaloids, fluid extracts, capsules, tablets or other elegant and refined pharmaceutical products, for everything was crude and bulky. Hence the necessity of bags to accommodate them. It is even said, though with little semblance of truth, that when a man or woman went to mill they carried the grain in one end of the sack and balanced it with rocks in the other until some genius discovered that the balancing could be done by dividing the grain in the middle. As a rule, the pioneer doctor was loud and gruff, sometimes boorish, but more frequently with an assumption of dignity that among the people passed current for erudition. Under this armor of dignity he carried a kind, sympathetic heart, which his patients soon learned to know and thought nothing of his rough and sometimes profane language while ministering to their needs with almost womanly tenderness.

The pioneer doctor's life was not an easy one, but on the contrary fraught with danger, hardship and exposure such as we today can scarcely realize. His patients were few and oftentimes widely separated. Roads were mere trails, cut or blazed through the woods and in bad weather almost bottomless. There were vast areas of

*Editor's Note.*—Veteran of the Civil War, teacher of medicine, surgeon, writer of text books, novelist, executive, citizen, author of an operation that has made his name famous wherever surgery is practiced, Dr. D. Todd Gilliam at the age of 78 years enjoys to an enviable degree the esteem of the profession and the love of those who know him personally. His paper on "The Pioneer Doctor of Ohio" is a valuable historical contribution to be read no less for the interest in the subject than for the charm of a delightful literary style.

swamp land, miry, treacherous and of uncertain depth, which had to be braved or circumvented by a long detour. There were practically no bridges or boats, and swollen streams and swift moving currents made fording or swimming extra hazardous. Then there was the skulking Indian, the bands of yelping red-mouthed wolves, the catamount and the stealthy panther. The driving sleet, the blinding snow, and the chances of being lost in the trackless forest, with a cold so intense as to freeze the blood in the veins, was by no means a far-fetched

fear. This, though a highly colored picture, is not an unlikely one, and does not represent a tithe of the dangers and discomforts of the pioneer doctor, and the wonder is that the disasters from such exposures were not more frequent. The answer is to be found in the hardness, resourcefulness, excellent judgment and indomitable will power of these men. And what did the doctor do after arriving at the bedside of the patient? It should be remembered that the pioneer doctor was largely his own purveyor and dispenser. Pharmacologists and drug stores were as yet unknown. The doctor stocked himself with native herbs, roots, leaves and balsams which he gathered from the woods or wayside by the cart load. He compounded his own pills, powders and potions. The drugs used in those days were crude and for the most part unsparingly repugnant to the taste, and were exhibited in doses proportionate to their nastiness. Powders were given by the teaspoon or tablespoonful, or even in larger quantities; infusions or decoctions by the mugful, or even by the pint or quart. Little or no attempt was made to disguise the taste of these unspeakable crudities, or, if so, it was usually ineffectual. Impounding the medicament in scraped apple, or enclosing it in dough which had been rolled and pressed, were the methods most in vogue. As said before, they were ineffectual, for somehow the medicine, which, so far as gustatory qualities were concerned, had the scraped apple beat to a frazzle, always managed to get nearest the palate and the bolus so clumsily constructed defied all attempts at deglutition until the contents had been nicely and evenly distributed through the oral cavity. A much more effectual method of concealing the taste of obnoxious bitters was to suspend them in a strong decoction of black coffee. But who

\*This paper, in large measure, is the introductory chapter of "Medical Ohio," written by the author for Volume V of Randall and Ryan's History of Ohio.

had the coffee? When it is remembered that the people of those days were as alive to gustatory impressions as they are today, it will be understood that it was a serious matter to be sick, in more senses than one. But this was not all.

At or about the time we are speaking of, it was the custom to treat fevers and inflammatory affections by confinement in a close room, the body sandwiched between feather-beds, or loaded down with bedclothes and all cooling drinks withheld. Add to this the frequently repeated and heroic doses of nauseating medicines and the intemperate use of the lancet, and the wonder is not so much that so many died as that any survived.

In those days, and for a long period thereafter, calomel and jalap were the sheet anchors for a wide range of ailments. Indeed, among the more ignorant practitioners, who constituted the majority, these drugs were given almost indiscriminately. Not only so, but the calomel especially was given with such reckless disregard of consequences as to lead to frequently unpleasant if not disastrous results. Intense salivation, with loss of gums and teeth, and unsightly disfigurement, were by no means rare. Blood-letting was then much in vogue, and among the class of doctors of whom we are now speaking was practiced as recklessly as was the use of calomel.

Patients were bled for every conceivable state and condition, and it was even asserted that they were bled for hemorrhages of the nose, stomach and bowels, or as a prophylactic against such hemorrhages. The extent to which this abuse was carried in some sections and by some practitioners is almost unbelievable. As a rule people submitted without question, for the reason that as a rule the doctor was not called in until the case had become supposedly desperate. Yet we find in the literature of that period, which, by the way, was mostly foreign, complaints by writers that patients too often denied themselves the benefits of blood-letting under the mistaken belief that the first blood-letting was so much more efficacious than subsequent ones. They wanted to reserve this first blood-letting for some crisis which they knew would come sooner or later. We hold in our hand a small volume, published early in the last century, in which specific directions are given for blood-letting and other barbarous practices then in vogue, which carries with it a sort of lurid suggestiveness well fitted to the subject.

Leeching was another form of blood-letting very much in use at the time. The leeches are applied by rolling them in a cloth and covering with a tumbler. The cloth is now withdrawn under the edge of the tumbler. "If they be well chosen and disposed to bite they can only do so on the skin." In case of troublesome hemorrhage following the falling of the leeches, the author proposes the following method, "which never fails." It consists in covering the bleeding sur-

face with a piece of linen folded several times on itself, and applying to it a red-hot iron. He then goes on to describe the process of cupping, which consists in making a number of incisions in the skin and drawing the blood therefrom by applying to the scarified surface glasses from which the air has been expelled by burning alcohol. Next he proceeds to consider some of the various methods and instruments of torture in daily use by the physician and surgeon of the time, and with which we of today are less conversant. After speaking of the blister, which is not so old as to be new to us, but which was at that time used universally and unstintedly, he passes on to the seton. The seton is a thread or skein of threads introduced through a fold of the skin to create and maintain an issue. These were sometimes permitted to remain through a long period, and various supplementary devices resorted to to increase the irritation and discharge. "It often happens," says the writer, "that patients object to having the seton through the skin of the neck on account of the unsightly scar, but, as we have no other means of conquering a violent ophthalmia, it becomes important that the above objection should be overcome." Permanent issues were usually made on the thigh, leg or arm. An incision was made and "a small tent of lint kept in the wound a few days to irritate it. We then place a pea in the wound to prevent the healing and keep up a continual irritation." "The actual cautery (hot iron) may take precedence of all others, and is one of the most powerful assistants to surgery. \* \* \* The less the cautery is heated, the more pain it causes and the less it destroys the parts to which it is applied; thus the cautery heated to a gray heat is very irritating and causes acute suffering, while the cautery at a white heat is more active and much less felt." The gray cautery is that recommended. The Moxa was an appliance of slow torture, the object of which was to produce powerful and sustained counter-irritation. This consists in carded cotton made into a sort of a rope and bound tightly in linen. This is coiled on the surface of the body and one end ignited. Slow combustion, and incidentally protracted torture, is maintained by the more or less constant use of the bellows. "We should blow so that the Moxa may burn as slowly as possible without allowing it to be extinguished." We are tempted to give the writer's description and use of the old-fashioned pullikins for the extraction of teeth and descant on the barbarous manner in which it was done, but, on reflection, and calling to mind a little personal experience, we are willing to concede that while it might have been worse it could not have been much worse than we have it today.

The early settlers for obvious reasons located along the streams, made clearings and broke the sod. In the course of a few months, ague, bilious fever and dysentery made their appearance. This

was ascribed to the miasm rising from the bottoms and broken soil. The doctor spoke of "paludal influence" and thereby boosted himself several rungs in the eyes of his admiring constituency. But nobody thought of the ubiquitous mosquito except as a pesky little tormentor, never once dreaming that it had any connection, even in the remotest degree, with the prevailing sickness. Every farm house, every settlement and every village had its contingent of fallow, anemic and icteroid men, women and children who dragged themselves about one day and shivered and chattered and raved in fever the next, until the immunity that comes from repeated inoculation, aided to some extent by the drugs of the doctor, eradicated the plasmodium which the mosquito had set adrift in their veins. So common, so virulent, so persistent were these attacks that many of the settlers, despairing of relief and unable to battle with their maladies and support themselves at the same time, returned to the densely populated districts whence they had come and where the afore-mentioned mosquito, with its siren song and poison tongue, did not so abound.

It must not be supposed that the doctor stood hands down during all this time. The opportunity was too good to be lost. He plied his patients with calomel and jalap, bulky doses of cinchona bark, or, in the absence of that, something else equally as nasty if not quite so efficacious.

"When a thing is bad," once said a great editor, "it is mighty hard to right, when it is mighty bad it rights itself."

It would seem that things had arrived at that stage where the automatic reversal should come in. Suddenly, nobody knew how, a change came. It was not at the behest of any one great personage or by any conclave of authority. It meant not so much anything new as to get away from the old. "Get away from the old!" That was the cry of the human hearts, and it rose to the very gates of heaven. But where? How? Before them were darkness, mystery, uncertainty; behind were bondage and bricks of straw. The sublime moment was at hand. It is one of those human climaxes in which inspiration comes in thunder tones. "Speak to the sons of Aesculapius that they go forward!" Into darkness, into the mystery, into the uncertainty they go, and lo, there are the cloud by day and the fire by night to lead them. Like all reforms, it swung to the other extreme. Blood-letting was tabooed, mercury was execrated, the starvation treatment of diseases gave way to liberal feeding, the introduction of cooling drinks in fever led up to the unrestricted use of the same, suffocative rooms and sweltering bed gave way to open doors and windows, cooling drafts, cold packs and sponging of the surface. Where practicable, the open air treatment was adopted with nothing but a canopy overhead to protect from rain and sun. This was a phenomenal stride in the right direction,

though it soon became apparent to all except the purblind that the prohibition of mercurials was not altogether wise—that in some diseased conditions it was indispensable, in others distinctly advantageous. It took longer to rediscover any virtue in blood-letting, but in time it became evident that in certain rare conditions, and as an emergency measure, it was not only advisable but at times necessary. It was a great victory for rational medicine. The progressives were in the camps of the enemy. The antiquarians no longer existed as an organization. That they were not utterly destroyed, a peep into the saddlebags of some of the more staid gave ample evidence. Here the lancet, the scarificator, the coil of Moxa and a generous bottle of calomel spoke of fealty to a lost cause. While these things were transpiring in the new world in the quiet, unostentatious way which we have depicted, more marked and violent charges had taken place in the old world, championed by leaders of character.

Thus we find that the Brunonian System, which had its origin in the fertile brain of John Brown, of Scotland, (1735-88), found a foothold in Scotland, Italy and Germany. This system, favoring mild medication and supporting treatment for the majority of diseases, came nearer approaching the border line of rationalism than anything hitherto propounded. Strange as it may seem, it was opposed tooth and toe-nail by many of the most influential members of the profession, and was only installed after a hard-fought battle, including public riots. Its career was short and it died the death. Scarcely had the acclaim which greeted Brunonianism died away than Broussais (1772-1838) came forward with a system, more sanguinary, if anything, than any that preceded it. Broussais is said to have used 100,000 leeches in his individual practice in a twelve-month! Such was the heritage of American medicine.

Meanwhile the fame of Ohio, "the Garden Spot of America," had gone forth. An empire had risen where shortly before the crack of the white man's rifle had wakened the echoes of the primeval forests—forests whose green boughs had fanned azure skies throughout the ages. Villages, towns and cities had taken the place of the wigwam, the beaver dam had given way to the structure of man, and the rushing waters and whirl of the gristmill transformed a scene of placid and restful beauty into one of sordid commercialism. Forges and factories sent up black columns of smoke to mingle with the clouds, and the sound of the anvil and the clank and clatter of machinery drowned the voices of nature. The wolf and the deer, the panther and the bear disappeared with the forest, and Hiawathas took their Minnehahas by the hand and turned their faces sorrowfully to the setting sun.

Meanwhile, also, the spirit of progress was in the air and the medical profession began to

awaken to a realization of its attitude toward the public. A college here and there, organizations and societies for improvement, grew apace with the advancement along other lines. In the early days the laws governing the practice of medicine in Ohio were few, very incomplete, and so laxly administered as to render them practically of no effect. As a result, the profession was crowded with ignoramuses and pretenders whose self-assertiveness and clamorous pretensions worked upon a credulous populace and gave to them a place alongside the most favored of the legitimate sons of Aesculapius. Good men there were, and plenty of them. Men of culture, refinement and high professional attainment; men who were college bred, and that too in the best schools of this or other lands, but they were hampered and mortified by the self-imposed company of charlatans and mountebanks. This latter class was not all imported, for with the in-born assertiveness of the native Ohioan many of them sprang direct from the soil, full armed and audacious. With a few crude drugs, of which they knew little, a few instruments, of which they knew less, a pretentious vocabulary, and an assumption of great wisdom, what they did not know was made up for by the various subterfuges ignorance brings to its aid. In those days decorous entrance into the medical profession was attained through apprenticeship to a preceptor. The duties of the apprentice were to read, to recite to the preceptor, make up powders and pills, compound medicines, look after the instruments and appliances, and in some cases curry the horse, sweep out the shop and make himself useful generally. As he advanced in proficiency he assisted the preceptor and—married his daughter. With this, he instantly acquired a prodigious asset, for with it came a full partnership and all the accumulated patronage, knowledge and experience of pater familias. Others more ambitious and probably better equipped with funds completed their education by attending one or two courses of lectures.

The awakening of the medical profession of Ohio, at or about the middle of the 19th century, is reflected in the president's address to the Ohio Medical Society for the year 1860. He felicitates them on the large and constantly increasing attendance, the quantity and high character of work accomplished; deprecates the avaricious tendency of the times, which lures the doctor into other callings in association with medicine, and speaking of those who essay to practice medicine and preach the gospel, he says: "I should be loth to trust either my body or my soul in their keeping." In that strange combination of doctor, carpenter and preacher, the carpenter being also the coffin-maker, one can imagine the doctor "curing" the patient till he dies, the carpenter boxing and labeling the remains and the preacher launching him into the Great Beyond with appropriate word and ceremony. Then, speaking

of the necessity of an elevation of the standard of medical education, he says: "The community judges. . . the qualification of the physician for his knowledge of general subjects. If they find him ignorant of everything outside, they naturally conclude that he is ignorant of everything inside the profession. The time has passed when a mere knowledge of calomel and jalap will serve as a passport to public confidence." He goes on to discuss certain needed reforms in our medical colleges, the registration of physicians and the regulation of the sale of patent medicines, and recommends that a law be passed by the legislature requiring every manufacturer of such to print on the label the recipe of the compound. While the above is interesting as indicating the strides of the profession and its aspiration for higher things, yet the tone of discouragement pervading it all, and the little that is accomplished compared with that which is talked about, suggest Mark Twain's discovery that "people are always talking about the weather, but nobody does anything." This at first blush seems particularly apropos to the situation, but when we stop to look around and observe that most of the things discussed at that meeting are today accomplished facts, it reminds us for the hundredth time that agitation must always precede action and that the agitation of a good cause is one of the most hopeful signs of its realization. At this same meeting the reports of the various committees on subjects assigned them are full and free and exhibit a comprehensiveness and acumen that would do credit to any like body anywhere. The committee on Medical Literature speaks of the unusual activity of the American press, the products of which, for scientific value, scholarship and polite learning, take rank among the best works of the old world. "Who reads an American book?" is obsolete sarcasm and only hurts because it once applied. After mentioning a half dozen or more books in a fairly critical way, and some in lavish praise, the reviewer stops to pay his respects in a not altogether complimentary way to the recent great work of Prof. S. D. Gross, whose "System of Surgery" not only created a big stir at the time, but maintained a leading position in this and other countries for more than a quarter of a century, and is even now consulted more frequently than any other work on the subject not strictly up to date. Further on the reviewer makes partial amends by adding: "Nevertheless the disposition is to accord it a friendly reception; at home and abroad hearty and even extravagant encomiums have been bestowed on the 'System' of this prominent American surgeon and teacher. Simpson, of Edinburgh, speaks of it as the most complete work on Systematic Surgery in the English language."

It is worthy of note that the medical books of the early part of the nineteenth century were, for the most part, examples of more than ordinary



Patients requiring hospitalization are treated at Mt. Carmel, Grant, Protestant, St. Francis, or McKinley Hospitals at the option of the physician or surgeon referring the patient.

**RADIUM  
TREATMENTS**

**BEN R. KIRKENDALL, M. D.**  
137 EAST STATE STREET,  
COLUMBUS, OHIO.

literary merit. They were flowery and fascinating and as delightfully fragrant as the zephyrs that come over the Gardens of Spices. Their perusal, so far from being a task, was a pastime and a pleasure. As science advanced and facts accumulated, it became necessary to sacrifice imagery and elegance of diction to brevity and directness. As an example of epigrammatic terseness and perspicuity, coupled with scientific accuracy, Prof. Austin Flint's "Practice of Medicine" stands pre-eminent. It has been asserted that not a single line of this work could be expunged without materially affecting the sense.

The foregoing gives a pretty fair idea of the status of the medical profession of Ohio in the mid-period between pioneer days and the present. It must be considered, however, that it applies to the more intelligent and progressive contingent, and that many were still plodding along in the rut of their predecessors, and many were beyond the pale of the uplifting influence by which the profession was being elevated to the plane of respectability. Of this latter contingent a word may not be amiss. We are too prone to look upon the illiterate and those removed from the centers of public activities with undisguised contempt. It was always thus, not only as concerns the medical profession but in all the other callings of life. When Ben Franklin went to England and applied for a job at a printing establishment, the proprietor, on learning that he was from the Colonies, seemed to regard it as something of a joke. How could this green provincial know anything about type-setting?

"Take this," said he, handing him a compositor's stick, "and set up something." Before the proprietor could turn around twice, Franklin was back and placed in his hands as neat and perfect a piece of work as ever was done.

"Can any good come out of Nazareth? Come and see." This is what the proprietor read and wondered.

"Why," said he to himself, "the boy is not only an adept in the art, but he has brains and wit."

In speaking of the settlement or backwoods doctor we do not wish to be understood as including that despicable class of harlequins whose mere assumption is a stigma on the noblest of professions, but of that infinitely higher and better class of honest, homely, brainy men who are doing the best possible for themselves under the hampering influences besetting them. The backwoods doctor had no library to speak of, and such books as he had were old, thumbed and dogeared from long use. He knew little of medical lore. He knew little of what was going on in the great teeming world beyond the horizon of his own little world, but for this reason he was compelled all the more to exercise his faculties, to meet the various exigencies that presented themselves in his path. He could not turn to his library, for that was archaic and woefully incomplete. He could not summon to his assistance the masters

of the art, for they were too remote and beyond the means of his clientele. He just had to sit down and think it out. He had to devise methods, instruments and appliances to meet the case, and he had to do it right. There could be no false step—no error or judgment, for the end results were the telltale which gave him an approving conscience or otherwise. Nature gave him brains, just as it did the city-bred boy. It would seem oftentimes that nature, in consideration of the absence of opportunity, had been prodigal in bestowing natural gifts, for we find among these men a larger proportion endowed with strong native intellectuality than among the more favored in the centers of learning. Who has not seen men of the stamp we are describing, great, honest, whole-souled fellows, with massive brains and bodies and homely, simple ways that somehow got into your affections as no other men could? These men lead their lives and die, wept and honored by their little community—but often carry down into oblivion a mental and moral equipment that under favoring circumstances would have moved the world. Should we not take off our hats to such?

We are now compelled to turn to another phase of medical life, and one which, considered in its nature and effects, is calculated to bring the blush of shame to the cheek of every properly constituted physician. We refer to that most detestable trait of animal nature—jealousy. We shall not assert, as some have, that jealousy is inherent in the calling, that the most evenly tempered and unselfish man, when he dons the cloak and staff, emblazoned with the serpent, becomes instinct with the malignity of that reptile, but it is a fact nevertheless that jealousy has always been rife among physicians to an extent seldom seen among other professions. Not only so, but these jealous strifes and bickerings between doctors often assume such magnitude as to involve whole communities. This, of course, was subversive of concerted effort and exercised such a retarding force on all attempts at betterment of the profession as to constitute an almost insuperable obstacle. They would not get together, or, if they did, would not pull together, for what one suggested the other was sure to oppose, and so between them they managed effectually to block the wheels of progress. It is one of the functions of polite society to discountenance such sentiments, or at least the manifestation of them, and as a result men get together now and work together and accomplish things. We shall have occasion more than once in the succeeding pages to note the baneful effect of this ugly distemper on the life and action of otherwise most worthy men, and to witness its blighting effects on enterprises originally launched with high purpose.

The doctor of today is the metamorphosed doctor of the past and is as different as is the gorgeous butterfly from the loathsome catterpillar

*X-Ray,  
Radium,  
Removal of  
Foreign  
Bodies*

CHAS. F. BOWEN, M. D.  
344 East State Street  
Columbus, O.

from which he was evolved. Medicine has made wonderful strides in the last half century, has attained to such dimensions, has undergone such manifold changes, has been segmented and specialized to such a degree that no human brain can compass it in its entirety. Of course there are principles in every department of medicine—outlines as it were—which give to the student a bird's-eye view of the whole field. No specialist without a knowledge of these general principles can hope to be a good diagnostician.

The different structures and functions of the body are so correlated and mutually dependent that no man can confine himself to his own hallick and get a comprehensive view of any case. He will be groping in the dark and in many instances be led to most absurd conclusions. Often, very often in fact, the general practitioner with his general sweep of knowledge will be a safer diagnostician than the specialist with all his nicety of skill and erudition provided the specialist has not grounded himself in the principles of medicine.

At no time in the history of the world has medicine done so much for the human race as today. You cannot always tell whether you have cured your patient, for a great majority of cases would have recovered without medical attention,

or in spite of the doctor, but when you find multitudes of people living longer and happier by reason of your work there can be no doubt of its efficacy. To show how efficient the work of the medical profession is I will quote from the statistics of the British government, the most accurate in the world.

"In the decade 1871-1880 the expectation of life in Great Britain was 41 years. In the decade 1911-1920 it was 51.5, an increase of eleven and a half years in half a century. In spite of the fact that the population of Great Britain is 13,000,000 greater than it was in 1871 there were 50,000 less deaths per annum. In 1854 the death rate was 37.2 per thousand; in 1912 it was 12.4 per thousand. The average death rate per thousand from typhoid fever in the period 1871-1800 was 7,800, in 1920 it was 537. In 1870 the scarlet fever deaths were about 30,000; in 1920 about 1,000." So it is in almost every department of medicine except such as have baffled research as to cause, such as cancer and even here many thousands of patients have been spared the torments and dangers of this dread disease by early diagnosis and treatment. While the expectation of life looms grandly it is a little early yet to bemoan the fact that we may all become Methuselahs.

## PUBLIC HEALTH NOTES

The June bulletin of the State Department of health on the movement and prevalence of communicable diseases during the month of May contains some interesting data. Smallpox cases reported from Clark, Erie, Ottawa, Stark, Tuscarawas, Paulding and Franklin Counties totalled 204, 115 of which were reported during the later half of the month. Scarlet fever cases, reported from Lorain, Belmont, Cuyahoga, Summit, Butler, Logan and Wayne Counties, numbered 318, less than half the complete summary report for April; 202 of these cases were reported after the 15th of May. Ninety-six case cards of typhoid were received for May, twice the number reported for April. Reports of 238 cases of diphtheria were received in May, 161 in the last two weeks of the month.

—Wayne County health department plans to hold a number of baby welfare clinics in various parts of the county this summer for the weighing and examination of babies and the instruction of mothers as to care and feeding of infants.

—Believing that a beautiful home is one in which health and sanitation are cardinal considerations, the Dayton Public Health League has unanimously indorsed the "Home Beautiful" movement as a step toward a realization of better health conditions. Four model homes have been

displayed in Dayton incorporating in addition to artistic and practical furnishings and construction features such health essentials as proper screening facilities, sanitary basements, etc.

—Demonstrations in home nursing were given by a nurse from the State Department of Health in Lima, recently, before health club leaders from all the townships of Allen County. These leaders in turn will conduct demonstrations in their districts for the benefit of those who were unable to attend the Lima sessions

—Prompt work on the part of the Massillon and Stark County health departments halted a threatened smallpox epidemic in East Greenville during the latter part of April. When 10 cases of the disease appeared, health authorities visited all persons residing in East Greenville, who had been exposed to the disease and were employed in Massillon, and placed them under quarantine until the disease had been checked, thus preventing its spread to Massillon six miles distant.

—One of the largest and most successful tuberculosis clinics conducted by the State Department of Health in conjunction with local health departments and the county medical societies was held in Bucyrus, recently. Out of 74 patients examined, 15 positive, 27 suspected and 32 negative cases of tuberculosis were determined.

—Dr. C. L. Mueller, health commissioner of Wapakoneta, is secretary of the newly organized Auglaize County Public Health League, a component of the Ohio Public Health Association.

# Radium Laboratory

350 East State St., Cor. Grant Ave.  
Columbus, Ohio



Edward Reinert, Ph. G., M. D.  
R. R. Kahle, Ph. B., M. D.

Citz. 9215

Bell, M. 7417



## The Holzer Hospital Gallipolis, Ohio

*Radium for all  
therapeutic  
uses*

# Radium Rental Service

Radium loaned to physicians at moderate rental fees, or patients may be referred to us for treatment if preferred.

Careful consideration will be given inquiries concerning cases in which the use of Radium is indicated.

### BOARD OF DIRECTORS

William L. Baum, M. D.    N. Sproat Heaney, M. D.    Frederick Menge, M. D.  
Louis E. Schmidt, M. D.    Thomas J. Watkins, M. D.

## The Physicians Radium Association

1110 Tower Building, 6 N. Michigan Ave.  
CHICAGO, ILL.

Telephones: Randolph 6897-6898

William L. Brown, Manager

# One Hundred and Sixty - Five Applicants for Medical Licensure Appear Before Medical Board During June Examinations

The semi-annual examination of applicants for licenses to practice medicine and the limited branches were conducted by the State Medical Board in Columbus, June 6, 7, 8, and 9. A total of 165 graduates of medical colleges participated in the examinations. Of these, Ohio colleges furnished 128 candidates—Ohio State University College of Medicine, 31; University of Cincinnati Medical College, 42; Western Reserve University School of Medicine, 25; Cincinnati Eclectic College, 22, and the College of Homeopathic Medicine, Ohio State University, 8.

It is noteworthy that each year an increasing number of graduates from the large eastern medical schools locate in Ohio, there having been 56 applicants for licensure from eastern and foreign schools in the June examinations. The number was larger than ever before from foreign colleges. The out-of-state colleges represented by the candidates were Harvard, Jefferson, Johns Hopkins, Loyola, Meharry, New York University and Bellevue Hospital, Rush, St. Louis University College of Medicine, Tuft's Medical College, University of Pittsburgh, and University of Pennsylvania. Foreign colleges were the Imperial University, Tomsk, Russia; University of Budapest, Hungary; University of Naples, Italy; University of Vienna, and the University of Toronto, Canada.

Eight osteopathic candidates took the examinations. Applicants to practice the limited branches included 15 chiropodists, two masseurs, 4 cosmetic therapists, four midwives and two chiropactors, all of whom were first examined by the State Medical Board in the fundamentals prescribed by law and later by examining committees of the particular class of practice to which they sought admission.

For the benefit of those who keep step with the times by going over the questions used by the State Medical Board in examination of medical applicants, the questions used in the June examination are reproduced.

## SURGERY

1. Discuss the diagnosis and treatment of perforated duodenal ulcer.
2. Discuss the diagnosis and treatment of renal calculus.
3. Outline the symptoms and surgical management of fracture to middle third of femur.
4. Discuss the etiology and treatment of shock.
5. Describe surgical treatment of carcinoma of the rectum.
6. Discuss tetanus and tetany.
7. Give surgical treatment of fracture of patella.
8. Describe treatment of compound fracture of both bones of forearm above the wrist.
9. Discuss diagnosis, prognosis and treatment of fracture of base of skull.
- 10.

Discuss surgical treatment of tuberculosis peritonitis.

## OBSTETRICS

1. State your views with reference to obstetric examinations. What would you expect to learn from them?
2. Outline general scheme of treatment for persistent and pernicious vomiting of pregnancy.
3. Give diagnosis and management of the R. O. P. position of the vertex.
4. What interval should elapse after the birth of the child before (a) tying the cord; (b) delivering the placenta?
5. Discuss the use of anaesthetics in obstetrics with particular reference to the kind, time and manner of administration.

## ANATOMY

1. Through what arteries is collateral circulation carried on after ligation of the subclavian artery at point of election?
2. Describe the position of the palmar arterial arches.
3. Give the origin and the distribution of the pneumogastric nerve.
4. Describe the structure of the knee joint.
5. What important structures in the mediastinal space?

## BACTERIOLOGY, PATHOLOGY AND HYGIENE

1. What is an antogenous vaccine? A shock vaccine? Upon what theory is based their use?
2. What is the Schick Test and how applied?
3. What are disease carriers? Give illustrations, and how may one be detected?
4. Give clinical tests which would help you diagnose ulcer of the stomach.
5. What is the significance of the blood test in diabetes?
6. Give technic of lumbar puncture and what information may be obtained by examination of spinal fluid?
7. What are the pathologic possibilities of an enlarged spleen?
8. In the case of an individual found dead, how could you estimate approximately the time since death occurred?
9. Give the etiology and tissue changes in (a) hypertrophy, and (b) dilation of the heart.
10. What are the quarantine regulations for a case of scarlet fever?

## PHYSIOLOGY

1. Give the composition, reaction and uses of blood.
2. What is an extrasystole and how produced?
3. Define briefly and give the physiologic significance of (a) dyspnea; (b) apnea; (c) dysphagia.
4. Describe the physiology of vomiting.
5. Mention three examples of amyloid food. Describe in detail the changes that amyloid food undergoes in the process of digestion.
6. Describe cholesterin, giving its origin and function.
7. Define aphonia and aphasia. Give the cause of these conditions.
8. How is the sensation of pain produced?
9. Describe color blindness and name the colors which the subject commonly fails to dis-

# Artificial Pneumothorax

in

## Pulmonary Tuberculosis



**LOUIS MARK, M. D.**

327 East State Street  
Columbus, Ohio

# Cincinnati Radium Laboratory

22 West Seventh Street

**Needle, Tube and Plaque  
Applicators**



CHARLES GOOSMANN, M. D.  
X-Ray Treatment When Indicated.

## Prevention like: this:

"It is certainly a pleasure to send you this renewal premium check, when I think how completely you shut up my black-mailer I have not heard anything more from him and cannot too highly recommend your Company for the prompt and efficient manner in which you handled the threat. I practiced 21 years before I struck a snag.

Yours truly."

## Defense like: this:

"Dear Sirs:

We want to express our appreciation for the services rendered us in our recent case.

We feel that the success of this case is due entirely to the wonderful defense. As medical men we followed your technique very closely and we wish to say that, in our opinion, you have a talent for this type of cases unequalled by any one.

Very truly yours."

## Indemnity like: this:

"The Company shall indemnify the holder hereof against any judgment or loss imposed by law upon the holder hereof in any claim or suit defended by the Company. Such indemnity shall be limited to Ten Thousand (\$10,000) in any one claim or suit, and Thirty Thousand (\$30,000) in all claims and suits arising hereunder, such indemnity being in addition to the unlimited defense"—

Clause 'G' of Our Contract.

*For Medical Protective Service  
Have a Medical Protective Contract*

**The Medical Protective Co.**

Of

Fort Wayne, Indiana

tinguish. 10. What is the origin of blood sugar and how is the normal content maintained.

## SPECIALTIES

1. Name some sequelae of middle ear suppuration. 2. Describe the technique of tonsillectomy. 3. Define staphyloma and give treatment. 4. What is sycosis vulgaris? Give symptoms and treatment. 5. Give indications of congenital syphilis.

## DIAGNOSIS

1. Discuss clinical diagnosis carcinoma of pylorus of stomach. 2. Give description of acidosis in diabetes mellitus. 3. What physical signs would you expect to find in a patient with a sacculated aneurysm of the ascending arch of the aorta? Give differential diagnosis between small box and varicella. 5. In tuberculosis of the kidney, what evidence would warrant a diagnosis? 6. Differentiate types of meningitis. 7. Discuss the typing of lobar pneumonia. 8. Discuss the types of goitre. 9. What combination of symptoms do you consider essential for the diagnosis of locomotor ataxia in the preataxic stage? 10. Give diagnostic symptoms of Addison's disease.

## CHEMISTRY

1. What is understood by the group of chemical substances known as ethers? 2. What elements enter into the composition of alkaloids? 3. How would you treat a case of poisoning by (a) morphin, (b) strychnine? 4. Define the terms (a) metabolism, (b) catabolism, (c) anabolism. 5.

Name three substances usually classed as sugars and give a test for each.

## PRACTICE

1. Name six of the more common exanthemata, giving the date of appearance and character of the eruption in each. 2. What is arthritis deformans? Describe the changes in the tissues and give theories as to the etiology. 3. Name five causes of intestinal obstruction and give some of the more important symptoms of each. 4. Give the symptoms and treatment of rickets in a child of 12 or 14 months. 5. Give the symptoms and treatment of auricular fibrillation. 6. Give the symptoms, complications and treatment of chorea. 7. What is epilepsy? Differentiate between grande mal and petit mal and give treatment of a moderate case of the former. 8. Give symptoms and treatment of acute Bright's Disease. 9. Give symptoms and treatment of gastric ulcer. 10. How would you diagnose incipient phthisis?

## REGULAR MATERIA MEDICA

1. Chloral Hydrate. Give therapeutic uses, dose and toxicology. 2. Ipecac. Name principal preparations and doses. Describe its action. In what conditions is its use indicated? 3. Belladonna. Name its principal alkaloid giving action, uses and dose. 4. Give the physiologic action of cocaine, its uses, dosage and effect of over dose. 5. Give the maximum adult dose of the following (a) strychnia sulphate; (b) Fluid extract of Veratrum; (c) Morphine sulphate; (d) Atropine sul-

## The Management of an Infant's Diet

## Diarrhea of Infants

Three recommendations are made—

Stop at once the giving of milk.

Thoroughly clean out the intestinal tract.

Give nourishment composed of food elements capable of being absorbed with minimum digestive effort.

A diet that meets the condition is prepared as follows:

<b>Mellin's Food</b>	.	.	<b>4 level tablespoonfuls</b>
<b>Water</b> (boiled, then cooled)	.	.	<b>16 fluidounces</b>

Feed small amounts at frequent intervals.

It is further suggested:—As soon as the stools lessen in number and improve in character, gradually build up the diet by substituting one ounce of skimmed milk for one ounce of water until the amount of skimmed milk is equal to the quantity of milk usually given for the age of the infant; also that no milk fat be given until the baby has completely recovered.

Mellin's Food Company, Boston, Mass.





Fever Thermometers—Urinary Glassware S-85



THE pride of the craftsman in his handiwork is exemplified in the zeal with which Parke, Davis & Company's pharmaceutical chemists, biologists, and physiologists maintain the unvarying quality of Adrenalin. And that quality is the natural result of highly specialized scientific skill gained through twenty years' experience in the manufacture of the original product.



THE NAME "ADRENALIN" IS LINKED INSEPARABLY WITH THE GOOD NAME OF PARKE, DAVIS & COMPANY

URINE  
BLOOD  
SPUTUM  
EFFUSIONS  
STOMACH  
CONTENTS  
WASSERMANN &  
NOGUCHI  
REACTIONS  
GONORRHEAL  
COMPLEMENT  
FIXATION TEST  
BLOOD CHEMISTRY  
PROTEIN  
SENSITIZATION  
TESTS

BASAL METABOLISM  
AUTOGENOUS  
VACCINES  
FAECES  
GENITO-URINARY  
SURGICAL and  
GYNECOLOGICAL  
PATHOLOGY  
DARK FIELD  
ILLUMINATING  
FOR  
SPIROCHETA  
PALLIDA  
MEDICO-LEGAL  
POST MORTEM  
X-RAY

# LABORATORY

## Clinical and Pathological

COLUMBUS, OHIO 370 East Town Street

J. J. Coons, B. S., M. D., D. Sc.  
H. M. Brundage, M. D.  
Dorris Coss, B. S., M. S.  
Ruth Miller, B. S.

PROMPT SERVICE

Immediate Report on Frozen Sections of all Tumors.

phate; (e) Philocarpin hydrochlorate and Tr. ac-onite. 6. Name the principal narcotics. In what conditions are they used and to what class of persons should they not be given? 7. Carbolic acid. Give its uses, the symptoms of poisoning and its treatment. 8. Write a prescription for the following: (a) influenza, (b) pneumonia, (c) cough, using two or three drugs in each prescription. 9. Fluid Extract of Ergot. What is its physiologic action and in what conditions is it used? 10. From what is podophyllin derived? Give its action and dose.

#### HOMEOPATHIC MATERIA MEDICA

1. State briefly the indications for podophyllin. 2. What would you use aconite, belladonna, gelsemium or baptisia in a fever. 3. Name four remedies that are useful in the treatment of lobar pneumonia and the indications calling for each. 4. How much morphia sulphate would you give a child hypodermatically under two years of age? How much strychnia sulphate? 6. Name four heart remedies with specific indications for their use. 6. Give the indication for the use of hydrastis. 7. When would you use veratrum viride physiologically and in what doses? 8. Give treatment for spasmodic croup with indications for remedies. 9. Mention four remedies indicated in different forms of meningitis with indications. 10. There are three definite causes for dropsical conditions. Give two remedies for each cause with reasons for selecting same.

#### ECCLECTIC MATERIA MEDICA

1. Name the plant remedies used as diuretics. Give their specific indications and usual dose. 2. Give the specific indications for the use of hyoscyamus and usual dose. 3. Give the usual dose of neutralizing cordial, Dover's powder, opium and morphin sulphate. 4. Give the specific indications for the use of the alkalies. 5. Give the symptoms of poisoning by paris green, and antidote and treatment. 6. What remedies would you use in the various stages of influenza? Give dosage. 7. Differentiate carefully, therapeutic uses of aconite and veratrum. 8. Name two vermifuges with dosage and method of use. 9. What is the physiological effect of pituitrin? Give indications for its use and dosage. 10. Give the indications and uses for libridol. For compound emetic powder.

#### Ohio Society of Clinical Laboratory Diagnosis

During the annual meeting of the State Association in Cincinnati in May, the Ohio Society of Clinical Laboratory Diagnosis was organized. Drs. Carl Spohr and C. E. Roderick, both of Columbus, were elected chairman and secretary, respectively. Drs. E. E. Eisenberg, Cleveland, Thomas Ramsey, Toledo, and Albert Faller, Cincinnati, were named as an advisory committee.

#### Small Advertisements

*Wanted*—A few book agents to sell the new "crowning edition" of the celebrated book on "The Physician Himself." Address the author, Dr. D. W. Cathell, Emerson Hotel, Baltimore, Maryland.

*Location*—Unopposed practice in town and country in western Ohio, to purchaser of 7-room house and 3-room office combined, \$2,500, part cash. Good farming community; good schools; nearest competition 7-8-16 and 18 miles distant; use auto all year. Illness reason for selling. Will introduce. Address X, care *The Journal*.

*For Sale*—Property and practice in a town of 900, with first-class high school, parochial school, three churches, in well-to-do farming community in northwestern Ohio. Price right, with liberal terms to a good man. Write M. F. D., care *The Journal*.

*For Sale*—Physician's office equipment. For information address Mrs. L. W. O., care *The Journal*.

*For Sale*—In Dayton, Ohio, one of best locations, with offices and residence combined. Good practice at beginning. Immediate possession. Am quitting on account of health. Address B. G., care *The Journal*.

**D**o you believe that the fitting of trusses is a part of the Practice of Medicine? If so, send your patients needing trusses to

### The Columbus Truss & Optical Co.

PARKER W. PHENEGER, M. D., Mgr.

We Specialize in  
Elastic Stockings Made to Measure

Office and Fitting Rooms  
Suite 303-309 Rowlands Bldg., Broad and Third Sts.  
COLUMBUS, OHIO

## To Prevent Hydrophobia

Use

## Pasteur Treatment

With a

Potent Product and Prompt Service  
PRICE \$25.00

Order from

**James McIlvaine Phillips, M. D.**

2057 N. High St.

Columbus,

Ohio



*Here's where genuine Atophan is manufactured by a special process completely precluding the possibility of unpleasant empyreumatic admixtures.*

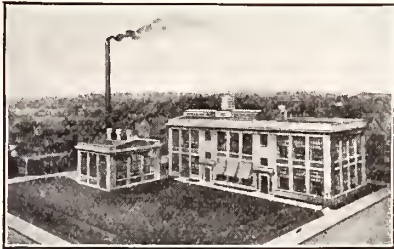
This means a still further improved Atophan for your cases of Rheumatism, Gout, Neuralgia, Neuritis, Sciatica, Lumbago and "Retention" Headaches.

*Ample trial quantity and literature from*

**SCHERING & GLATZ, Inc.**

**150-152 Maiden Lane**

**- NEW YORK**



Our Manufacturing Laboratories at Bloomfield, N. J.

## Fort Wayne Medical Laboratory, Inc.

(Established 1905)

**DR. BONNELLE W. RHAMY**

Manager and Director of Pathological and Serological Department

**DR. ROE J. MAIER**

Director of X-Ray and Radium Department

**PAUL H. ADAMS, B. S., Ch. E.**

Director of Industrial and Organic Chemistry Department

Equipped for making complete examinations of blood, urine, sputum, feces, spinal fluid, pathologic tissue, secretions and excretions of any character, and doing blood chemistry, protein sensitization, blood typing for transfusion, Wassermanns (ice box and heat), tuberculosis and gonorrhoeal complement fixation tests, making autogenous vaccines, dark field examination for spirochetes, basal metabolism, toxicology, medico-legal investigations, eugenic tests, and for making every test of clinical value for diagnostic study in medical and surgical cases.

**Wassermanns Daily Except Sunday**

All serologic tests \$5.00 each blood.

The X-Ray Department includes complete diagnostic and therapeutic X-Ray laboratory, with a new twenty-inch machine for deep therapy; radium in adequate amounts to meet all requirements of malignant and other diseases where indicated, and a complete ultra-violet ray equipment.

The Industrial and Organic Chemistry Department is equipped for any kind of chemical investigation, including medical, physiological and blood chemistry, toxicological and other medico-legal investigations, and the analysis of milk, water, seeds, fertilizers, feeds, iron, steel, ores, coal, oils, etc.

Fee bills and containers sent on request.

Special delivery postage insures prompt delivery of specimens.

**327 WEST BERRY STREET**

**FORT WAYNE, INDIANA**

(One block South from Interurban Station)

## ACADEMIES AND COUNTY SOCIETIES

### Cincinnati

Dr. Albert H. Freiberg, professor of orthopedic surgery at the College of Medicine, University of Cincinnati, was chosen president-elect of the Cincinnati Academy of Medicine at the annual election, May 22. Dr. Freiberg headed both tickets presented in the election. Dr. A. G. Drury, who was also on both tickets, was retained as treasurer, a position he has held for many years, and Dr. L. Howard Schriver was elected secretary. Others elected were: Delegates to the State Association, Drs. E. O. Smith, Louis Schwab, William Doughty, William Mithoefer and Samuel Iglauer; alternates, Drs. James Miller, Charles Howard, John A. Caldwell, A. W. Foertmeyer and Clarence King. Dr. Mark Brown, elected last year, assumed the presidency at this meeting.

#### THIRD DISTRICT

*Logan County* Medical Society's June meeting, in Bellefontaine on the 3rd, was attended by 26 members. Dr. Wishard of Indianapolis, who was scheduled to speak on "The Symptomatology, Complications and Treatment of Gonorrhea" was unable to be present because of illness, but his part on the program was filled by Dr. H. O. Mertz, Indianapolis, who most ably handled the above subject as well as his topic, "The Social Aspects of Gonorrhea." Dr. Mertz's address was unusually instructive and well given and was thoroughly enjoyed. The July meeting will be held on the 12th at Indian Lake.—M. L. Pratt, Secretary.

#### FIFTH DISTRICT

*Ashtabula County* Medical Society, in session at Ashtabula, May 10, heard a talk on "History and Present Day Treatment of Cancer of the Stomach" by Dr. Frank Gallagher of Cleveland. Dr. Gallagher handled the subject in a well condensed manner, pointing out nothing new in etiology, classifying pathology into three difference classes and bringing out some highly interesting new technique in surgery of the stomach which he illustrated with charts. The society attended the tuberculosis clinic held at Jefferson, May 23 and 24, under the direction of the state and county health departments.

*Trumbull County* Medical Society held its monthly meeting May 18, at the Hotel Warner, Warren. Members of the county bar association were guests of the society and the program was arranged in conjunction with the Mental Clinic held the same day. The first speaker was Dr. H. T. Thornburgh, county health commissioner, under whose auspices the clinic was held. He stated that it was the first mental clinic held in the State of Ohio and its object was to wage a campaign against the increase in insanity and feeble-mindedness. The next speaker was Dr. Edmund

## Dares Haemoglobinometer

Candle lighted, or Electric lighted.  
We are accepting orders for prompt delivery.  
Write for booklet and prices.

## Tycos Office Sphygmomanometer

With 6 inch silvered dial.  
A distinct advance over the pocket type.  
Immediate delivery. Price \$37.50.

Surgical Instruments—Dressings,  
Pharmaceuticals, Biologicals

Your orders will receive prompt attention—  
"You will do better in Toledo."

## The Rupp and Bowman Co.

319 Superior St.

TOLEDO,

OHIO

## SAVE MONEY ON YOUR X-RAY SUPPLIES

Get Our Price List and Discounts on  
Quantities Before You Purchase  
**HUNDREDS OF DOCTORS FIND WE SAVE  
THEM FROM 10% TO 25% ON X-RAY  
LABORATORY COSTS**

### Among the Many Articles Sold Are

- X-RAY PLATES.** These brands in stock for quick shipment. PARAGON Brand, for finest work; UNIVERSAL Brand, where price is important.
- X-RAY FILMS.** Duplited or Dental—all standard sizes. Eastman, Ilford or X-ograph metal backed. Fast or slow emulsion.
- BARIUM SULPHATE.** For stomach work. Finest grade. Low price.
- COOLIDGE X-RAY TUBES.** 5 Styles. 10 or 30 milliamp.—Radiator (small bulb), or broad, medium or fine focus, large bulb. Lead Glass Shields for Radiator type.
- DEVELOPING TANKS.** 4 or 6 compartment stone, will end your dark room troubles. 6 sizes of Enameled Steel Tanks.
- DENTAL FILM MOUNTS.** Black or gray cardboard with celluloid window or all celluloid type, one to eleven film openings. Special list and samples on request. Price includes your name and address.
- DEVELOPER CHEMICALS.** Metol, Hydroquinone, Hypt, etc.
- INTENSIFYING SCREENS.** Patterson TE, or celluloid-backed screens. Reduce exposure to one-fourth or less. Double screens for film. All-metal Cassettes.
- LEADED GLOVES AND APRONS.** (New type glove, lower priced).
- FILING ENVELOPES** with printed X-Ray form. (For used plates). Order direct or through your dealer.

If You Have a Machine Get Your Name on Our Mailing List



## GEO. W. BRADY & CO.

771 So. Western Ave.,  
Chicago

# LOESER'S INTRAVENOUS SOLUTIONS



## INTRAVENOUS INJECTION IS A SERIOUS PROCEDURE THAT REQUIRES

**FIRST:** Selection of Standardized Solutions, from a Reliable Laboratory.

**SECOND:** Full Knowledge of the Contents of the Solution.

Half secret compounds, unscientific gunshot combinations, specialties and low priced substitutes are out of place in intravenous medication.

Loeser's Intravenous Solutions are not "cures" or "specifics," but simple scientific solutions of U.S.P. and standard remedies of established therapeutic value.

The contents are plainly stated on the label, free from ambiguity, mysticism and charlatanism. They are standardized by chemical, physical and animal tests.

*Clinical Reports, Reprints, Price Lists  
and*

*"The Journal of Intravenous Therapy" will be  
sent to any physician on request*

R. L. HAWKINS  
628 Elm St., Cincinnati, Ohio  
Distributor for

## New York Intravenous Laboratory

*Producing Ethical Intravenous Solutions  
for the Medical Profession Exclusively.*



M. Baehr, chief neuro-psychiatrist of the Bureau of Juvenile Research, State Department of Welfare, who announced that his work in connection with state institutions will be directed toward promotion of a system seeking to prevent and cure insanity rather than house the mentally ill. Dr. H. H. Goddard, chief of the Bureau of Juvenile Research, followed with an address on "The Relation of Intelligence to Efficiency."

Judge Charles M. Wilkins of the Common Pleas Court of Trumbull County, next addressed the society in a pleasing manner and brought out many points of interest from the legal aspect. He stated in closing that preventive medical work as outlined would be of great help in meeting the needs of the times. Judge Joseph Smith of the Probate Court spoke of the many problems encountered in dealing with juvenile cases and the help rendered through this bureau. Dr. D. E. Hoover closed the program with an expression of appreciation on the part of the society to the men who had participated in the meeting and urged cooperation with the object of the clinic. Following the program dinner was served in the parlors of the hotel.

On May 9th a resolution was presented by the Trumbull County Medical Society asking the Board of Education of the Warren Public Schools to take under advisement the appointment of a full-time physician and dentist and that the nursing staff be organized to allow one nurse to each 1500 students. The communication was accepted and filed by order of the board. Following the acceptance of the resolution, the members of the society residing in Warren held a meeting May 24, at which time Superintendent H. B. Turner and the members of the Board of Education were their guests. The meeting was addressed by Dr. E. A. Peterson, director of the Cuyahoga County Public Health Association and formerly medical director of the Cleveland public schools, who pointed out that the four great factors in giving information about matters of health and hygiene are the family physician, the health officer, the hospital and dispensary and the public schools. He urged the importance of a department with a medical supervisor in charge.—John D. Knox, Secretary

#### SIXTH DISTRICT

*Mahoning County Medical Society* met at the Youngstown Public Library, May 23d. The speaker of the occasion was Dr. Milton B. Cohen, Cleveland, whose subject was "The Diagnosis and Treatment of Asthma and Hay Fever." This was a very timely subject and Dr. Cohen's presentation of it engaged the interest of everyone present.—A. W. Thomas, Secretary.

*Richland County Medical Society's* monthly meetings as arranged by the program committee have constituted a series of educational sessions which have been much enjoyed by and greatly benefited the membership. On March 16, Dr. Charles Goosman, Cincinnati, gave an illustrated

## HELPS IN DIAGNOSING

Originated and Endorsed by  
Prominent Physicians.

Practical and Convenient

Renal Function  
AMPULES OF  
PHENOL—SULPHONE—PHTHALEIN  
and the  
DUNNING COLORIMETER

Acidosis Conditions  
CO<sub>2</sub> TENSION OF ALVEOLAR AIR  
ALKALI RESERVE OF BLOOD  
HYDROGEN-ION CONCENTRATION  
OF BLOOD

Gastric Acidity  
SHOHL-KING GASTRIC ANALYSIS  
OUTFIT

Urea in Urine and in Blood  
UREASE-DUNNING

Literature upon request

## Hynson, Westcott & Dunning

BALTIMORE

## Luer Hypodermic Syringes

2cc  

---

60c

5cc  

---

75c

10cc  

---

1.00

All Glass



20cc  

---

1.25

30cc  

---

1.50

50cc  

---

2.25

Made in U. S. A.

—To pay more is a waste of money—Quality and workmanship guaranteed second to none or money promptly refunded.

## Charles E. Findlay Co.

Physicians' and Hospital Supplies  
677 N. High Street Columbus, Ohio  
Bell Phone, Main 6518



# Hay Fever

## Mulford Pollen Extracts

mean more to the medical profession than a mere seasonal remedy for Hay Fever, to be obtained at a certain price.

They are the only pollen extracts, or so-called antigens, which are standardized according to protein nitrogen content.

They include only the acetone-insoluble portion of the pollen protein—the specific protein in refined form

The salts, resins, gums, carbohydrates and other extractives are eliminated, and the resultant product is more stable, and less subject to chemical changes.

It requires Mulford resources and standards to prepare products of the specificity, purity and desensitizing value of Mulford Pollen Extracts.

### *For Diagnosis*

Pollen Extracts in Intradermic Syringes and Cutaneous Outfits.

### *For Treatment*

Pollen Extracts in Hypodermic Syringes, Vials and Mulford Hypo-Units.

SEND FOR NEW LITERATURE

49546e



# H. K. Mulford Company

## Philadelphia

lecture on "X-ray and Radium Therapy," which was highly instructive and incited keen interest. The meeting of April 20, at which Dr. Charles J. Shepard, Columbus, was to have conducted a skin clinic, was postponed because of the illness of the speaker, who will be asked to attend a special meeting in the near future. At the meeting in Shelby, May 18, Dr. A. J. Thomas, Cleveland, discussed "Modern Obstetrics." His address was followed by a wide discussion and exchange of experiences. The June 15th meeting was devoted to the subject of "Lymphatic Leukemia." Dr. Frank Winders, Columbus, gave the main paper in correlation with a case history presented by Dr. C. B. Meuser, Ashland.—J. S. Hattery, Secretary.

*Summit County* Medical Society, meeting at the Peoples' Hospital June 6, enjoyed the following program: 1. "Glaucoma," by F. H. Cook; discussion by C. M. Clark and D. W. Stevenson. 2. "Faucial Tonsil," by J. E. Springer; discussion by C. E. Townsend and R. L. Vioran. 3. "Aural Complications in Infectious Diseases," by R. F. Thaw; discussion by U. D. Seidel and J. J. Conlon. Attendance 49. The average attendance for the first half of the year was 73.—A. S. McCormick, Secretary.

#### EIGHTH DISTRICT

*Muskingum County* Academy of Medicine held its June meeting on the 7th, with an attendance of 24 members. Interesting reports of the St. Louis convention were given by Drs. Warburton, Sutton and Hanna, Dr. Warburton being one of the state delegates. Dr. Warburton also discussed the treatment of syphilis, touching especially on the treatment of children with salvarsan by rectum. Several interesting cases were reported. A lunch was served after the business meeting.—Beatrice Hagen, Secretary.

#### NINTH DISTRICT

*Pike County* Medical Society's meeting at Waverly, May 15, was featured by a one hundred per cent. attendance of members. Dr. E. W. Tidd, state meeting delegate, gave a very satisfactory report of the Cincinnati meeting, and other members presented interesting case reports. Drs. E. W. Tidd and I. P. Seiler were appointed members of a committee to study the nurse problem.—I. P. Seiler, Secretary.

#### Phi Rho Sigma Held Reunion

A reunion luncheon of members of the Phi Rho Sigma Medical Fraternity was held at the Hotel Sinton during the seventy-sixth annual meeting of the State Association in Cincinnati. This was the first effort along this line by members of this fraternity and it proved so successful that it was decided to make it an annual affair. Arrangements were in charge of Dr. J. C. Staats of Cincinnati.

## Our Business

is confined exclusively to the manufacture of Strictly High Grade Medicines and Pharmaceuticals for Physicians, Dispensing and Prescribing.



Our Offices and Laboratories are now located in our New Building, 330-336 Oak Street, one square north of Grant Hospital.

NO GOODS SOLD AT RETAIL

**The COLUMBUS PHARMACAL Co.**  
COLUMBUS, OHIO

## Every Physician

Is Interested In

## Physician's Supplies

In dispensing, he requires a great variety in his office—in prescribing he uses the PRESCRIPTION DEPARTMENT that is UP-TO-DATE.

If you are unacquainted with our plan of handling the physician's requirements, you may profit by giving us an opportunity to show you what we can do.

## The Wendt Bristol Co.

47 South High St., Columbus, Ohio

FINE PHARMACEUTICAL SPECIALTIES



# Fabiana Imbricata - Pichi

Natural Order, Solanaceae.

This remedy has attained eminent consideration as a therapeutic agent among those who have used it during a number of years.

Pichi increases the excretion of solids through the kidneys and is an antiseptic in all forms of urinary diseases in which it is indicated, except ACUTE structural kidney disease.

Chronic retention and infected cystitis and pyelitis yield to the physiological effects of Pichi.

Pichi increases the secretion and elimination of bile. Because of this action it finds ready application in all forms of functional liver diseases, as well as in cirrhosis, and other forms of hepatic disorders because of retained secretions and toxæmias.

After appendicitis and gallbladder operations the administration of Pichi has been attended with pronounced and good results.

Capsuli Pichi Compound contain a well balanced assembly of proven remedies that enhance the physiological effects of Pichi as an hepatic and genito-urinary remedy of unusual merit.



1104-1108 North High Street, - - Columbus, Ohio

## State-Wide Program On Mental Hygiene Comtemplated in Conjunction with Bureau of Juvenile Research

The national committee on mental hygiene, following a survey made in Hamilton County, has issued a report containing pertinent suggestions for a state mental hygiene program. The report is being given careful consideration by a state committee on which a number of representatives of the medical profession are serving who will probably be appointed to a special committee of the Ohio State Medical Association that will study the problem.

Among various suggestions is the recommendation for legislation establishing a special division of mental hygiene within the state department of public welfare to have supervision of the institutional care and treatment of persons with mental disease, mental deficiency and epilepsy and of their guardianship in the community.

Such a division would have certain bureaus for the accomplishment of other definite services, such as a bureau of clinics, which would organize "flying clinics" from state hospitals, the bureau of juvenile research and state institutions for the feeble-minded, to serve public schools, juvenile courts and various communities of the state, while a bureau of social service would have to do with the after care, parole and social service work in

connection with paroled patients and with the community supervision of mental defectives.

Better institutional provision for the treatment of persons with mental diseases, and a comprehensive state program for dealing with the feeble-minded and epileptic is recommended. The latter would include a systematic mental examination of all children in the public schools who are retarded three or more years.

It is suggested that the study of the unadjusted school child should include other mental problems than mental deficiency, and that above all the aim of treatment should be made as prominent as that of diagnosis. Further, that the school clinic should be made use of by parents and teachers for those children presenting conduct disorders.

The national mental hygiene committee calls attention to the fact that probably for generations to come the burden of training the majority of mental defectives will rest largely upon the shoulders of the public school authorities, so that whatever training most defectives are to receive will be in the public schools. It suggests legislation making provision for special classes in every community in the state where there are ten or more such mentally defective children, and au-

### WE BELIEVE

**T**HE Medical Profession will be pleased to know that for the past nine months the Sherman ten mil. vial has been filled to contain 12½ milliliters of vaccine.

In the future this package will be known as a 12½ mil. vial and will sell at \$2.00, the price of the former 10 mil. vial.

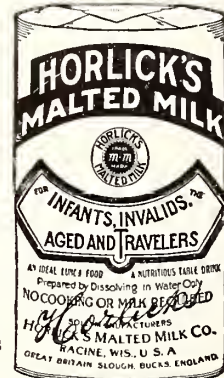
This is equivalent to a price of \$1.60 on a ten mil. basis and is an increase of 25% in the quantity of vaccine.

*Bacteriological Laboratories of*

**G. H. SHERMAN, M. D.**  
DETROIT, MICH.

## Safe and reliable for the summer feeding of infants

A  
Complete  
Food



Used  
1/3  
Century

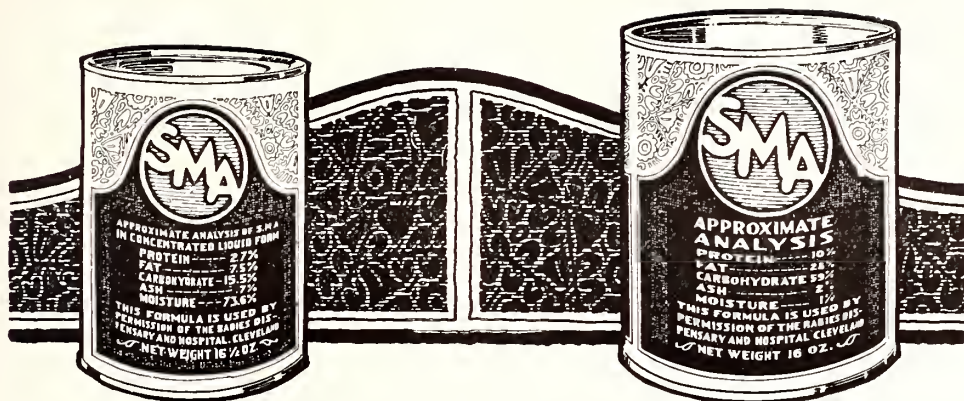
Avoid  
Imitations

Samples  
Prepaid

Hermetically sealed in sterilized glass  
containers

*Send for Literature*

**HORLICK'S - Racine, Wis.**



S. M. A. in liquid form

S. M. A. in powder form

## A Food to Keep Babies Well Adapted to Mother's Milk

# S.M.A. offers the family physician

a simple and satisfying food for babies who are deprived of mothers' milk, or who require food in addition to what the mother can supply.

A food which requires only the addition of boiled water to prepare it, whether for the month-old baby or the baby a year old.

A food which contains the required food elements; and whose clinical records of feeding show an absence of spasmophilia and rickets in any infant fed with it while it was still well.

A food which makes happy, solid,

breast-fed looking infants, and which insures normal development.

A food which is available both in powder form and in concentrated sterilized liquid form.

S. M. A. is furnished to parents on a physician's prescription. If your milk distributor or your druggist do not now have S. M. A., they will order it at your request.

Formula by permission of the Babies' Dispensary and Hospital of Cleveland

**THE LABORATORY PRODUCTS COMPANY**  
3829 Cedar Avenue  
Cleveland, Ohio

thorizing the payment by the state department of education of a fixed sum to the local school authorities.

The national committee estimates the number of feeble-minded persons in Ohio to be between 35,000 and 40,000, and the report expresses the belief that the state is not more than touching the surface of the problem of mental deficiency in the present provisions for institutional care. The position is taken that expense is no excuse as these persons are already a heavy expense to the general public and their maintenance one way or another is being provided for out of the public purse.

Parole of well-trained and carefully selected feeble-minded persons is suggested, the report stating that a great many institutions are now paroling mental defectives of this type with success.

Another phase of legislation recommended to the state mental hygiene committee is that requiring a mental and physical examination of all inmates of state penal, correctional and delinquent institutions; repeated offenders in adult courts and all problem children in juvenile courts.

Dr. E. M. Baehr, psychiatrist for the State Department of Welfare, estimates that at least 20 per cent. of the inmates of Ohio penal institutions are so mentally defective they cannot be redeemed to society and should be removed at once

to custodial institutions for the insane or feeble-minded to spend the remainder of their lives.

The State Bureau of Juvenile Research is now making its first examination of wards at the Girls' Industrial School, Delaware, the Boys' Industrial School, Lancaster, and the Mansfield Reformatory, with the idea of removing the mentally defective.

In furtherance of the suggestion to grant apparently cured patients of the state hospitals for the insane trial visits home instead of releases or discharges from institutions, a plan that has already been indorsed by the State Department of Welfare, a mental clinic was recently held at Warren. It was designed as a follow-up examination for former insane patients in that vicinity, for persons suspected of suffering incipient insanity and psychopathic cases generally:

A series of such clinics, it is believed, would enable the department to secure an accurate survey of the number and kind of mental defects in Ohio; to acquaint county officials with the work of the Bureau of Juvenile Research, and to obtain their co-operation in assigning cases to the bureaus for examination and recommendation; to find incipient cases of mental disorders and recommend care and treatment to arouse the state to support a preventative and curative program for mental defectives.

MEAD'S

DIARRHOEA IN INFANTS

"The thing that often eludes us after years of experience with many babies is knowing **WHEN TO FEED WHAT.**"—*Dr. Lewis Webb Hill.*

SUGGESTION

When a loose stool appears discontinue the food that the baby has been taking and feed

PROTEIN MILK

PROTEIN MILK is easily and quickly prepared in the home by the use of

MEAD'S CASEC  
Cow's Milk and Water

When the diarrhoea is corrected (with CASEC Mixture), the baby may be successfully fed on the proper proportions of MEAD'S DEXTRI-MALTOSE, cow's milk and water.  
Full literature on CASEC and MEAD'S DEXTRI-MALTOSE sent immediately on request.

MEAD'S  
DEXTRI-  
MALTOSE

for average  
infant feeding.

THE MEAD JOHNSON POLICY

Mead's Infant Diet Materials are advertised only to physicians. No feeding directions accompany trade packages. Information regarding their use reaches the mother only by written instructions from her doctor on his private prescription blank. Literature furnished only to physicians.

MEAD'S  
CASEC

for babies  
with  
diarrhoea

MEAD JOHNSON & COMPANY

Evansville, Indiana

# MEDICAL ECONOMICS

PUBLIC HEALTH - SOCIAL WELFARE *and* ORGANIZATION PROBLEMS  
WITH EDITORIAL COMMENT *by* D. K. M.

## Civic and Political Duty

Too often repeated is the aspersion that physicians neglect their civic and political duty through failure to take active part and exert leadership in public affairs, in which because of training and experience their influence could be extended toward the solution of fundamental problems in welfare and health.

With the multiplication of social questions, with the extension of governmental activity, it is particularly timely that physicians take a more direct interest in these matters.

The primaries are closely approaching. On August 8 will be selected the candidates for public office, including those who seek membership in the state legislature. It is understood that bills are being prepared for introduction by various bodies of disgruntled individuals, which propose to abolish laws enacted to protect the public from various forms of contagion, and intended to maintain the health and wellbeing of the citizenship.

Each physician is responsible in his community for the standard of lay thought toward health and medical service. Through county society activity and effort in education of the public or its leaders is reflected the official and legal attitude of the community and the state toward medical practice.

Each member owes a duty in cooperation with the officers of his county medical society, including the legislative chairman, to work together in these matters.

On this subject the following remarks by the chairman of the board of trustees of the Texas State Medical Association are of interest:

"Some of us are beginning to get tired of going before the Legislature and making fights for what we consider the interests of the people, only to have them say, 'To hell with you.' 'Let these measures go right on through.' We make a fight and spend our money, for whom? For the people. Let's right about face and tell the legislators that we are looking after our own interests, and that when a matter is up before the Legislature attacking us as a profession, or our interest, that we are going to be represented at the polls, in the Legislature, and everywhere else; but when the people want our advice about medical legislation, let them come around to the office and we are ready to give it to them. Now, is that sound? I am not talking about educational propaganda, you understand; that is a different matter. I am talking about spending our money and having these two-bit politicians laugh us in the face, and say, 'The same old set of fellows who were here before. They have got some

ax to grind. You are all here for the same business; we don't pay any attention to you at all.' It is enough to offend. I don't believe many doctors have been before the State Legislature with ulterior motives. They have been defending what they thought were the best interests of the people in health matters. I think it is time for us to come out and say that 'We will fight whenever you touch matters that are of interest to us,' just like manufacturers and merchants and others do. When the people want us to go and fight for them, let us say, 'Yes, we will go, but you must go with us.'"

Commenting on this kind of a situation, *The Indiana State Medical Journal* says: "Too long have we depended upon intelligence and consistency in the framing and enactment of laws that directly or indirectly affect medical practice, only to discover that the average legislator is not guided by sense or reason but by political influence, and to get under the skin of that type of legislator means that we must take a hand in molding political influence. We can't do this by pursuing an apathetic course until the legislature convenes and then frantically work to head off iniquitous medical legislation that should have been prevented by earlier and more effective action."

Do you know the character and attitude of your candidates on vital issues (some of which were summarized in the annual report of the Committee on Public Policy and Legislation in the *May Journal*)?

Has an effort been made and will such effort continue to inform and educate public officials on those questions which mean so much to the public? The duty is not so much on behalf of your profession itself, as it is a special duty to the public because of your medical insight into such questions.

The interests of the public are paramount but the advancement of the medical profession and public interest are inseparable. The one cannot be neglected without jeopardizing the other.

## Passing of Homeopathy

A new era in medical education in Ohio is inaugurated this month in the passing out of existence of the College of Homeopathy of the Ohio State University, through action taken by the board of trustees, after months of investigation and deliberation. Thus is marked a period of development of special interest to the medical profession in this state. A detailed account of the situation is carried on page 563 of this issue.

### "Your" Association

In no better way is consideration for the ideas and desires of the individual members of the State medical profession exemplified than in the spirit which characterized the remarks by members of the Council of the Association at the July meeting.

It was the unanimous thought of the officers and members of Council that the Association in its policies, procedure and activities must continue faithfully to reflect the group thought of the membership; each individual physician, as a member, entitled to equal voice in the organization.

This spirit was further reflected in the announcement by Dr. Robert Carothers, president of the Association, of the personnel of the appointive committees—standing and special—which are carried on page 568 of this issue in the proceedings of Council. These committees, together with the constitutional committees elected by the House of Delegates, the officers of the county medical societies, the section officers, and the councilors themselves, constitute an active group of several hundred from the membership and representing all specialties, all viewpoints, and all communities.

The officers and committeemen are not only entitled to the suggestions and advice of the members but of cooperation and support.

Bromidic but true—"The chain is only as strong as its weakest link". The service and benefit to the members through medical organization is in direct proportion to the interest and harmonious cooperation of *all* the members.

---

### Illinois Scandal in Licensure

The medical profession of Ohio may be thankful that it escaped the enactment of that section of the administrative reorganization code which as originally drawn would have destroyed the identity of the professional licensing boards and merged them under a department of registration and examination.

It will be remembered that Ohio was urged to adopt the "Illinois plan" under which have come scandals and indictments. The irregularities in that state consist, so it appears, in supplying advance copies of the state board questions to individuals conducting certain "Quiz" schools who either sold them to their students direct, or "fed" them to the students in short review courses of a week or ten days preceding examination. The fees charged ranged from \$200.00 to \$500.00. Lists of names of men who had failed in examination were supplied to these schools and a high-pressure advertising system was employed in getting them to come in.

In addition, persons who were not eligible to take the examination because of lack of experience, college graduation, etc., had their admission credits "fixed" so they could take ex-

amination, the prices paid ranging from \$500.00 to \$2,500.00 for the privilege of taking the medical examination—this in addition to the fee paid usually \$200.00—for entrance to the "quiz" course.

Cases are also reported where candidates, after receiving notice of failure in examination, would be visited by a "fixer" and if the sum demanded was paid, a license would come in due time, but the names of such persons were not included in the list of successful candidates issued by the Department of Registration and Education for publication.

Slight encroachments and difficulties under the Ohio system, whereby the bureau of examination of the State Department of Public Instruction may be authorized by the respective licensing boards to perform certain duties, are said to have occurred. How much worse situation might have developed if the professions had not realized the danger and demanded that the licensing boards be exempted from the system of political consolidation.

The State Medical Board, the Dental Board, the Pharmacy Board, the Board of Embalmers, must be preserved as such in order to maintain professional identity and integrity and to preserve the best interests of the public.

Naturally there should not be a wide multiplication of such boards. All the healing arts—medicine and its limited branches—should and must be retained under the present uniform system as administered under the State Board of Medical Registration and Examination. Public interest demands the enforcement of reasonable fundamental requirements for all who treat the sick, with special examinations in the limited branches for those who do not meet the full educational requirements for complete licensure.

---

### Workmen's Compensation Developments

Like Fourth of July pyrotechnics the lurid publicity relative to "looting" of the state workmen's compensation fund by "dishonest doctors" has finally fizzled down to facts. There is "no such condition existing as the newspaper reports would indicate in reference to doctors throughout the state collecting excess fees under the workmen's compensation law", says Chairman T. J. Duffy of the State Industrial Commission, who adds: "I deplore very much the publication of these articles. They are not warranted according to facts in the case, and I regard the publication of such misleading statements as being harmful to the workmen's compensation department as well as an injustice to the medical profession of the state."

It looks as if some other person was looking for personal credit on the basis of false "economy" in an effort to reduce medical costs in the operation of the compensation fund.

Naturally, if physicians have made false

claims against the fund they should be held to the "strictest accountability", but such procedure should be against them as individuals and not as representative of the medical profession as a whole.

Drastic cuts in the premium rates under the workmen's compensation fund system were forecast in July when a 30 per cent. refund in the form of credit premium was estimated on the next payment. This refund represents a total distribution of \$3,000,000, which exceeds the previous record by one million dollars.

The dividend goes to employers in 491 classifications which showed a surplus during the period of its accumulation. Those employers in classes which cost the fund more than the amount of premiums paid in will not receive the dividend. Under the proposed readjustment of rates, reductions will be made in 491 classifications, which represent 66 per cent. of the entire number. In 179 classifications, there will be no change of rates, while in 75 classes which showed deficits, there will be an increase. A total savings of \$106,000 under the legislative appropriation was also expected in the operation of the department.

The department of claims of the Industrial Commission, in a report for the month of June points out a decrease in the number of industrial deaths and injuries, as compared with the preceding month.

During the month of June, there were 10,574 injury and death claims filed in all classes as compared with May, when 11,509 were submitted. In June there were 48 death claims and 10,526 injury claims against 53 and 11,456 respectively for May. In the state class there were 9,410 injury claims, of which number 7,050 were medical only claims, indicating that the great majority of injuries while requiring medical service were of temporary duration. The number of claims disposed of in all classes decreased from 11,587 in May to 10,478 during June. The cause assigned by the department for this recession of activity is the number of employes that are out on annual vacations.

Since the law extending the benefits of the workmen's compensation law to include occupational diseases was placed into operation in the state eleven months ago, there had been 413 claims filed up to June 30.

Classification of these claims as to diseases follow: Anthrax, 1; Aniline Poisoning, 3; Arsonic, 1; Benzol Poisoning, 8; Carbon Dioxide Poisoning, 4; Dermatitis, 221; Fume Poisoning, 1; Lead Poisoning, 130; Napthol Vapor Poisoning, 1; Zinc Poisoning, 1; Other causes, 42.

### Ohio's Recommendations Effective

Aside from the scholarly attributes of its members, the many notable contributions made to the advancement of the medical and surgical sciences, the medical profession of Ohio may be well, and justly, proud of another achievement—that of being in the vanguard of the best organization thought and practice of the day.

In the pronouncement of policies and the establishment of new organization activities, the profession, through the Ohio State Medical Association, has made a truly splendid record; one of nation-wide scope.

Indicative of this trend toward the acceptance of the aims and ideals of the Buckeye profession is the action taken by the House of Delegates of the American Medical Association at the St. Louis session, when the Board of Trustees were authorized to take over from the Council on Health and Public Instruction its medico-legal and legislative work and to organize a new bureau through which such work shall be transacted.

The first step in the organization of this bureau has been taken. The Board of Trustees has announced the appointment of Dr. William C. Woodward as executive secretary of the Bureau. Dr. Woodward's experience in public life, as health commissioner of the District of Columbia and later of the city of Boston, together with his legal training, have especially fitted him for this position. The bureau is now a part of the national organization.

Proposals for the establishment of the Bureau were first submitted to the House of Delegates of the A. M. A. at the Boston meeting in 1921, when Dr. J. H. J. Upham presented the Ohio resolution embodying the essentials for its organization. This resolution was referred to the trustees for action. At the St. Louis meeting one year later it was formally adopted.

This bureau, patterned in a measure after successes attained in this state, should be of definite service not only to the profession but to the public in a national way.

Such service is expected not only to include contact, information on, and guidance over, proposed and pending federal legislation of direct interest to the profession, but on proposed plans, regulations and rulings of various federal departments and bureaus concerned with problems of public health and medical practice.

The educational work of the bureau is too, of vital importance. Material directed to the public upon matters pertaining to disease prevention, sanitation, public health and protection against quackery will be of immense value. This service would contemplate direct and constant contact with federal departments, with the possibility of properly guiding educational efforts and propaganda issued by the United States Public Health Service, and from other official

and semi-official agencies interested in and concerned with the health of the nation.

A bureau at Washington is the next step. Problems that will confront it will undoubtedly be both numerous and complex. The satisfactory solution of these and the success of the service rendered will depend, in a large measure, upon the whole-hearted support and the close cooperation of the profession as a whole.

Its possibilities as an agency for allaying misunderstandings and misinformation in the field of public health and medical practice, are unlimited. Much depends upon its success.

#### Health Code a Legislative Issue

So thoroughly are Ohio women convinced that the principles of the Hughes-Griswold Health law are fundamentally sound and afford the essential machinery, necessary in the field of public health today, that they have, through the Ohio League of Women Voters, forwarded a questionnaire to the various candidates for the state senate and house of representatives who are subject to the August primary, asking:

"Will you defend the Hughes-Griswold Health law against amendments that might weaken it?"

This forecast of the attitude of the Ohio League of Women Voters against any destructive attack upon Ohio's law, coincides with the resolution adopted by the House of Delegates of the Ohio State Medical Association at Cincinnati in May, which states in part:

"Resolved, that the Ohio State Medical Association in annual convention assembled records its opposition to any amendments that may be proposed to the Hughes-Griswold Law which do not have the effect of adding strength to it."

#### "Maternity and Infancy"

If pre-primary activities presage determined effort in the future, Ohio may expect to see an organized attempt by the Ohio League of Women Voters to secure the "full enforcement of the provisions of the Sheppard-Towner law."

Candidates for nomination to the state legislative offices are being sounded-out by that organization, prior to the August primary concerning their attitude toward "the appropriation of state funds to match funds which the federal government will spend in Ohio under the provisions of the Sheppard-Towner act for the public promotion of maternity and infancy". The candidates for governor are being interrogated concerning their theories toward carrying-out "in full" the provisions of this federal act.

This is interesting in view of the resolution adopted by the House of Delegates of the Ohio State Medical Association whereby is pledged "every honorable means to deter the Ohio Legislature from the appropriation of any monies for the purpose of providing *medical attendance*

under the provisions of the said law." And while the present policy of the State Department of Health is sane upon this matter, there may be later difference of opinion on how public money is to be spent in carrying-out "in full" the provisions of the federal act.

Those advocates of enforcing the provisions of the act, in full, might find facts for thoughtful reflection in the first report issued by the Chicago Community Trust, which has undertaken a general survey of the urban institutional facilities for the care of the sick and the disabled in Illinois.

The first study and report is concerned with "Prenatal Care in Chicago" and states that there are twenty-eight prenatal stations for indigent cases in that city, none of which are publicly conducted. All have been developed by various types of agencies and organizations.

Less than ten per cent. of the women delivered each year in Chicago, it is said, receive prenatal care by clinics or similar organizations. The greatest majority, those presumed to be able to select and pay for such service, employ private physicians.

#### Public Health and the Tariff

The Senate has adopted an amendment to the Tariff Bill which reduces the duty on surgical instruments, "composed wholly or in part of iron, steel, copper, brass, nickle, aluminum or other metal", to 45 per cent. ad valorem. The rate originally fixed in the bill as it passed the House of Representatives was 35 per cent. The Senate Finance Committee subsequently advanced the rate to 60 per cent., which was considered excessively high and to which much objection was made. The rate of 45 per cent. is likely to remain, it is said, in the final passage of the Tariff Bill. The Senate also adopted a rate of 35 per cent. on dental instruments.

The Fordney bill, as it now stands, does not contain any provision permitting free importation without duty of philosophical, scientific and laboratory instruments, although the Payne-Aldrich law of 1909 contained such provision. The Underwood Tariff of 1913, which is now in force, does not permit free importation of scientific instruments.

#### The Difference

Physicians are often criticized for not taking their patients into their confidence, while it is stated that the popularity of the chiropractor is due to his perfect frankness in this regard; from which it would appear that the difference between the physician and chiropractor is that the physician knows what is wrong with the patient but won't tell, while the chiropractor doesn't know what is wrong but is glad to tell it.—Bulletin of Cleveland Academy of Medicine.



# Spontaneous Evolution in Transverse Presentation\*

SYLVESTER J. GOODMAN, Ph. G., M.D., F. A. C. S., Columbus

*Editor's Note.*—Spontaneous evolution is extremely rare even in the extended experience of the most noted obstetricians, hence the interest that attaches to the cases reported by Dr. Goodman. Douglas, of Dublin, has described the mechanism of spontaneous evolution as it occurs in favorable cases, which are, however, the exception and not the rule. Very frequently the condition is not realized as such until after delivery has occurred and the case has been studied in retrospect.

**N**O ONE, I am rather certain, will dispute the statement that transverse presentation of the fetus is a most formidable complication, especially if the patient has been allowed to advance with her labor to the point where the arm has prolapsed and the shoulder has become impacted in the pelvis. In practically all such cases it will be found that the child is dead, and unless proper treatment is instituted at once, there is grave danger of rupture of the uterus. Many unpleasant experiences with transverse presentations can be avoided if the attending obstetrician tarries and thinks a little before he ruptures the membranes.

Perhaps a better understanding of the conditions, leading up to the maneuver under discussion, could be had if we were to consider the whole subject of transverse presentation, but as the title of the paper indicates, we are to talk about *spontaneous evolution*.

## METHODS OF TRANSVERSE PRESENTATION DELIVERY

There are four natural methods, or ways, in which transverse presentations can be delivered. These are spontaneous rectification, spontaneous version, spontaneous expulsion and spontaneous evolution. For the study of the first three I will refer you to the text books. Spontaneous evolution and spontaneous version are frequently confused.

*Spontaneous evolution* is a mechanism of delivery by which the body of the transversely presenting foetus is bent upon itself, being forced gradually down into the pelvis. The head impinges above the ileo-pectineal line on one side, and the neck becomes excessively stretched, thus allowing the shoulder, arm and thorax to be packed down into the birth canal. Prolapse of the arm gains room for the trunk and eventually the groin, the buttocks appear next at the vulva alongside the arm, whereupon evolution is complete and delivery may be effected with comparative ease.

## INCIDENCE OF SPONTANEOUS EVOLUTION

Spontaneous evolution is extremely rare. The case, which is to be reported, was the first I had ever seen. The whole thing happened so quickly and smoothly that I had to pinch myself to be sure that I was not "seeing things". The following statistics, taken from the report of a

case published by Dr. Matthew Marshall, Pittsburgh, Pa., (*Am. Jour. Obst. & Gyn.* Vol. 2, No. 2, Aug., 1921), will impress you with the rarity of this delivery. Schroeder places the number of transverse presentations at one in two hundred deliveries. Spontaneous evolution occurs once in several hundred transverse presentations. Payer collected records of 34 cases in 468,557 births. At Johns Hopkins Hospital it has occurred twice in 13,000 deliveries. At the Western Pennsylvania Hospital it has occurred but once in 3,500 deliveries at full term. To my knowledge there has been no other case in our hospital during the twenty-one years I have been on the staff.

## MECHANISM OF SPONTANEOUS EVOLUTION

Most obstetricians are agreed that this mode of delivery can take place only by the method described by Dr. John C. Douglas, of Dublin. I have taken his description from Herman's "Difficult Labor". "In the second stage of labor the shoulder is forced very low into the pelvis. The shoulder and thorax are at each successive pain forced still lower, until the ribs are on the perineum, and cause it to assume the same form as it would by pressure of the forehead in a natural labor. At this period not only the entire arm, but the shoulder can be perceived externally, with the collar-bone lying under the arch of the pubes. By further uterine contractions the ribs are forced more forward, appearing at the orifice of the vulva, as the vertex would in a natural labor, the clavicle having been by degrees forced round on the anterior part of the pubes. The entire fetus, immediately prior to its expulsion, somewhat resembles the larger segment of a circle; the head rests on the pubes internally, the collar-bone presses against the pubes externally. The arm and shoulder are entirely protruded, with one side of the thorax not only appearing at the vulvar orifice, but partly beyond it; the lower part of the same side of the trunk presses on the perineum, with the breech either in the hollow of the sacrum, or at the brim of the pelvis, ready to descend into it. By a few further uterine efforts, the remainder of the trunk, with the lower extremities, is expelled. Delivery is finished as in a labor in which the breech had presented. This mode of delivery takes place when the fetus has descended into the pelvic cavity. It requires very powerful uterine action to accomplish it. If only

\*Read before the Section of Obstetrics and Pediatrics, of the Ohio State Medical Association, during the Seventy-Sixth Annual Meeting, at Cincinnati, May 2-4, 1922.

the uterus is strong enough, a full-time child may be delivered through a pelvis of average size in this way, and may survive. Delivery in this way, if it is going to take place at all, will do so quickly." In the cases recorded by Dr. Douglas, the labor was in each case over in less than six hours. "But it is very seldom that the uterus is strong enough to drive out the child in this way, and therefore you must not wait or expect this to happen."

#### PERSONAL EXPERIENCES

A few weeks before I was called to see the case to be reported, I saw a transverse presentation with arm protruding. The waters had drained away and the child was impacted in the pelvic cavity. The fetus was dead, the patient's temperature was 103 degrees and she was having intense chills. She was removed to the hospital and after an attempt to deliver the babe I performed decapitation and amputation. The mother died of sepsis eight days later. With the picture of this case in mind I was not especially enthusiastic when I was called in counsel to attend another patient in practically the same condition.

#### ILLUSTRATIVE CASE REPORT

*Case Report:*—Mrs. L. J. M.—, patient of one of our local physicians, a four para, white, aged 33 years, married twelve years. All other labors normal except that one was a forceps delivery. No pre-natal examination of any kind was made, the patient having reported to the attending physician the day before labor started. On arrival at the home of the patient, at the time of delivery, the doctor did not make any pelvic examination, nor detect the fact that he was dealing with a twin pregnancy. The first child was born spontaneously about 8:30 A. M. The placenta came quickly with little or no bleeding. The doctor left soon after and the women folks busied themselves with the washing of the baby. The patient soon went into labor again, the pains being even more severe than before. They saw that she was about as large as before the first baby was born and excitedly called the doctor to the house. When he arrived he was greeted with the sight of an arm protruding from the vagina. He at once called me to see the patient, and owing to the very unsanitary and unhygienic surroundings, I ordered her removed to Grant Hospital. This was about noon of the same day.

On arrival at the hospital examination showed that the right arm and shoulder were protruding from the vagina. The dorsal part of the right chest was also presenting. The position was left acromion anterior with marked discoloration of the presenting part. This case exactly resembles the one reported by Marshall, of Pittsburgh. After examination was completed the patient was draped for delivery, by version, and ether administered. While scrubbing up, preparatory

to delivering the patient, one of the nurses called my attention to the fact that the baby was delivering itself. I remarked that there was no occasion for haste as there was little doubt that the babe would await our coming to deliver it. Upon inspection, however, I was amazed to see the arm, shoulder, chest, trunk and buttock, and then the head deliver without any aid from us. All we did was to deliver the placenta and I have no doubt it would have come away without our assistance. The mother's measurements were about normal and there was nothing worthy of note about the shape of the pelvis. The child was dead and macerated. The mother made an uneventful recovery and left the hospital in about one week.

This being the first case of the kind in our hospital, we did not recognize that we had seen such a rare delivery until reviewing our old text books. Within the month I was interested to see the report of Marshall's case and his report of Herrgott's case. The remarkable similarity between these three cases is of more than passing interest. In all three cases the mechanism of Douglas was the type observed. I trust that anyone having such a delivery, in the future, will report the same as soon as observed.

In conclusion I wish to call your attention to the extreme rarity of this condition and to repeat that one should never wait for this mechanism to effect delivery.

121 S. SIXTH STREET.

#### REFERENCES

1. Marshall: *Am. Jour. Obst. & Gyn.*
2. Herman: *Difficult Labor.*
3. Williams: *Text Book on Obstetrics.*
4. Tweedy and Wrench: *Text Book.*

#### NEW AND NONOFFICIAL REMEDIES

During June the following articles were accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies: Borchardt Malt Extract Co.: Borchardt's Malt Cod Liver Oil and Phosphorus. Intra Products Co.: Ven Sterile Solution Procaine, 0.5 per cent.; Ven Sterile Solution Procaine, 2.0 per cent.; Ven Sterile Solution Procaine, 5.0 per cent. Lederle Antitoxin Laboratories: Pituitary Extract-Lederle, (Obstetrical); Pituitary Extract-Lederle, (Surgical). Parke, Davis and Co.: Diphtheria Antitoxin piston syringe containers; Antitetanic Serum piston syringes containers; Antigonococcic Serum, 12 Cc. bulbs; Antistreptococcic Serum, 20 Cc. piston syringe containers; Antistreptococcic Serum, 50 Cc. piston syringe container; Anti-Anthrax Serum; Antimeningococcic Serum; Diphtheria Toxin-Antitoxin Mixture; Tuberculin B. F. (Bovine); Gonococcus Vaccine, 1 Cc. bulbs; Gonococcus Vaccine, 1 Cc. syringe; Gonococcus Vaccine, 5 Cc. bulb; Gonococcus Vaccine, 20 Cc. bulb; Erysipelas and Prodigiosus Toxine (Coley), 1 Cc. bulb; Erysipelas and Prodigiosus Toxins (Coley), 15 Cc. bulb.

## Chronic Infectious Arthritis (Still's Disease)\*

S. D. FOSTER, M.D., Toledo

*Editor's Note.*—On account of the increasing prevalence of infectious arthritis it is a treacherous thing to make a diagnosis of so-called rheumatism. The infectious arthritides present so similar a history as to point to a common pathology and bacteriological family tree. The lesions may be proliferative or degenerative. The inroads in any particular case depend on the bacterial and toxine effects as well as the duration of the disease and the susceptibility of the patient. The X-ray may be of differential diagnostic value, while the nodes of Heberden are pathognomonic. Treatment, according to Dr. Foster, consists principally in the removal of foci of infection, hygienic care, rest of the joints and the use of appropriate endocrines. Occasionally operations may assist in decreasing disability.

THE HISTORY of any case of the infectious arthritides is so similar to all others, from a broad viewpoint, that no doubt is left but that they have a common pathological and bacteriological family tree.

Draper is of the opinion that chronic arthritis represents very profound constitutional disturbances, in which forces, analogous to those concerned in acromegaly and thyroid insufficiency, are concerned. Coulaud also relates experiences with severe cases of rheumatism, which improved under thyroid treatment. However, he and others warn us that these patients, who also had tuberculosis, might suffer early death from the aggravation of the tuberculosis from this treatment.

### PATHOLOGY AND BACTERIOLOGY

The pathology may appear to change from time to time, or there may appear to be a difference in the articulations of the same individual. This difference may be real or only apparent. Nichols, of Boston, says "it is unusual, but quite possible to have both *proliferative* and *degenerative* arthritis co-existing, hence the same end-results may be produced in these joints by a variety of irritating agents, and a given agent or irritant may produce a variety of gross appearances."

The pathological changes, which do take place, are those caused by the bacteria themselves, or more frequently, by the bacterial toxins.

In the very acute cases, or those in which the bacterial count is very high, the determination of the causative factor may be easy. More often the examination of the aspirated fluid is fruitless. Schuler, Banantyne, Wohlman and Fayerweather, in a large number of cases, have worked out a special line of tissue staining, whereby, they have demonstrated the bacteria *in situ* in the deep layers of the synovial membrane.

Whether the pathological changes are proliferative or degenerative, as the case may show, the causative factor will be found in some bacterial action. These bacteria may be alive or dead, accentuated or weakened, or it may come from endotoxines or even the exotoxines.

It is very likely, that the only difference in the proliferative or degenerative conditions may be the amount, or the length of time that this irritative factor is at work; or the susceptibility of its habitat; or the condition of the patient, as is shown by the opsonic index. It is a battle of these forces which determines whether the disease or the resisting power is paramount.

The pathological changes will vary, from the mere hyperaemia of the synovial membrane, to the most extensive destruction of all tissues in and about the joints, or to the greatest amount of proliferation, as shown in other cases. With this, usually at some stage, comes an ankylosis of one or more joints, even including the vertebral column.

### DEFORMITIES

This ankylosis may be *true* or *false*. It may be bony or fibrous, and often the trouble resides in the contraction of muscles or fascia, or from the irregular surface of the component parts of the joint.

This condition of ankylosis may be further exaggerated by the presence of Heberden's nodes on the articular surface. These nodes are found to be an hypertrophy of the peri-chondrium at the joint margin of the cartilage and capsule, and this hypertrophy may be real bone.

Usually the classification of these ankyloses can only be determined after the use of the X-ray, or under the relaxation of anesthesia.

Probably 80 to 90 per cent. of all such cases, when they make their first visit to a physician, have a diagnosis of *rheumatism* placed upon them. In the light of present-day scientific research, no such diagnosis should ever be made, until after all possible foci of infection have been eliminated. These sources may be anywhere, but are more frequently found in the head and neck. Those in the tonsils, teeth and intestinal track, being the most easily discovered and eliminated.

Many clinicians have reported excellent results and cures, when such foci have been found and removed. Among these is Leonard W. Ely, of San Francisco, whose report, under the title "The Second Great Type of Chronic Arthritis: A Laboratory and Clinical Study," in the first

\*Read before the Surgical Section of the Ohio State Medical Association, during the Seventy-Sixth Annual Meeting, at Cincinnati, May 2-4, 1922.

number of the Archives of Surgery, is of much value for our study and consideration.

#### DIFFERENTIAL DIAGNOSIS

As happened in the case to be reported in this paper, the question of *tuberculosis of the joints*, must need to be settled in the differential diagnosis of each case.

A few guiding points should be remembered: *first*, the pathology in tuberculosis is rarely multiple, but is so in chronic infectious arthritis; *second*, in tuberculosis the site of the pathology is primarily in the osseous system, while in the infectious arthritides, it is primarily in the soft tissues; *third*, Koch's old tuberculin should give a positive reaction *only* in tuberculosis; *fourth*, in the vertebral column tuberculosis is usually found only in the bodies of the vertebrae, and not in the lamina, and with this bone destruction comes deformity of the vertebral curves, while in the chronic infectious arthritis, there is generally bone formation and ankylosis, with no such deformity, except that which comes from bad posture.

One noticeable thing in the arthritics, is that generally *all the joints to be involved are attacked early*. Seldom does the condition spread after it has become chronic.

In *gonorrhoeal arthritis* we generally find a mono-articular infection, while in chronic infectious arthritis, as already mentioned, it is usually poly-articular. Also in gonorrhoeal arthritis the knee is the most common site of the trouble. If it starts in the knee in infectious arthritis, it early spreads to other joints. In gonorrhoeal arthritis the diaphyses of the long bones may be affected, while in the others, they are seldom or never involved. No bony spurs are found on the plantar surface of the os calcis, while in the gonorrhoeal cases these spurs are frequent. Usually, in the gonorrhoeal cases, it is possible to find evidence of the primary infection somewhere in the genito-urinary systems, while in the arthritics, the foci may be found anywhere in the body and are caused by any of the pyo-genic organisms.

#### TREATMENT

The treatment of chronic infectious arthritis includes many remedial measures, both local and general. This means that as yet there is no known specific.

Everything possible should be done to build up the body health together with its resisting powers; including fresh air living, regulated diet, tonics and rest, together with free elimination of the end-products of perverted metabolism.

Then a search for any focus of infection must be made; and it is removed or drained, if possible. Some clinicians have thought that they obtained good results from repeated injections of pituitary and thymus gland extracts. These endocrine products are at least worth a thorough trial.

Locally we use heat, light and massage of the joint areas, and with them rest by means of some sort of splint or plaster cast. The deformities are usually those of joint flexion, as most of the flexor muscles are the stronger. When the vertebrae are involved, the support should be so placed, that when ankylosis does take place, the body will be in the best possible posture not to interfere with free respiration. All these measures must be continued until the disease is no longer progressing.

After the disease has apparently reached its limit, a careful study of the joints is to be made, in order to see where a change of posture might benefit the patients or make them more comfortable. Tenotomy, arthrotomy, osteotomy, arthrodesis, arthroplasty or arthrectomy may be called for. Any beneficial operative procedure is justifiable in such cripples as they are the most helpless of individuals.

#### ILLUSTRATIVE CASE REPORT

Girl, (A. S.), aged 10 years, perfectly normal at birth, the third of five healthy children. She remained well until nearly three years of age, when she had a slight fever for a few days, but that soon passed away and she was supposed to be all right again. About one week later, her right knee became swollen and painful, then the right ankle. The right limb was placed in a cast for some time; but no good resulted. Soon the disease spread to other joints involving the vertebrae.

I first saw her at the time that, July 21, 1920, and the only remaining joints that had good motion were the left shoulder and temporo-mandibular. She could lie on her back, inclining to the right, with her lower limbs acutely flexed at the knees and hips. The left elbow was ankylosed with the palm of that hand toward her back. There were Heberden's nodes on both hands.

There was no pain, fever or cough. Pulse rate varied from 110 to 120; the B. P. was Sys. 100 and Dias. 70.

She had spent three years in the Tuberculosis Hospital and had then been discharged *as not having tuberculosis*. Records show that she had entered the hospital May 29, 1916, and had been discharged August 30, 1919.

*Diagnosis*: Probably chronic infectious arthritis.

*Prognosis*: Poor as to recovery. Her parents were told that she might be changed to a posture that would enable her to hold a book and touch her head, if they would sign a "release from all liability."

An examination under ether revealed the fact that she could move none of the joints.

*Operations*: On August 4, 1920, under ether given by Dr. Young, and assisted by Dr. Figley, I exposed the left elbow. The union at this articulation was so firm that we finally did an

excision of the entire joint, being very careful not to injure the nerves or blood vessels supplying the forearm and hand. This ankylosis was really bony, and it was only after a wide excision, that we were able to bring the hand around so that the palm would be toward the head. The arm was kept in a plaster cast for about two weeks. After the cast was removed passive massage with heat and light therapy, was applied. The patient had no idea of the methods necessary to move this joint, and she has never acquired them. She can, however, hold a book or doll, and she has learned to feed herself.

On September 8, 1920, about one month after the first operation, I started, with the same help as before, to fix her right hip. After we had come down to and cut the deep fascia, we were able to move the hip and also the corresponding knee. The right leg was placed in a plaster cast with the joints at about a right angle. After four days the anterior part of the cast was removed, and an attempt was made to use massage and passive movements. There has, however, not been much improvement since the day of operation, except that the tone of the muscles has been increased.

On October 8, 1920, just a month after the second operation, and with the same help as before, I tried to better the left lower leg. All that was necessary, here, was to do a tenotomy of the flexor muscles and tendons. Eight days later, this cast was removed, and it was seen that we had union by first intention. It was at this time that there was some sign of trouble, but for-

tunately it proved to be of no consequence. The girl had been stupid for two or three days. Naturally we were thinking of tuberculous meningitis. However Dr. Dice and I could find no other symptoms of that condition, and the stupidity soon passed away.

The Von Pirquet test had been negative, and there had been almost an entire absence of fever, during her long stay in the hospital. The girl has never been in school; but is naturally bright. I have been trying to get some one interested enough to teach her to read, so that she can amuse herself and pass the time more agreeably.

#### CONCLUSIONS

1. The different classes of the arthritides come under the same pathological family tree.
2. Many research workers now classify the arthritides under endocrinopathies.
3. The pathology varies and we may have both proliferative and degenerative changes in the same case.
4. Joint ankylosis may be true or false.
5. Most cases are first diagnosed as rheumatisms.
6. Many cases improve when infectious foci are removed.
7. Arthritis must be differentiated from rheumatism, tuberculosis and gonorrhoea.
8. Treatment consists in the removal of causative factors, together with the use of heat, light, massage, good diet and rest by means of protecting casts.

---

## The Physician, the Health Official and Co-operation\*

M. F. HUSSEY, M.D., Sidney

*Editor's Note.*—Dr. Hussey strikes the keynote of the present medico-political and economic situation by quoting the following from Whipple—"The nation should not embark upon programs of socialization of medicine, socialization of nursing, or the paternalistic or maternalistic care of health of individuals, without first looking ahead to see where such policies lead, socially, financially and politically. The advisory powers of the health department should be freely used, but the treasury of the state should not be drawn on to pay for personal benefits or class benefits even in the name of health."

**T**HE LEGENDARY HISTORY of the healing art has its inception in Apollo, called by some Helios, the Greek for sun, and was naturally considered the restorer of life after the blighting influence of winter and disease, the producer of all growth and the constant wager of warfare against cold, darkness and death. His deeds were sung by the various muses of history, song, poetry and tragedy. *"Bright-haired Apollo—thou who ever art a blessing to the world, whose mighty heart forever pours out love and light and life."*

Apollo had one son, Aesculapius the god of medicine, who was instructed by Chiron the

learned, and, in the healing art, by his father; he soon excelled his father and, it was said of him, that he could recall the dead to life and that he also possessed fabulous powers in the prevention of disease. It is told that while in the form of a serpent, he was being transported to Rome, where a very fatal plague existed, he escaped to an island in the Tiber from which place the plague was banished.

His brilliant medical career was brought to an untimely end by Jupiter who feared the people would worship the physician instead of himself, so he hurled him with lightning down to Pluto's world.

However, this did not extinguish his race for he left two sons both of whom were physicians;

\*Read before the Section on Hygiene and Sanitation of the Ohio State Medical Association, during the Seventy-Sixth Annual Meeting, at Cincinnati, May 2-4, 1922.

one of them, Machaon, also possessed miraculous healing powers, having healed an offensive wound of ten year's duration for Philoctetes, who had been left on the island of Lemnos for that period.

Aesculapius also left a daughter, Hygeia the goddess of health, whose function seemed wholly the protection of health and the prolongation of life.

#### LEGENDARY TIES

The legendary ties of consanguineous relationship, that bound Medicine and Hygiene during the mythological period, are now scientific correlation and service to humanity in the amelioration of suffering, the correction of disturbed function, the hastening of convalescence, the healing of lesions, the removal of causes and prolongation of life. As moral obligations are often stronger than legal ones, so are the ties for the service of humanity stronger than those of blood relationship.

Hygiene is an integral part of medical science. Its advancement is, *pari passu*, as the advancement of medicine. In their advancement there has never been conflict, but often each has been an adjuvant to the other. In their functioning, they have, in the past, most usually harmonized, co-operated and reciprocated. Will such co-operation and harmony continue? If not, why not? "Aye, that's the question!"

#### THE BASIS OF CO-OPERATION

Some changes have taken place, and many more are threatened, in the relation of the public health organization to the individual practitioner of medicine, relative to the province of public health and its means of accomplishment. In the writer's opinion there is a barrier that may prevent the co-operation of the health official and the practitioner, thereby thwarting the full fruition of the health organization, the achievement of a binding philosophy of health, embracing all and benefitting all.

Such achievement, devoutly to be wished for, is perhaps, too Utopian to be realized but the ideal can be more nearly reached, if co-operation instead of conflict be established and maintained. *This can be done in one way only, namely by restriction of the health officials to sanitation and education, of which there is a large and fertile field for cultivation.*

They must not enter the field of bio-chemistry or immunology. This should be forbidden ground except in indigent cases, which should be clearly defined or cared for after consultation with the physician or physicians in that immediate vicinity. This restriction should be an *ipse dixit* issued by the State Health Department without too prolonged procrastination, lest it be issued by the combined voices of thousand of physicians of the state, who resent the economic encroachment of their function.

If the warp and woof of the integrity of the Hughes-Griswold bill shall be maintained and its sphere of usefulness, commensurate with social needs, be perpetuated, the executors of its provisions, individually and collectively, must at once recognize their functional limitations, and that industrial processes, old age pensions, health centers, welfare work, community diagnostic clinics, and the Sheppard-Towner Maternity bill are but entering wedges to socialization of medicine or mere incidents in a false theory that hopes to unify the whole social organization and make it representative of the composite welfare of all.

Russia knows too well the results of such socialization. I do not know that my apprehension transcends that of the general practitioner relative to the health official's encroachment on the duties and functions of the physician, neither shall I prophecy what effects would follow such encroachment. We all know, or should know the potentialities for good or evil that lie in the hands of the doctor.

Mutual endeavor, where there is conflict, interference or economic violation of another's rights, is a psychological impossibility; eliminate these and the ends will command co-operation which will often be needed to overcome such criticisms as usually follow the initiation of social changes and constructive legislation.

Let us make a comprehensive and altruistic effort to co-ordinate, correlate and synthesize the function of the health official and the physician and, this being done, each can then find his proper sphere of labor, the magnitude of which is sufficiently large for all. Neither can function fully, intelligently and efficiently without harmony, collaboration and co-operation.

#### THE PROBLEM OF IMMUNOLOGY

Shall our health officials assume the rôle of immunologists? Is it their function to use the Schick tests for susceptibility to diphtheria and to immunize the susceptibles? Shall they vaccinate the unvaccinated? Shall they go round with a Luer syringe and vials of typhoid and paratyphoid vaccines, inoculating gratuitously any one, especially if he have in contemplation a fishing trip up or down the river or a week of camping? Can he use the protein tests for hay-fever, asthma, eczema and, perhaps a host of other unknown conditions produced by anaphylaxis and then immunize them or have them abstain from certain proteins producing the manifestation?

In a few short years immunologists may be able to immunize against the various types of pneumonia, tuberculosis, pertussis, meningitis, and what not! Will the health officer then continue his immunizing? Will he furnish the young Lothario with calomel ointment and a solution of argyrol as a prophylactic against

venereal diseases, thereby aiding and abetting prostitution?

I do not know that the general practitioner of medicine will stand supinely by with his arms akimbo and see the usurpation of his rights, which he has possessed from the very incipency of the healing art, which custom has vouchsafed him and for which his education has qualified him, but I do believe that the general practitioner's whole heart and soul will co-operate with the health official, if he will remain from the field of immunology.

#### CONCLUSION

Permit me in closing to quote from Prof. George Whipple: "*The nation should not embark upon programs of socialization of medicine, socialization of nursing or the paternalistic or maternalistic care of health of individuals without first looking ahead to see where such policies lead, socially, financially and politically. The advisory powers of the health department should be freely used, but the treasury of the state should not be drawn on to pay for personal benefits or class benefits even in the name of health.*"

## Dermatoses of Present Day Interest\*

JAMES W. MILLER, M.D., Cincinnati

Instructor in Dermatology, College of Medicine, University of Cincinnati; Attending Dermatologist to the Cincinnati General Hospital, Good Samaritan Hospital, Episcopal Hospital for Children, and General Protestant Orphan Asylum.

*Editor's Note.*—Epidermophytosis, ordinarily termed dysidrosis or pompholyx, is a vesicular dermatosis essentially limited to the hands and feet, now recognized as a mycotic affection and is caused by the epidermophyton inguinale of Sabouraud. The treatment is by no means easy. However, very brilliant and striking results often follow the use of the dermal curette and the application of Whitfield's ointment. Dermatitis exfoliativa following the use of arsphenamine, while fortunately seldom seen, will perhaps in the future be observed oftener from the more general use of this remedy. Treatment consists in keeping up the heart, the use of general stimulants and especially alkalies, internally and externally.

**E**PIDERMOPHYTOSIS AND DERMATITIS EXFOLIATIVA, following the administration of arsphenamine, are two dermatological conditions that are of more than usual interest at the present time. Ringworm of the cutaneous surface, trichophytosis with the classical symptoms, such as we are all familiar with, the sharply margined ringed lesions as seen on the general surface, is so radically different from epidermophyton infection, that a description merits attention. What was formally termed dysidrosis of Tilbury Fox, or pompholyx of Hutchinson, or intertrigenous eczema, an inflammation essentially limited to the hand and feet, is now known to be of mycotic origin in a large number of individuals. It is estimated that one-half of all cases of this type now give cultures of epidermophyton. Likewise dermatitis exfoliativa following the use of arsenic, principally arsphenamine, although only seen occasionally (severe cases occur only in a very small fraction) will perhaps be observed more frequently following the more general use of this valued preparation.

#### MYCOTIC NATURE OF SKIN ERUPTIONS

The mycotic nature of many skin eruptions of a vesicular or vesico-bullous type and spoken of as eczema, dysidrosis or pompholyx, especially when found upon the hands and feet is now well established and it only awaits more careful cultural methods to place this class of skin diseases,

definitely under parasitic affections. Maukhtar<sup>1</sup>, while working in the clinic of Fournier in 1892, first described an eczematoid eruption showing an abundant growth of mycelial threads. In 1908, Whitfield<sup>2</sup> described five cases of ringworm of the hands and feet indistinguishable from an ordinary outbreak of acute vesico-bullous eczema. This was followed by a report from Sabouraud<sup>3</sup>, in 1910, who described a series of cases which gave cultures of epidermophyton inguinale, an affection due to a parasite closely allied to the trichophyton. The fungus does not attack the hair and when situated in the groin and on the upper parts of the thighs, it causes the type of dermatosis known as Hebra's eczema marginatum, showing red round patches rapidly extending with sharply rounded edges and some times vesicular. Kauffmann Wolf<sup>4</sup>, in 1914, devoted the most painstaking work to the subject making a careful microscopical study of twenty-five cases. Ormsby and Mitchell<sup>5</sup>, in 1916, reported a series of sixty-four cases and gave a description of their method of cultural work, using in all cases the proof agar of Sabouraud. White<sup>6</sup>, in 1919, also confirmed the findings clinically of others who had established, beyond a doubt, the existence of this special form of ringworm infection. The difficulties of cultural methods are strikingly brought out in this report and repeated failures resulted from his first endeavors.

According to Bowen<sup>7</sup>, Darier noticed during the war that whenever a soldier appeared with a vesico-bullous or squamous eruption limited to hands and feet, three diagnoses were usually considered,—eczema, occupational dermatitis, or

\*Read before the Section on Dermatology, Proctology and Genito-Urinary Surgery of the Ohio State Medical Association, during the Seventy-Sixth Annual Meeting, at Cincinnati, May 2-4, 1922.

dysidrosis. Only exceptionally was a parasitic mycotic affection thought of. *In order to determine how many of these cases are epidemic mycoses, Darier examined the roofs of the vesicles and the scales microscopically. He found the epidermophyton in such a large proportion of the lesions examined that he was forced to the conclusion that dysidrosis does not exist as a distinct cutaneous disease and that the clinical picture, so well portrayed by Fox and Hutchinson, is that of epidermophytosis.*

#### CLINICAL DESCRIPTION

The vesicle is the primary lesion which may be single or multiple, grouped or disseminated. The vesicle is deeply seated, the content is usually clear unless secondarily infected. In the course of a few days or a week, the fluid is absorbed leaving a brownish macule. Eventually the roof of the vesicle comes away leaving a red, smooth shiny surface surrounded by up-turned scales. Instead of desquamating, the roof of the vesicle may produce a yellowish brown keratotic lesion in which may be found many mycelial threads. Hyperidrosis is apt to be induced by or at least to accompany the infection. Fissures may also occur. If irritated with caustic applications and wet dressings, ezematoid dermatitis may supervene or even a severe pustular infection develop, thus changing the clinical picture and making the growth of a pure culture difficult at all times, but very difficult under these conditions on account of bacterial contamination.

The *clinical appearance and general characteristics* of the parts involved are as follows:— In the pubic, genito-crural, perineal, and anal regions, a typical *eczema marginatum* is found. The primary lesions are tiny vesicles and scaly papules, spreading at the borders and clearing in the center. The feet show a vesicular dermatitis with much scaling and maceration especially between and below the toes. The lesions presenting undermined edges and deep maceration are typically characteristic. The hands, especially on the palmar surfaces, besides showing the condition as already outlined, often present *hyperkeratoses* varying in degree.

The *subjective symptoms* vary. They may be insignificant and the attention of the patient is called to the condition, or the disease may incapacitate for walking. Itching is the most common symptom but this is seldom distressing. Most of the cases occur in adults but no age is exempt.

The *diagnosis* depends on the microscopic examination and the demonstration of the fungi. One negative examination does not exclude ringworm. Clinically the condition is readily recognized and a microscopical examination is not always necessary.

The *treatment* is by no means easy. However, very brilliant and striking results often

follow the use of the dermal-curette and the application of an ointment containing 5 per cent. salicylic and 10 per cent. benzoic acid in petroleum, known as *Whitfield's ointment*.

#### ILLUSTRATIVE CASE REPORTS

I wish to briefly report two especially satisfactory results using the above method:—

*Case 1.*—Female, aged 60, phone operator. The dorsal surface of both hands and wrists had been involved for many years. Patient was nervous and suffered from almost constant headache and intolerable itching. The disease appeared in the form of groups of vesicles together with fissures and hyperkeratotic papules on a large solid area of dull red inflammation appearing mostly on the dorsal surface of the hands and spreading to the interdigital spaces and on to the palmar surface. The nails were discolored, ridged and friable. A pyodermitis complicated the above condition. A lotion of equal parts of black wash and lime water was ordered. After the acute inflammation had subsided Whitfield's ointment was used with rapid and permanent relief.

*Case 2.*—Male, aged 50. Epidermophytosis of the feet for 18 years. The condition was such that the patient was hardly able to walk. He had had much and varied treatment in the past, without relief. Roentgen rays, iodine and white precipitate ointment had no effect. The condition had been photographed and demonstrated as porokeratosis. The feet were swollen and very much inflamed. There was hyperkeratosis, especially of the heels, together with deep seated vesicles and the presence of many deep and painful fissures, forming a rather classical picture. Itching was moderate. Preliminary treatment consisted of the application of a saturated aqueous solution of picric acid for a few days and the cutting away carefully all macerated tissue and using a curette for the small areas of keratosis. This was followed by the application of Whitfield's ointment which caused the rapid disappearance of all lesions.

Relapses may occur which are stubborn but they yield to the above treatment if faithfully carried out.

#### DERMATITIS EXFOLIATIVA

Severe cases of exfoliative dermatitis occur only in a very small fraction following the use of arsphenamine. Desquamation may follow an erythema, that occasionally is seen after the use of this preparation. These mild types of scarlatinaform or morbiliform eruptions are sometimes mistaken for scarlet-fever and German measles, and are at times accompanied by high fever, 104° and 105° F., but more often the temperature is comparatively mild. The erythematous condition may be localized to a part of the body, for example, the neck, chest or abdomen, but in severe cases it spreads over the



whole body; and if it then develops into exfoliative dermatitis the patient's life is in danger. This rash may occur early even following the first injection but more often late, that is, a month or more following several weekly injections of the drug. The writer has observed three well marked cases during the past four years of his service at the Cincinnati General Hospital.

#### ILLUSTRATIVE CASE REPORTS

*Case 1.*—Male. Received an injection of arsenamine at the port of New York, on his return from military service in France where he had previously received a series of similar treatments. The patient, when examined, presented a well marked erythematous eruption, which unfortunately had been mistaken for a relapsing lues. This was followed by a prolonged and severe moist scaling dermatitis.

*Case 2.*—Female. The rash occurred after the second injection of full doses of neo-salvarsan administered by her family physician. When admitted a diffuse erythema with scaling was noticed, which lasted for months and was associated with marked emaciation.

*Case 3.*—Male. Was given a series of injections, five in number, at weekly intervals and this was followed by a dermatitis exfoliativa with the usual sequelae.

#### CLINICAL COURSE

Following the erythematous rash, vesicles and later pustules form over the general surface. These ruptures and crusting and scaling develop. Exfoliation, at first limited to the neck and extremities, gradually becomes generalized and a moderate fever develops. There is some fissuring and exudation. There is always a great deal of swelling of the face involving the lips, nose, eyelids, ears and cheeks. The eyelids are so swollen that the patient is unable to see. A weeping eczematous condition is nearly always present on some part of the body. Later, as the acute stage subsides, the skin takes on a deep redish-brown tint and subsequently there is a great deal of exfoliation of the epidermis. Often there is a complete loss of hair. The soles and palms develop thick epidermic plates (hyperkeratosis). The finger and toe nails are often completely shed but grow again. There may be fever, headache, vomiting and diarrhea. The fauces are injected and the tongue is dry and brown. There is often renal irritation and the urine will show albumen and traces of arsenic. The patient usually looks and is very ill, the general health becomes impaired and loss of weight is very marked. Convalescence to complete recovery is slow. As the patient recovers the appetite returns and the mental depression, which is a characteristic feature, disappears and the general health improves. After all acute symptoms have subsided one can hardly recognize the

former emaciated patient. A gain of fifty pounds is not unusual.

Hauck<sup>8</sup> reports that the early literature on silver salvarsan gave the impression that skin manifestations of a toxic nature were entirely lacking, but within the last year evidence has been accumulating which shows that this impression was erroneous. Dryfoos has insisted that the exanthemata and dermatitis were as frequent after silver salvarsan as after the other members of the salvarsan group. According to Mierowsky, in his report for the salvarsan commission, the proportion was one case of skin eruption among 4,703 injections, and one case of universal-dermatitis among 16,127 injections of old, sodium, and neo-salvarsan.

Although dermatitis exfoliativa is seldom seen one must be ever watchful for the first symptoms of salvarsan intolerance, as even a mild rash should warn us to immediately withhold further treatment until such time as we believe all risk is entirely eliminated. Treatment consists of keeping up the heart, general stimulants and the use of alkalies, principally bicarbonate of soda, internally and externally, (baths). This procedure was at once instituted in our series of cases with complete and satisfactory recovery in from two to three months.

628 ELM ST.

#### REFERENCES

1. Djelaleddin-Moukhtar: Ann. de Dermat. et de Syph., 1892, p. 152.
2. Whitfield: Lancet, London, July 25, 1908.
3. Sabouraud: Ann. de Derm. et de Syph., 1910, p. 289.
4. Kaufmann Wolf: Dermat. Ztsch., 1914, Vol. xxi, p. 385.
5. Omsby and Mitchell: Journal A. M. A., Sept. 2, 1916, p. 711.
6. White: Jour. Cutan. Dis., Vol. 37, p. 501, August, 1919.
7. Bowen: Boston Medical & Surgical Journal, April 7, 1921, p. 358.
8. Hauck: Archiv. für Derm. und Syph.

#### Propaganda for Reform

*Veratrum Viride in Pneumonia.*—Medical opinion is averse to the routine use of *veratrum viride* in the treatment of uncomplicated pneumonia. Claims made for the use of *veratrum viride* are advanced for other drugs, none of which has borne critical investigation. The error on the part of those who make these claims is the result of inadequate control observations. Advocates of *veratrum viride*, aconite and venesection believe that by the depression of the circulation produced by the treatment, they may lessen the extravasation of blood into the air vesicles and to this degree lessen the involvement of the lungs. The lack of demonstrable success of venesection has led to the discarding of this once almost universally employed mode of treatment of pneumonia. It is unreasonable to expect as much or more from aconite or *veratrum* than from venesection. (Jour. A. M. A., March 18, 1922, p. 835).

## Concerning Eye and Nasal Symptoms in Pituitary Disease, with Report of a Case of Acromegaly\*

FRANCIS W. ALTER, M.D., F. A. C. S., Toledo

*Editor's Note.*—Owing to the fact that acromegaly is so insidious in onset and so indefinite as to general symptoms, it is imperative that the eye and nasal symptoms be correctly interpreted in regard to pituitary disease. Dr. Alter details the anatomical basis of these eye and nasal symptoms as well as the pathology of pituitary gland enlargements and includes illustrative case reports to exemplify his deductions. The author's case report shows what can be accomplished in this condition by intracranial surgery.

**T**HE IMPORTANCE of prompt recognition of the true cause of the ocular symptoms, manifested by some grave underlying disturbance, has often been emphasized by various authors. In many instances it has been demonstrated that with a correct interpretation of the ocular symptoms much can be done in the way of instituting proper and timely treatment. Moreover, it often helps to place a wavering and uncertain diagnosis upon a secure basis. A vivid example of such a condition is presented by *acromegaly*. This disease, with its insidious onset and indefinite general symptoms, pursuing a course common to many other diseases and presenting such phenomena as headache, nervousness and emotional disturbance, could, for instance, easily be classified as hysteria or neurasthenia. Yet how serious an error this would be, considering that not only the sight of the individual may be at stake, but also his very existence may be in jeopardy.

### THE ANATOMICAL BASIS OF EYE SYMPTOMS IN ACROMEGALY

In acromegaly, quite apart from the striking changes incident to the enlargement of the skull-bones and of the extremities the overgrowth of hair and other abnormal phenomena; the eye symptoms are always prominent and are present comparatively early in the clinical course, when the general aspect is not so clearly defined; hence findings such as optic atrophy, bi-temporal hemianopsia or color-field defects, are of great importance. If we add the evidence furnished by the X-ray examination, we then have a means of fixing the diagnosis, and making possible a definite and scientific application of the remedy. In a recent article by Keegan<sup>1</sup>, of Omaha, on neighborhood signs in pituitary tumor, he gives an anatomical resumé which is so succinct and to the point that I am taking the liberty of quoting him rather extensively:—

"The pituitary gland is situated in a small fossa of the sphenoid bone, the sella turcica or pituitary fossa, bounded inferiorly by the sphenoid cells, anteriorly and partly above by the anterior and the posterior clinoid processes of the sphenoid bone, laterally by the cavernous sinus, and above by the dorsum sellae and the

diaphragm sella, a membrane of dura which is perforated by the stalk of the infundibulum. Above this dural membrane is the optic chiasm and the floor of the third ventricle of the brain. This close relationship to the sphenoid cells below and the optic chiasm above, leads to the neighborhood signs related to these structures and to the question of operative approach to pituitary lesions.

"The pituitary gland is surrounded, in addition to its bony encasement, by a dural envelope which bridges over the lateral and superior bony deficiencies. Tumor growth of the gland would first produce symptoms of tension within the dural capsule. The tension of the dural capsule. The tension of the dura causes headache, localized fairly accurately in the sphenoid region and radiating to the temples. This headache is subject to variation, probably due to differences in vascular distention of the enlarging gland, but often is severe and persistent. The differentiation from sphenoid cell infection is not easy in the early stages before bony or other neighborhood symptoms appear."

Keegan says further:—"The next neighborhood symptom in many cases is enlargement of the bony fossa of the pituitary gland, revealed by X-ray. The necessity for stereoscopic X-ray plates should be emphasized, with the view slightly down into the fossa, thus enabling one to estimate an increase of depth where the lateral borders might be normal in appearance and hence misleading. The average normal measurements of the sella are 10 to 12 millimeters antero-posteriorly, 8 millimeters in depth and 14 to 15 millimeters transversely. Profile radiographic measurements exceeding 15 millimeters antero-posteriorly and 10 millimeters in depth may be looked upon as indicating an enlargement, not necessarily pathologic. However, the extreme of normal variation may reach 30 millimeters antero-posteriorly."

### THE PATHOLOGY OF PITUITARY GLAND ENLARGEMENT

In reviewing the pathology of pituitary gland enlargement, we find that they are chiefly *adenomatous and cystic, not truly malignant*, and their effect is to induce a condition of hypopituitarism with its familiar syndrome, a condition due to a deficiency of pituitary secretion.

\*Read before the Eye, Ear, Nose and Throat Section of the Ohio State Medical Association, during the Seventy-Sixth Annual Meeting, at Cincinnati, May 2-4, 1922.

In a series of twenty operated pituitary lesions Heuer<sup>2</sup> found solid adenomata in eighty per cent. and cystic adenomata in twenty per cent. Supra-sellar tumors were in great variety; that is, tumors not originating strictly in the pituitary gland but affecting the gland by pressure from above downward. We may find gliomas, solid and cystic epithelial tumors, and sarcoma. Pituitary tumor growth causes various bony distortions of the fossa. We may have a wide ballooning of the cavity so that it extends forward, far into the sphenoid cells with accompanying destruction of the dorsum sellae; conversely, there may only be a simple spherical distention. There is a preponderant tendency for pituitary tumors to break through the diaphragm sellae and become intra-cranial; this possibility is thoroughly considered by Heuer<sup>2</sup>, of the University of Cincinnati, and Adson<sup>3</sup>, of the Mayo Clinic, both of whom have published their experience and conclusions.

After the growth has become intra-cranial it tends to extend in five directions; and from the multiple extensions of the growth the significance of the symptoms can be deduced.

We find that the growth tends to extend *first*, directly upward against the chiasm; *second*, forward in front of the optic chiasm; *third*, backward behind the chiasm; *fourth*, towards the third ventricle of the brain; and *lastly* the tumor may grow laterally on either side of the chiasm and involve the cavernous sinus.

The preponderant tendency of the tumor to grow forward intra-cranially causes pressure on the optic nerves with an increasing degree of atrophy, and unless operation is done to relieve the pressure, complete paralysis of the optic nerves will follow. The marked incidence of bi-temporal hemianopsia in pituitary tumor has been explained by Henshen<sup>4</sup> and Cushing<sup>5</sup>, who found that a pituitary tumor in its typical anterior extension would first press on the under surface of the chiasm and interfere with the ventral crossed fasciculus which supplies the lower nasal retina, thus producing a visual defect in both upper temporal quadrants. Further anterior extension of the tumor between the optic nerves would result in medial pressure on both ventral and dorsal crossed fasciculi followed by a more complete hemianopsia. The color fields show an earlier defect than the form fields and this phenomena is therefore of early diagnostic significance.

In advanced cases the oculo-motor nerves may be paralyzed. Exophthalmus of a moderate degree occurs where the cavernous sinus is involved. Furthermore, if the olfactory nerves are affected anosmia may result, or epilepsy with gustatory and olfactory aura occur.

#### NASAL AND NASO-PHARYNGEAL SYMPTOMS

In regard to nasal symptoms Cushing<sup>5</sup>, of Boston, cites one case where anosmia combined with

primary optic atrophy and adiposity were the only signs of the hypophyseal lesion, and the evidences referable to the naso-pharynx he regards as of very great importance. A history of troublesome epistaxis is very common and the bleeding may be excessive. It was not unusual for patients to mention an occasional unexpected and intermittent discharge of mucus into the pharynx. This probably explains why so many of these unfortunates have been subjected to prolonged treatment for supposed primary sinus disease. A complete physical examination should always include the retro-pharynx. In some of Cushing's cases an actual protrusion of the tumor was observed during such an examination, and one disclosed a nodule which was taken for an enlarged pharyngeal hypophysis.

An illumination of the relation between pituitary disease and naso-pharyngeal symptoms is given by W. S. Bryant<sup>1</sup>, in an article concerning the pharyngeal hypophysis. He tells us that the importance of the pharyngeal pituitary lies in the fact that this external portion of the glandular hypophysis may have its functional mechanism interfered with by the infections of the upper air tract, especially of the rhinopharynx and the pharyngeal angle. Citelli<sup>6</sup> believes that the pharyngeal hypophysis is in functional contact not only with its surroundings, the pharyngeal mucosa and the adenoid vegetations, but also with the cerebral hypophysis. Accordingly, the common inflammations of the pharyngeal mucosa exert an injurious effect upon the functional and the anatomical development of the pharyngeal hypophysis and indirectly upon the cerebral hypophysis. Bearers of *adenoids* have been known to present a hyperplastic condition of the cerebral pituitary with hypersecretion. Citelli's findings justify the assumption that part of the associated disturbances with adenoid vegetations represent toxic phenomena in consequence of impaired hypophysial function.

#### ILLUSTRATIVE CASE REPORTS

In addition to my own case, I am taking the liberty of reviewing several others reported in the literature, which illustrate the varying aspects of the disease under discussion.

In an article reporting three cases, de Schweinitz tells us that among the disorders of the pituitary body, the visual disturbances represent the most common neighborhood signs of the hypophysial lesions, both in excessive activity of the glandular epithelium (hyper-pituitarism, and in diminished function of the anterior lobe (hypopituitarism).

The visual phenomena are discussed as follows: impairment of acuteness of vision, lesions of the intraocular optic nerve apparatus, alterations of the visual field and anomalies of ocular motility. Visual hallucinations, chromatopsia, photophobia, exophthalmos, palpebral pigmenta-

tion and glandular hypertrophy are also referred to in this connection.

In connection with impairment of vision in acromegaly the writer says: "Impairment of vision naturally may vary from blurred sight to complete blindness, according to the degree of disturbed function of the optic pathways which is present, and depends, in largest measure, upon degrees of compression of the chiasm, tracts, and optic nerves, but does not bear any close relation to the size of the sella (Cushing). For instance, in acromegaly, the size of the sella may be conspicuous, but the evidence of poor vision entirely lacking."

From the direct visual standpoint, the following signs are evident in disturbances of the pituitary body. There may be an early indistinct vision, or ill-defined blurr without ophthalmoscopic change,—probably being the earliest state of physiologic blocking of light impulses; later on, with or without such antecedent blurred vision, nerve-head pallor (which at first and for a long time may continue to represent a condition of blocking of light impulses, and not a destruction of nerve-fibers), and the nerve function may entirely be restored by operative and therapeutic measures; finally, pressure not being relieved, the continued nerve pallor indicates nerve destruction and permanent blindness, or at the least great deterioration of vision, this pallor being usually somewhat waxy in appearance, with a suggestion of yellowish tint.

Bi-temporal hemianopsia, which, when present, is the most typical ocular symptom, occurs in fully fifty per cent. of patients with hypophysial lesions and with disease of the infundibulum with or without acromegaly.

Three cases are described by de Schweinitz, in all of which tumors of the pituitary body were present, all of the patients suffering temporary blindness in one or in both eyes. In these cases, large quantities of thyroid extract, a combination of thyroid and pituitary body extract, in addition to injections of mercury were given, the mercury being administered even when the Wassermann reaction proved negative. The results were most satisfactory.

The question is raised as to whether the mercury used was responsible for the excellent results, for syphilis may have been present in spite of the negative Wassermann tests, and de Schweinitz believes it possible that a combination of thyroid and pituitary gland extracts is more efficacious than either of these extracts alone; likewise the combination, in association with mercury, is more effective than is an extract of either one gland given in conjunction with mercury.

Another interesting case is reported by Louis F. Jermain<sup>10</sup>. The patient was a married woman of thirty-eight, without children. Her parents, brothers and sisters were all well and normal in size. She complained of headache, failing vision

and an overgrowth of the facial extremities. This patient had had the usual children's diseases; first menstruated at twelve years and was regular until her second operation at the age of twenty-two. About the age of seventeen her menstrual periods became painful. When twenty years of age she was operated upon for appendicitis, and the left ovary was removed at the same time. At twenty-two her other ovary was removed following which menstruation ceased. For the past six years the patient has complained of headache; she also noticed that her hands and feet were gradually growing larger and that she was steadily gaining weight. Examination showed the head to be large, particularly the frontal region; the pupils were equal and active; no paralysis of extrinsic muscles; frontal bones large and prominent; zygomatic arch enlarged; lower jaw enlarged and prominent. There was marked increase in the spacing of the teeth, especially the incisors, and the teeth were in poor condition. The tongue was large and coated. The chest was well developed; lungs and heart normal; pulse rate 74; blood pressure, 130 systolic; 80 diastolic. The spleen and liver were not palpable and the abdomen was negative. The reflexes were normal although the hands and feet were greatly enlarged. Radiographs of the hands show marked increase in the size of the bony structures and those of the head a very large sella turcica with practical obliteration of both clinoid processes. Ophthalmic examination showed bi-temporal hemianopsia with beginning optic atrophy in both eyes. Two hundred grams of glucose gave a marked glucose reaction in the urine.

Jermain suggests that the hypophysial enlargement and the acromegaly in this case may perhaps have been due to the removal of the ovaries and the cessation of the menstrual function at the age of twenty-two years.

Frazier<sup>11</sup> reports a very interesting case treated by surgery combined with the X-ray. He remarks that in at least ninety per cent. of cases, failing vision is the chief complaint; in the remaining ten per cent. there is headache with or without failing vision. In the exceptional case there may be disturbances of pituitary function, such as adiposity, sexual apathy, or amenorrhea. In the vast majority which come to the surgeon for relief, however, the chief indications for intervention are the pressure phenomena, failing vision and headache.

Among the various cases described is the following: The patient was a woman aged forty-four. Ten years ago her feet became noticeably larger and soon after her hands also increased in size. Coarseness of the features of the face was observed and, later, increase in weight. Six years ago the vision of the left eye became impaired, and within a year there was total blindness in this eye. Within the past four months there had been difficulty in reading with the right

eye. The physical findings were those of dyspituitarism; there were present acromegalic features with marked accession in weight (former weight 120 pounds; present weight 210 pounds). The ophthalmic report was: O. S. sightless, O. D. hemi-achomatopsia. Spinal pressure was 18 mm. Hg. X-ray report showed the posterior clinoid processes to be atrophied, and the sella deformation characteristic of a pituitary lesion was observed. Operation was done under cocaine anesthesia by the transphenoidal approach, the sphenoid sinus proving to be shallow.

Upon the removal of the sella floor the pituitary lesion was exposed. There was moderate pulsation, but no tendency to herniation as is seen when suprasellar pressure is marked. After partial excision of lesion the wound was closed and the nares tamponed. Immediately after operation the patient became wildly delirious, and the delirium continuing, she died the following day. The delirium was attributed to a hyper-susceptibility to cocaine, but the exact cause of death was undetermined.

The interesting feature in this case was the discovery at autopsy of a primary supra-sellar endothelioma. The pituitary disorder was undoubtedly a sequel to this super-imposed growth. The writer adds "that there was a lesion beyond the limits of the sella turcica might have been surmised from the atrophy of the posterior clinoid processes, but the nature of the supra-sellar lesion could not have been suspected." This case is but one of many examples of procrastination in the presence of unquestionable evidence of some pituitary lesion, in which the patient becomes completely blind in one eye and partially so in the other.

Frazier, as a result of observations during a series of operations, advised the combined surgical-X-ray-radium treatment and the adoption of a sub-sella decompression as the first surgical method of attack, preferring this to the more formidable attempt at extirpation of the lesion by the super-sellar approach. Operation as a means of treatment is justified for two reasons: (1) because substantial and immediate relief usually follows a sella decompression, and (2) because, in the removal of the interposing bony partition, the floor and roof of the sphenoid sinus, the effect of radium upon the pituitary is thereby increased.

Another case is described by E. C. Ellet<sup>22</sup>. A married woman was fitted with glasses in 1911, she being then forty-four years old. She learned then for the first time that vision in her left eye was poor, but as the eye-grounds were normal, the left eye was judged to be amblyopic. Two years later vision was observed to be failing in the right eye, and on examination proved to be reduced to one-third and the nerve slightly atrophic; the left eye was unchanged. The patient's appearance had also changed during the two years, the features were coarser, the face

slightly edematous, and the fingers large and long. The feet were not increased in size. Radiographs revealed an enlarged sella turcica, and the phalangeal changes characteristic of acromegaly. The diagnosis was first made from the eye symptoms.

This patient was operated upon by Harvey Cushing in July, 1913, following which vision in the right eye improved so as to be almost normal, and remains good after the lapse of seven years; the other acromegalic symptoms were also arrested. The visual fields and vision of the left eye are unchanged.

#### AUTHOR'S CASE REPORT

My own case is as follows:—

*History.*—Married woman, aged fifty-six years, who has been in declining health for the past three or four years, manifesting an increasing degree of lassitude and asthenia, coupled with a persistent basillar headache which radiated to the temples and a sensation of pressure in the head from within outward. The eyesight has been affected for two years, failure of vision being marked the past six months. She is excitable and nervous over small events; restless and subject to disturbing dreams. There has been some loss in weight. Hysterectomy for tumor was performed about ten years ago, at which time the ovaries were removed.

*Present Condition.*—Characteristic acromegalic features with prominent frontal and malar bones; enlargement of jaws; wide interspaces between incisor teeth; tongue large and flabby; feet very large and broad; fingers enlarged, thick and spade-like in shape; knee and arm jerks normal. Blood pressure 160-195. No sugar in urine. There is an enormous overgrowth of the hair of the head which is so heavy she can hardly handle it. X-ray shows a wide sella turcica with some atrophy of the post-clinoid processes.

*Ocular examination* shows vision R.E. 20/110, L.E. 20/200; with proper lens correction right and left eye 20/50 and 20/80; both eyes showed beginning atrophy of optic nerves. Perimetric examination shows a typical bi-temporal hemianopsia, the temporal halves of the field being a blank. Marked defect in the color field. This patient was seen in consultation by Dr. L. A. Miller, who concurred in the diagnosis.

After being under my care from February 9, 1921, to May 10, 1921, she finally agreed to go on to Boston for operation. At the time of her departure her vision had declined to no vision at all in the right eye, and 20/80 in the left. In addition to the visual disturbance she was tormented day and night with ever-increasing head pains.

Operation was performed at the Peter Bent Brigham Hospital by Dr. Cushing, who used the transnasal route, and in a communication, he states that he found an adenomatous cyst of the

pituitary body. The patient regained her full field of vision within a week or so after the operation.

Direct vision with proper lens correction is now 20/30 in both eyes with the fields normal. She has made a complete—and perhaps I would not be exaggerating too much if I say—a wonderful recovery, and is indeed a brilliant example of what can be done in this comparatively new field of intracranial surgery.

314 COLTON BUILDING.

#### REFERENCES

1. Keegan, J. J.: Neighborhood Signs in Pituitary Tumor. *Am. J. Ophtha.*, Vol. 4, p. 835, Nov., 1921.
2. Heuer, G. J.: Surgical Experiences with an Intracranial Approach to Chiasmal Lesions. *Arch. Surg.*, Vol. 1, p. 368, 1920.

3. Adson, A. W.: Hypophyseal Tumors through the Intra-Dural Approach. *Jour. A. M. A.*, Vol. 71, p. 721, 1918.
4. Henschen: Klinische und anatomische Beiträge zur Pathologie des Gehirns. 2:217, Uppsala, 1892.
5. Cushing, H. and Walker, C. B.: Chiasmal Lesions, with Especial Reference to Bi-Temporal Hemi-Anopsia. *Brain*: London, Vol. 37, p. 341, 1915.
6. Cushing, H.: The Pituitary and Its Disorders. *Lippincott*, 1912, pp. 246-7.
7. Bryant, W. S.: The Relation of Adenotomy to the Pharyngeal and the Cerebral Hypophyses. *Med. Rec.*, Vol. 90, p. 441, Sept. 9, 1916.
8. Citirelli: quoted by Brant: *Anat. Anzlinger*, Vol. 41, p. 321, 1912. Also *Ann. des Mal. de l'Or. du Larynx*, Vol. 39, p. 338, 1913.
9. De Schweinitz, G. E.: Concerning Some of the Ocular Interpretations of Disorders of the Pituitary Body and their Non-Surgical Treatment. *Virginia Med. Month.*, Vol. 48, p. 179, July, 1921.
10. Jermain, L. F.: Case of Acromegaly. *Wisconsin Med. Jour.*, Vol. 20, p. 135, August, 1921.
11. Frazier, C. H.: The Control of Pituitary Lesions as affecting Vision by the Combined Surgical-X-ray-Radium Treatment. *Arch. Ophth.*, Vol. 50, p. 217, May, 1921.
12. Ellett, E. C.: Ocular Manifestations of General Disease. *Jour. Tennessee State Med. Assn.*, Vol. 13, p. 121; August, 1920.

## The Differential Diagnosis and Treatment of Some Pulmonary Diseases with Special Reference to Artificial Pneumothorax\*

LOUIS MARK, M.D., Columbus

*Editor's Note.*—Before attempting pneumothorax as a method of therapy in pulmonary conditions, it is advisable to very definitely diagnose carcinoma, lues, and abscess of the lungs. In carcinoma treatment is of little or no avail. Lues will not clear up except under anti-syphilitic treatment and abscess of the lung requires aspiration or a special method of collapse. Pleural effusions that have a tendency to re-accumulate may be controlled by a combination of aspiration and pneumothorax. As in pneumonia, typhoid, or fractures, nature requires rest to accomplish a cure, so in progressive cases of pulmonary tuberculosis, pneumothorax provides the necessary artificial rest for the diseased lungs. It must be used with discretion and a full understanding of the possibilities and limitations of the technique.

IT IS NOT my purpose to discuss in detail the differential diagnosis and treatment of all forms of pulmonary diseases. I merely wish briefly to bring to your attention some of the more important chest conditions, which are usually incorrectly diagnosed as tuberculosis, and to outline the treatment of progressive cases of pulmonary tuberculosis and pleurisy with effusion with artificial pneumothorax. The elaboration of any one of these conditions would, in itself, make a very lengthy article, so it will be necessary to merely touch upon the important points.

#### CARCINOMA OF THE LUNGS

Fortunately, carcinoma of the lungs is very rare, especially as a primary condition. It frequently occurs secondary to a carcinoma of the larynx or the breast. However, occasionally a primary lung carcinoma is found. When it does occur, it is usually mistaken for pulmonary tuberculosis.

A careful history and examination will usually suggest that it is not a typical tuberculosis. The lesion is not peripheral, primarily, as in tuberculosis, and the examination shows very slight changes. The temperature is seldom over

99°F. and the variation between morning and afternoon temperatures is not marked.

The X-ray shadow shows the early mass near or in the hilus. Subsequent radiographs reveal that the mass is increasing in size very rapidly.

Pain in the chest is usually severe and increases as the mass spreads. Fluid develops later and is of a thick bloody character. The patient, as a rule, gets the typical yellow appearance with wasting, as in carcinoma of any other portion of the body. A diagnosis can often be made by the cachetic appearance of the patient, the rapid decline, and the absence of fever.

Treatment is usually of no avail. X-ray and radium therapy may be tried. If the diagnosis is made early the life of the patient may be prolonged. I have been unable to find any reported cures in carcinoma of the lungs.

The accompanying illustrations (Figs. 1 and 2) show a case of primary carcinoma of the lungs, which was first diagnosed and treated as pulmonary tuberculosis, and only correctly diagnosed shortly before death.

#### PULMONARY LUES

Fishburg, in his book on tuberculosis, states that pulmonary lues is very uncommon. During the last few years many such cases have come to my notice. In most of them a diagnosis was

\*Read before the Columbus Academy of Medicine, March 27, 1922.

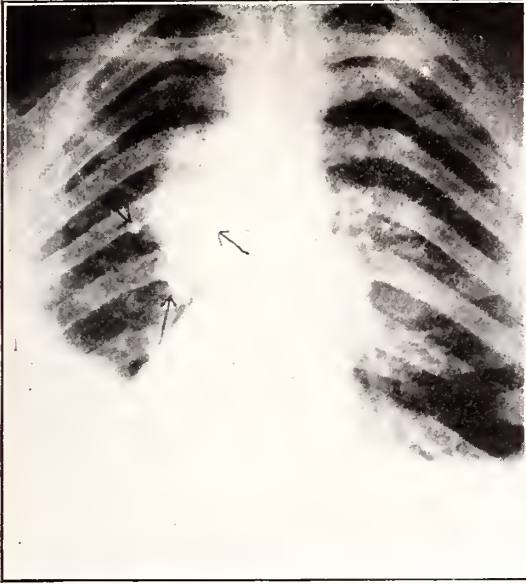


Fig. 1. Radiograph taken at the onset of symptoms in a case of carcinoma of the lungs.

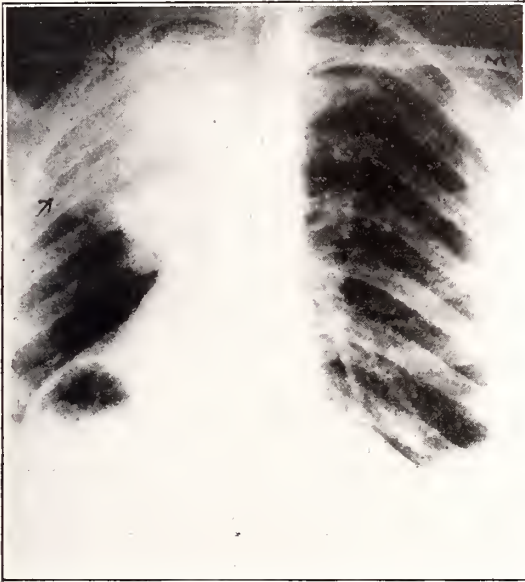


Fig. 2. Same case showing radiograph 5 months after onset of symptoms of carcinoma of the lungs.

made early, and in all but one, very good results were obtained by the regular anti-luetic treatment. The differentiation as a rule is difficult, but can be made if a careful history is taken, a careful examination made, including Wassermann tests and radiographs of the chest, to be followed, if necessary, by close observation of the patient for a week or ten day, repeated examinations, with the patient on a graduated exercise routine, and temperature and pulse taken before and after each exercise period.

The history presented in most cases is identical with pulmonary tuberculosis. The first

symptom is usually a distressing cough. Blood streaked sputum is common. A history of a chronic cough with constant or repeated expectoration of blood without physical findings in the chest, suggest pulmonary lues.

The temperature is normal, seldom going over 99.2°F. Pulse is normal. Blood pressure may or may not be increased. Physical examination of the chest is usually negative, unless lues is complicated by tuberculosis; a condition which is quite common.

The history, Wassermann test and X-ray (Fig. 3) aid more in the diagnosis than the physical examination.

The regular anti-luetic treatment gives very satisfactory results as a rule. A decrease of symptoms and the loss of the cough is noted



Fig. 3. Radiograph showing pulmonary lues.

within the first six weeks. Treatment must be prolonged as in tertiary lues. The prognosis in these cases, as far as the lungs are concerned, seems better than in pulmonary tuberculosis.

#### ABSCESS OF THE LUNGS

Pulmonary abscess should not be mistaken for pulmonary tuberculosis. As a rule, the abscess is located at the base of the lung. When located in the upper lobe, differential diagnosis is more difficult. All changes at the base should be considered non-tuberculous until proved tuberculous, and all changes at the apex should be considered tuberculous until proved non-tuberculous. A positive sputum is conclusive evidence that tuberculosis is present. A positive sputum does not rule out pulmonary abscess, as the condition may be of a tuberculous nature.

The history presented in these cases is usually very suggestive. The symptoms come on suddenly after aspiration pneumonia, operation, septic emboli which lodge in the lungs, or after an injury to the lungs.

If the abscess is deep seated, that is closer to the hilus than the periphery, physical findings may be *nil* or very slight. When near the peri-

phery, a circumscribed area of dullness is found, diminished or absent breath sounds, and if râles are present, they are of the large moist type. If the abscess has opened into a bronchus, the sputum is usually of a dark brown color, differing a great deal from that of pulmonary tuberculosis.

Copious hemorrhages may be present. This often makes the differential diagnosis more difficult. Many cases of pulmonary abscess, with copious expectoration and marked physical findings, are treated for pulmonary tuberculosis.

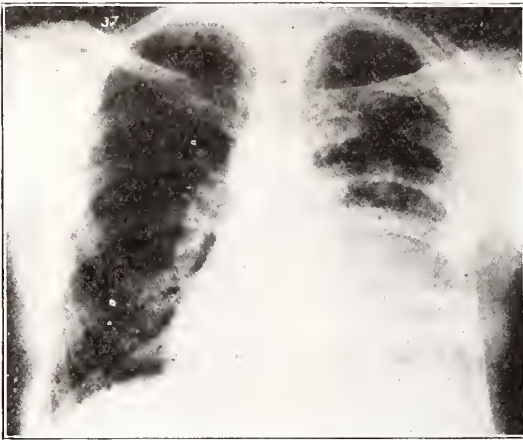


Fig. 4. Radiograph showing pulmonary abscess of the right lower lobe.

The diagnosis can usually be made upon a careful history, location of the lesion, physical finding, character of the sputum and the appearance of the X-ray shadow, (Fig. 4).

Very rigid treatment should be instituted in order to prevent serious complications in abscess cases. If the patient does not expectorate a great deal, suggesting that the abscess is open, the physician should attempt to aspirate the abscess, especially when it is near the surface. Efforts should be made to have the abscess emptied, preferably through a bronchus, so that the pus may be expectorated. When aspiration fails, or the abscess doesn't break in a day or two, the method I have found to be most successful, is to collapse the lung by means of nitrogen gas injected into the pleural cavity. The pressure should be made positive, that is a greater pressure in the pleural cavity than atmospheric. This will tend to force the pus toward the hilus and an opening will be made so that the abscess will empty itself. The pressure should be retained until all symptoms have disappeared. The pressure will bring in contact the two surfaces of the abscess, prevent refilling, will permit fibrous tissue to develop, and close the abscess, reducing the possibility of cavity formation in the lung.

When aspiration is successful, or when the abscess has opened spontaneously, and still the symptoms do not begin to subside, or when there

is danger of a chronic expectoration from the abscess cavity, artificial pneumothorax should be used.

When all symptoms have subsided, the gas injections are discontinued and the lung will re-expand. The treatment, as a rule, lasts about four months. The patient can usually return to work when the gas injections are discontinued. The results have been permanent and very gratifying.

Should aspiration fail and artificial pneumothorax be prevented by pleural adhesions, rest in bed and watchful waiting for the abscess to break of its own accord, is the method to pursue. If the patient is rapidly declining, the abscess should be opened directly from the outside, or a complete thoracoplasty should be done.

#### PLEURAL EFFUSION

Many cases of pleural effusion are encountered which will not absorb. When aspirated, the fluid quickly re-accumulates, although aspiration may be repeated every few days or every week, over a period of weeks or months, the condition resulting in either a fibrinous consolidation of the fluid or an infection necessitating a rib resection for empyema. The reason the fluid re-accumulates is because the pressure upon the lung was relieved suddenly when the fluid was removed, causing a re-expansion of the lung, with a dilatation of the blood vessels and lymphatics. The fluid then rapidly exudes into the pleura again, usually causing an increase in the amount rather than a decrease. In those cases which do not have a return of fluid, the vessels and lymphatics were able to hold their tension and the lung and pleura gradually returned to its normal function.

I have obtained very good results in recurrent pleural effusion by combining aspiration and artificial pneumothorax. The method used being as follows: The aspirating needle is placed in the lowest possible interspace while the pneumothorax needle is placed in the interspace at the upper margin of the fluid. As the fluid is withdrawn, gas is permitted to flow in. The same amount of gas is injected into the pleural cavity as fluid is withdrawn. The result is that when all the fluid is gone, the lung still remains in the same position and under the same pressure as before. There is no sudden dilatation with the resulting fluid exudation. The gas absorbs gradually, usually taking from two to four weeks, permitting a gradual re-expansion of the lungs and preventing an accumulation of fluid. Usually one aspiration and gas injection will suffice. In only one case was a second filling of gas necessary. This was due, I believe, to a too rapid absorption of the primary gas injection. In bi-lateral tuberculous pleural effusion, which occurs at times, first one lung is treated, and later the other.



## ARTIFICIAL PNEUMOTHORAX IN PROGRESSIVE CASES OF PULMONARY TUBERCULOSIS

When there is injury or disease of a portion of the body, nature attempts to place that part at rest to facilitate healing. When a leg or an arm is broken, the physician places the part in a cast. This immobilization is necessary for proper healing.

Unfortunately, there is no way to place the lungs in a plaster cast when they are affected with tuberculosis. In some cases we attempt to follow the procedure by placing the most affected lung in a cast of gas; but the cases that will respond to this form of treatment must be very carefully selected.

The first and foremost are cases of pulmonary hemorrhage. When there are copious hemorrhages endangering the life of the patient, or when hemorrhage continually returns after the patient is seemingly improving, complete collapse of the responsible lung, will usually prevent future bleeding. The gas causes pressure upon the vessels that are open, forcing the two surfaces together, and keeps them so by means of repeated refills until the two open surfaces have united.

Artificial pneumothorax should not be used, as a rule, until the usual routine of rest and therapy has been tried without success. Pneumothorax may be used in any stage case; that is, incipient, moderately advanced, or advanced, with or without cavity formation. The best results are obtained in unilateral cases; that is, in those that have one very active lung showing marked destruction with cavity formation or caseation, the other lung being either negative or inactive. When there is cavity formation, the collapse of the lung will force the walls of the cavity together, permitting a union and prevent a spreading of the infection. When there are signs of caseation or threatening caseation, compression will, as a rule, prevent extensive destruction, and may prevent cavity formation.

When both lungs are involved, one with an extensive, the other with a slight activity, and the patient does not respond to routine treatment, a partial or complete collapse of the most affected lung will usually give good results. There will be a reduction in the amount of absorption of toxin as well as a drop in temperature. The patient will then be in a better condition to take nourishment and will have increased his chances of improvement.

When one lung is collapsed, the other lung must necessarily take care of the work of both. A compensatory emphysema develops with a resulting dilatation of the lymphatics. This emphysema appears to aid the better lung, and if activity was present at the beginning of the treatment it soon becomes quiescent. In a very few cases, the expanded lung will show progressive disease, and if this does occur, artificial pneumothorax should be discontinued.

The treatments are given under local anesthesia, very little discomfort being experienced. I use the Robinson apparatus and nitrogen gas. Some prefer the use of filtered air. The results are the same with either. The needle is inserted through the parietal pleura to the visceral pleura. When there are no pleural adhesions, the pressure in the pleural cavity is minus, or less than atmospheric. A water or mercury manometer is used as a guide to determine when the needle is in the pleural cavity. When the operator has reasonable assurance that he is in the pleural sac, the pet cocks are opened and the gas is permitted to flow by gravity pressure. The manometer should be watched closely and if the pressure becomes too strongly positive, the gas should be shut off. The object is to get the pressure to neutral or to a small positive. The initial injection should be between 200 and 400 cc. depending upon whether there are pleural adhesions or not. Refills should be made once each week until the lung has been collapsed as far as desired, and then the interval increased. The dose should be gradually increased as indicated, never going above 500 cc. at any injection, (Figs. 5 and 6).

The duration of treatment varies with the

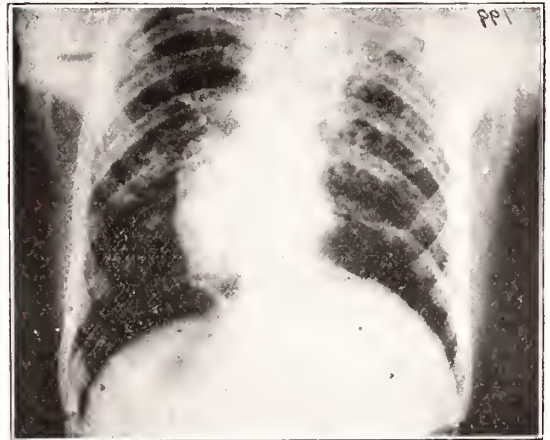


Fig. 5. Radiograph showing advanced pulmonary tuberculosis with cavity formation in the right upper lobe.

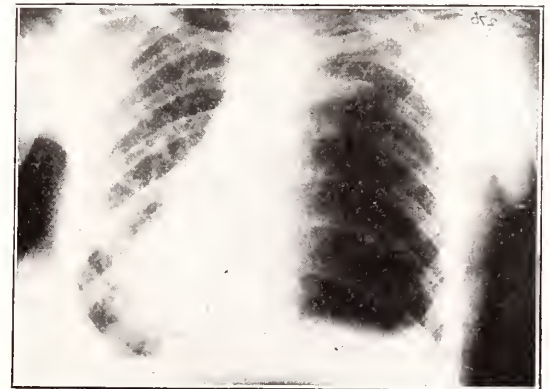


Fig. 6. Artificial pneumothorax of the right lung in case No. 5.

stage of the disease, and the general condition of the patient. In early or moderately advanced cases the treatment can be discontinued in from six to twelve months. In advanced cases with cavity formation, the treatment usually takes longer. After the temperature and pulse have become normal, the patient may go about his usual routine without any inconvenience from the gas injections. As a rule, results are noted after the third or fourth injection. When extensive pleural adhesions are present artificial pneumothorax may be impossible.

In a number of cases, fluid develops after prolonged treatment. This, however, has never proved harmful. In a great many patients, I have been able to discontinue the gas, and the patients got along very well, the fluid exerting the same pressure as the gas.

When treatments are discontinued, the lung gradually reexpands, and if proper healing had taken place, the inflamed areas are closed over

by fibrous tissue and the normal portions of the lung are not hindered very much from performing their usual functions.

#### CONCLUSIONS

This method is not a cure-all and should not be taken as such. It does give very gratifying results in seemingly hopeless cases, and should be used only after careful consideration. The accompanying illustrations give you an idea of the extensive lesions that can be benefited by this form of treatment.

In conclusion, may I suggest the use of comparatively the same method in the treatment of lung conditions as in pneumonia, typhoid, or fractures—which is, primarily, REST. When *natural rest* will not bring the desired results, *artificial rest* should be attempted, and the only therapeutic means of *artificial rest* available for the lungs is artificial pneumothorax.

327 EAST STATE ST.

## Phenol and Cresol Poisoning\*

RAPHAEL ISAACS, M.A., M.D., Cincinnati

*Editor's Note.*—On account of the prevalence of phenol and cresol poisoning it has seemed advisable for those who come in contact with many such cases in the larger general hospitals, to devise a newer and better treatment. Dr. Isaacs has found a simplified treatment in the use of sodium bicarbonate for gastric lavage and for internal medication. This treatment reduces the incidence of renal complications and hastens the elimination of the poison from the body. Dr. Isaacs also notes a marked variation in the susceptibility of different individuals to phenol and cresol.

**M**ANY METHODS for the treatment of phenol and of cresol poisoning have been recorded in the literature, some of value and others practically useless. Some require alcohol and whiskey, substances no longer available. To determine the simplest effective treatment for the acute poisonings and prevention of toxic effects, an analysis of thirty consecutive cases of phenol poisoning and fifty-two consecutive cases of cresol poisoning was made. The patients were treated in the wards of the Cincinnati General Hospital, and several methods were used.

#### PHENOL

In the majority of cases, the phenol was taken with suicidal intent, but accidental cases of mistaken bottles, or burns from external application were encountered. The amounts ingested varied from a few c.c. to about 100 c.c., usually of the aqueous 5 per cent. solution. In one case, about 10 grams of the crystals were dissolved in beer, and taken internally, but the patient recovered.

The severity of the symptoms seemed to be independent, to a certain extent, of the amount taken, and were not always commensurate with the time that elapsed before treatment. Of thirty cases, eight were unconscious on ad-

mission. Of these two died, one within a few minutes, and the other within five hours. Both of these were alcohol treated cases and were the only deaths in the series. The coma often comes on quickly after ingestion of the phenol solution, at times apparently within a few minutes, and in the non-fatal cases lasts from a few hours to seven or more (commonly five to seven hours), according to the treatment.

*Symptoms and Course.*—The chief symptoms are a burning sensation in the mouth and throat, later a burning pain in the epigastrium, at times severe enough to make the patient double up and grind the teeth. In some cases there is nausea, but it may be absent. Spontaneous vomiting occurs in a few cases. After several hours, there is usually much vomiting, probably induced by magnesium sulphate or other treatment. This may persist for a day or so. Dysphagia is occasionally present, but may not appear until the second day.

Examination may show no lesions whatever, or the tongue, mouth, pharynx or palate may be reddened, or show a white desquamating slough. At times, reddened areas are visible on the skin of the face, neck or shoulders, wherever the fluid has been splashed.

When unconsciousness sets in, the respiration becomes shallow and rapid (24 to 45), but may slow down to 4 per minute in the deepest coma.

\*From the Department of Medicine, University of Cincinnati and the Cincinnati General Hospital.

In such cases, there may be cyanosis and dilatation of the pupils. These conditions gradually change as the patient improves, and while, at the time, they look very serious from a point of view of prognosis, they do not necessarily point to a fatal termination. The face may be pale or cyanotic, cold, and the hands and feet are cold. The temperature may drop to 95.2° or 97°. All ranges of temperature from 97 to 99.6 may be encountered. The pulse becomes feeble and rapid, from 112 to 140. There is often foaming at the mouth, and the breath and vomitus have the odor of phenol.

Autopsy shows an excessive amount of mucus in the stomach and intestines, with irregular congestion, and small petechial hemorrhages. The liver is very pale, without congestion, and the lobular markings are lost. The kidneys are pale, with the stellate veins congested. The findings in these and in the other organs are not distinctive. There may be edema of the lungs. The urine may remain unchanged, or there may be albumin and blood or mucus. It is more commonly acid to methyl red and, with change in reaction, the albumin usually disappears. The color is occasionally brownish black. A purple-blue color may be obtained with ferric chloride in some cases. In severe cases, blood may be passed with the stools, either macroscopically or detectable by chemical means. The vomitus usually contains phenol, and may consist mostly of greenish bile-stained mucus, sometimes bloody. Albuminuria, blood in the stools, and tenderness in the abdomen, with a rapid pulse, were present in one case after external burns with phenol, following application to the face, in a wash.

#### THE PROBLEM OF PROPER TREATMENT

In reviewing the treatment of the patients, the list of drugs found to be used is remarkable. Gastric lavage is usually practiced. For this purpose, the records show that water, magnesium sulphate, sodium sulphate, sodium bicarbonate, alcohol (30 or 50 or 95 per cent.), milk and eggs, were used, and some of these substances were given per rectum. After the preliminary washing, magnesium sulphate, alcohol, whiskey, milk, castor oil, croton oil or glycerine were left in the stomach. To this the text books add vinegar, dilute acetic acid, tincture of iodine, potassium permanganate, egg albumen, sodium sulphate, flax seed or slippery elm tea, gruel, coffee, tea, hot punch, (Wetherstine<sup>1</sup>). For intravenous medication, 2 per cent. magnesium sulphate or sodium chloride-sodium carbonate solutions were listed.

Which of these procedures is the most valuable? We have found that simple lavage with 5 per cent. sodium bicarbonate solution, 3 to 6 quarts, is as effective as any of the above. Magnesium sulphate, 60 to 120 c.c. of a 50 per cent. solution, is left in the stomach, mainly for its

cathartic action, although it frequently produces emesis. Clarke and Brown<sup>2</sup>, found that there was no difference in the results, if alcohol was used or not. In comatose cases, the most prompt results are obtained, if a salt solution—normal saline, or magnesium sulphate 2 per cent., or preferably a sodium chloride (1.4 per cent.)—sodium carbonate solution (.37 per cent.) (i.e., Fischer's solution), 500 to 1000 c.c.,—is given intravenously. The skin and mucous membrane burns heal quickly with but little medication. Sodium bicarbonate 5 per cent. solution forms the most convenient wash, whether as first aid or later. Petrolatum may be applied to the skin in the later stages. If alcohol is available, it is of use in washing off the skin (Sollmann<sup>3</sup>), but one should also consider the effects of the denaturalizing agent, which it may contain. The fallacy of its internal use is shown by Clarke and Brown<sup>2</sup> and by Macht<sup>4</sup>, although Rehfuß<sup>5</sup> recently recommends it.

The patient is kept in bed until signs of hemorrhage and renal irritation have disappeared. Pain in the gastro-intestinal tract may be relieved with orthoform, 1 gram, but it may be necessary to use morphine. A fluid or light diet may be given. If a stimulant is necessary, caffeine-sodium benzoate hypodermically is effective. Calcium lactate may be given, especially if there is bleeding. Calcium is a chemical antidote for phenol, with which it forms an insoluble compound (Sollmann<sup>3</sup>). Enough alkali, soda bicarbonate and soda citrate, is given by mouth to keep the urine just alkaline to methyl red. Under this treatment, evidence of renal irritation seems to clear up rapidly.

It is well not to pass the stomach tube if the patient is unconscious, certainly not if his reflexes are dulled, as phenol acts both locally and centrally. One of the deaths in this series was apparently due to this cause, the description of the procedures on the patient's chart suggesting that alcohol may have been poured into the patient's lungs, a condition which the autopsy record seems to substantiate. In other cases, a passage of the stomach tube on the unconscious patient was followed by mild or severe bronchitis, with definite lung signs, fever and cough. Clarke and Brown<sup>2</sup> report similar results.

Macht<sup>4</sup> pointed out that alcohol, taken before the phenol, has a protective action. In our series the average duration of the period of hospital observation for those who had taken some form of alcohol previous to drinking the phenol was 4.2 days, while the stay of the others was 7.8 days. The average duration of hospital observation of the case treated simply with the sodium bicarbonate treatment was 4 days, while the average stay for the more complicated treatment was 6.8 days.

The rest of the treatment depends on the symptoms. Artificial heat is used when the temperature is low.

## CRESOL

Most of the patients of this type of poisoning came to the hospital with the history of having taken *lysol*. In the majority of the cases, the solution was taken with suicidal intent, or was given accidentally or with homicidal purposes in amounts of from 4 c.c. to 120 c.c. These solutions were from 25 to 50 per cent. cresol. The cases were received from 1/4 to 14 1/2 hours after taking the cresol preparation. There were two deaths in the series of 52 cases, one, an eleven month old baby, receiving about 4 c.c. of *lysol*. Before coming to the hospital, it received 8 c.c. of whiskey and some milk. The stomach was washed within 1/2 hour with magnesium sulphate. The child died within 1/2 hour. The other case was a woman of 40, who was brought in unconscious and died within 1/2 hour. Her stomach was washed out, and alcohol and magnesium sulphate were put in.

As with phenol, there seemed to be no direct correlation between the amount taken, the time that elapsed before treatment, and the severity of the effects. Just as some people show difference in susceptibility to phenol and cresol irritation on their skin—a form of *eczema* or dermatitis encountered among surgeons or nurses who have their hands in these solutions,—so the internal susceptibility seems to vary.

*Symptoms and Course.*—The symptoms are much like those of phenol poisoning. Immediately or within 10 minutes after taking, the person may feel "sick to his stomach," and may or may not vomit. One patient described his feelings by saying, "I felt numb from head to foot, had cramps in my stomach, but could not speak." Some of the cases of unconsciousness are more suggestive of a psychic rather than a toxic origin. A burning sensation is soon felt (within 15 minutes) on the mouth, throat, oesophagus and epigastrium. The pain may be quite severe and may prevent the patient from swallowing. Cresol does not seem to have as much anesthetic effect as phenol.

On the skin cresol leaves a red burn. Locally in the eyes there is a swelling and congestion of the eyelids, cornea and palpebral conjunctivae. On the mucus membranes there is first congestion, then a white coat is formed. The burns are commonly seen on the lips, gums, tongue, cheeks, pharynx, and tonsils. There may be petechial hemorrhages of the mucous membranes. In mild cases, no lesion may be visible. The tongue may become so swollen that it cannot be protruded. It is first whitish, and may develop a brown coat. Blisters may form and may be followed by a painful sloughing of the superficial layers of the mucous membrane. There may be edema of the mucous membrane of the pharynx, uvula, or glottis. An irritative cough, pharyngeal in origin, is more common than in phenol poisoning. There may be marked salivation, but whether it is true salivation, or mere accumula-

tion of saliva because of dysphagia, is a question. Hoarseness or aphonia may develop. It was present in one case of phenol poisoning and in two of cresol, but there was a history of previous hoarseness in the phenol and in one cresol case. There is usually marked epigastric tenderness, as well as general abdominal pain and cramps. Vomiting is frequent, especially on the day following, the vomiting being yellow or brown, at times containing blood. Both the breath and the vomitus may have the odor of cresol. Headache is common.

Unconsciousness may come on quickly and last 14 1/2 hours or more. The coma may come on so quickly that it hardly seems possible that any of the drugs could have been absorbed, and a mental factor must play a part. There is frequently a drop in temperature to as low as 94.4°, but as a whole the tendency to subnormal temperature is not marked in cresol poisoning, the reading being commonly normal, occasionally slightly elevated to 99° or 100°. The pulse is usually weak, rapid, (100 to 136) but some cases with slower pulse rates (66 to 80) are found. The respiration varied from 16 to 52, and was commonly increased in rate. In fatal cases, there is cyanosis with dilated pupils and respiratory failure. The patient may be irrational, and show twitching movements and frothing at the mouth.

The urine is frequently smoky and dark in color, varying from chocolate to purplish brown or almost black. The first urine was usually acid to methyl red. In those cases in which alkalis were used, no signs of renal irritation (albumin, blood, casts) appeared, although it was often present in the non-alkali treated cases. The phenolsulphonophthalein output in two of the latter type of cases was reduced to 38 per cent. in two hours in one case and 47 per cent. in two hours in another. In the first case improvement in the clinical condition was marked by a rise to 52 per cent. output in two hours. The blood pressure showed no striking abnormalities. On chemical examination, the blood showed no characteristic abnormalities.

## TREATMENT

Treatment in *lysol* poisoning, has been as varied as in the case of phenol. Lard, milk, butter, whiskey, olive oil, mustard, magnesium sulphate, sodium bicarbonate have been used to neutralize, absorb and wash out the poison.

Repeated confirmation in many cases, shows that most of these antidotes can be dispensed with; a simple lavage, either with the stomach tube or induced vomiting, using 5 per cent. solution of sodium bicarbonate, is quite effective. In cases so treated, especially if followed up with enough bicarbonate to quickly make the urine alkaline to methyl red, no signs of renal complications were encountered, as noted before.

Magnesium sulphate may be used following the gastric lavage, to induce catharsis. In cases of severe collapse, caffeine-sodium-benzoate hypodermically may be used, but the quickest and safest method is to give a saline solution intravenously, as in the case of phenol poisoning, 500 to 1000 c.c., repeating in 12 hours, if necessary. The skin and mucous membrane burns may be washed with sodium bicarbonate solution (2 to 5 per cent.), and, if very edematous, magnesium sulphate (50 per cent. solution) may be used on the mucous membranes. Orthoform as a spray or one gram internally may be used to relieve pain. For burns in the eyes, olive oil irrigations have been used. Petrolatum may be applied to the skin or lips. A liquid or soft diet may be given until the danger of hemorrhages is past. The average duration of hospital observation was 4.3 days.

So far no strictures or symptoms of scar formation in the gastro-intestinal tract have de-

veloped in our series, after the lapse of one to five years.

#### SUMMARY AND CONCLUSIONS

1. A simplified treatment for phenol and cresol burns and poisoning is found in the use of sodium bicarbonate for gastric lavage, and for internal medication.

2. This treatment reduces the incidence of renal complications, and hastens the elimination of the poison from the body.

3. A marked variation in the susceptibility of different individuals to phenol and cresol is noted.

#### REFERENCES

1. Witherstine, C. S.: *Sajous Analytic Cyclopedia of Practical Medicine*, 8th ed., Vol 7, p. 441, 1920.
2. Clarke, T. W., and Brown, E. D.: *The Value of Alcohol in Carbolic Poisoning*. *Jour. Amer. Med. Ass'n.*, Vol. 64, March 17, 1906, p. 783.
3. Macht, D. I.: *An Experimental Study of Lavage in Acute Carbolic Acid Poisoning*. *Johns Hopkins Hosp. Bul.*, Vol. 26, p. 98, April, 1915.
4. Rehfuss, M. E.: *Disease of the Stomach*. *Oxford Medicine*, Vol. 3, p. 66, 1921.
5. Sollman, T.: *Manual of Pharmacology*, 1918, p. 481, Philadelphia.

## PUBLIC HEALTH NOTES

The Mansfield Child Health Demonstration is cooperating with the Mansfield General Hospital in presenting to pupils of the nurse training school a course that will fit them for work as public health nurses on graduation. The theoretical work covers a series of 24 lectures and the practical work includes two months in the district in company with and under the direction of the public health nurses already working with the Mansfield Public Health Nursing Association and with the Red Cross nursing service of Richland County.

—Acting upon the budget submitted by the Auglaize County board of health, the county budget commission cut \$1,700 from the amount requested, precluding the employment of a full-time public health nurse during 1923.

—Wide-spread indorsement has been given the request of the Lancaster city health department for an additional appropriation next year for employment of a milk and meat inspector. Prominent meat dealers of the city were quick to second the idea inasmuch as it is of vital importance to firms shipping their products to other cities requiring meat inspection.

—At the recent annual meeting of the Cincinnati Social Hygiene Society, Dr. W. S. Keller was re-elected president for a fourth term. Dr. E. W. Mitchell was re-elected vice-president, and Dr. Elizabeth Campbell, secretary-treasurer.

—Twelve hundred delegates to the annual meeting of the American Public Health Associa-

tion are expected in Cleveland, October 16-19. Dr. H. A. McLaughlin, Washington, is president of the organization, and Dr. A. J. Hendrick, New York, secretary. Headquarters will be in the Hotel Statler.

—Infant welfare work was one of the outstanding features of the activities of the Akron health department in 1921. This work, according to a report just issued, has resulted in lowering the infant mortality rate to 68, making it the second lowest rate in the state for 1921. The rate was 101 in 1917. The report points to the need of additional dairy inspectors, institution of meat inspection and an increase in the number of school physicians and nurses.

—The first of a series of weekly clinics for babies of Union County was held in Marysville, June 30. Various local physicians and the public health nurse are giving their services at the clinics for the betterment of babies during the summer months.

—Dr. G. T. Wasson, Ashtabula County health commissioner, assumed the office of commissioner of the Bucyrus district, August 1, succeeding Dr. J. J. Martin, resigned. His salary is the same as that allowed his predecessor, \$4,000 per year with an additional \$500 for automobile upkeep.

—Important changes have recently been made in the health division of the safety department of Zanesville. Replacing the custom of appointing physicians in each ward to look after the indigent sick, two physicians, Drs. W. C. Bateman and O. M. Wiseman, have now been appointed to have charge of this work in the two districts into which the city has been divided. Dr. Beatrice Hagen, the health commissioner,

will work in conjunction with them. Dr. Martha McBride has succeeded Dr. Bateman as district registrar of vital statistics, and Dr. Maurice Loebell has succeeded Dr. J. C. Crossland as city bacteriologist.

—The Cincinnati Health Exposition executive committee has transmitted to the community chest a surplus of \$2,779.71, with the suggestion that it be used to establish a mental hygiene clinic.

### Typhoid Fever at East Liverpool and Xenia

The occurrence of a number of cases of typhoid fever at East Liverpool called for an investigation by the State Department of Health which was made during the month of June. Every case which could be located and which had occurred since the first of December, 1921, was thoroughly investigated by Dr. R. B. Tate. Thirty-seven cases were found and eight deaths have occurred in that period. The investigation revealed no source common to all the cases except the public water supply. It was found that the public water supply treatment plant had been run on too narrow a margin of safety, leading to results which were not absolutely satisfactory. All evidence pointed to the public water supply as the source of the disease, and steps were immediately taken by the State Department of Health to correct this condition. In the report of Dr. Tate, it was stated that some physicians were lax in reporting their cases and that not all of them used Widal tests in confirming diagnoses.

An outbreak of typhoid fever occurred at Xenia during the month of May which occasioned an investigation by representatives of the State Department of Health. Thirty-one cases occurred between April 15 and May 19, and one patient died. An epidemiological investigation was made by Dr. T. W. Mahoney, and the public water supply was found to be the only source common to all the cases. No direct evidence could be secured that the public water supply was at fault. Mr. Waring, an assistant engineer of the State Department of Health, found that a number of manufacturing plants maintained industrial connections which were not safeguarded according to the rules of the State Department of Health. Orders were sent to the officials of these plants requiring proper operation of industrial and public water supplies. The investigation made by Dr. Mahoney revealed that the milk supply of the city of Xenia was not being properly supervised. Recommendations were made to the health commissioner to correct this condition.

A further outbreak of typhoid fever at Xenia was reported, July 10, and an investigation is now being made to determine the source of the disease. Six actual cases of typhoid fever are known to exist and a number of suspected cases

have been reported. The investigation is being conducted by the engineering and communicable disease divisions of the State Department of Health.

### Methods of Discipline at Boys' School Under Probe

Numerous instances of alleged cruelty and brutal treatment accorded the inmates of the Boys' Industrial School at Lancaster, are cited in a series of affidavits recently filed with Dr. H. S. MacAyeal, director of the State Department of Welfare, by the Ohio Institute for Public Efficiency, following an official investigation made at the request of the governor.

Contents of the affidavits were not made public at the time of their submission. It is understood, however, that the affidavits charge that youths have been forced to stand in an upright posture for hours, stand until their shackled limbs gave way from exhaustion; that others have been compelled to bear their backs to welts of leather straps; and that one boy was thrust beneath an open faucet while freezing water played over his uncovered back. One affidavit, it is said, tells of floggings administered to boys who have failed to win athletic events in which rivalry existed between cottages.

Following the submission of the charges to the State Department of Welfare, Captain R. U. Hastings, superintendent of the Lancaster school, requested the welfare director to make a personal investigation of the charges. Because of other duties, Dr. MacAyeal declined to take personal charge of such an investigation and named a committee.

This committee, soon after the appointments were announced, visited the institution and will compile and submit the data collected and findings made to Dr. MacAyeal. The committee consists of: E. C. Shaw, Akron, personal representative of the director of welfare; Walter R. Hamer and S. C. Griffen, of the Department of Child Welfare; C. H. Mayhugh, of the Ohio Institute for Public Efficiency; H. F. Moyer, Dayton; and Fred C. Croxton, Columbus.

A similar investigation of the Lancaster school was made several years ago under the direction of Dr. J. E. Hagerty, dean of the College of Commerce and Journalism, Ohio State University, who at that time was a member of the old Board of State Charities.

### Ohioan Speaks in West

Dr. Robert G. Paterson, executive secretary of the Ohio Public Health Association has returned from Seattle, where he attended the meeting of the Washington State Tuberculosis Association as a representative of the National Tuberculosis Association. He also made stops in Arizona, Utah and other western states in the interest of the anti-tuberculosis movement.

## Abolishment of Homeopathic College at State University Marks New Epoch in Medical Education in Ohio

Through formal action of the board of trustees of Ohio State University on July 11, the Homeopathic College of the University was abolished; thus supplementing and completing the action which was taken on June 19, whereby the separate college of Homeopathy was discontinued and two chairs of Homeopathy authorized in the College of Medicine.

The latest action of the trustees, following investigation, a series of voluminous reports, and hearings over a period of several months, was predicated on recommendations submitted to the trustees by President W. O. Thompson, of the University. These recommendations, the basis of official action, included the following:

"That the further teaching of homeopathic medicine be discontinued, effective August 15, 1922.

"That the principal sums of money received from all sources be returned to the donors, without interest, said money to be paid from the interest on the endowment fund.

"That the transfer of the hospital, and all appliances and materials that go with it, become effective August 15, 1922.

"That the radium now in the possession of the College of Homeopathic Medicine be returned to Charles F. Kettering or to such person or persons as may be designated.

"That all research papers, drawings and the like that may be construed practically as personal belongings, although technically the property of the university, but of no special importance to other than the original investigator, be assigned and transferred to the appropriate professor in the College of Homeopathic Medicine.

"That the Homeopathic Library be kept intact and transferred to such persons or organizations as may be later determined upon.

"That a suitable leave of absence for the current year only with salary be provided for, in the case of such members of the faculty as would ordinarily be entitled to it, under the usual custom of the university."

In submitting his recommendations, President Thompson summarized these reasons for the entire elimination of the College of Homeopathy:

His investigation showed that the plan of merging the two colleges of medicine, as previously decided upon by the trustees, is not practicable and workable.

The proposal to completely eliminate their college is more acceptable to the homeopaths themselves than would be the merger plan.

Assuming that the merger is not practicable, then the sooner the University is through with it the better, and the more completely the work is done now the fewer will be the troubles and vexations of the future.

With the abolishment of the College of Homeopathy, effective on August 15, the last separate school of that kind as a college attached to any

### Science of Medicine

"The obvious retort to any special school or sect of medicine is that there is only one science of medicine. It would be as reasonable to maintain that there are several sciences of physics as of medicine. To speak of a form of anatomy, physiology, chemistry, pathology, bacteriology, pharmacology, etc., of the human or animal body which is homeopathic would be to talk absurdities which anyone could appreciate. No one would, I suppose, expect a surgeon operating, say for an inflamed appendix or a cancer of the breast to use a special homeopathic system of anesthesia, asepsis, dissection, suture, etc. All that is self evident, I think. Hence the fundamental training of doctors is not several things, but one thing," says Dr. Simon Flexner, head of the Rockefeller Institute for Medical Research.

state university, goes out of existence. This action is in line with the precedent established at the University of Minnesota. Arrangements for similar procedure have been made at the University of Michigan, and to a large degree at the University of California and the University of Iowa.

The important change is expected to stimulate the College of Medicine at the State University as a center of medical teaching and will remove whatever jeopardy existed in a lower classification for the College of Medicine.

With the passing of the last homeopathic school in Ohio, there are said to be but three separate schools now in existence in the United States, the Hannemann institutions, one each in Chicago, Philadelphia and New York.

The constructive efforts of the A. M. A. for a period of years in raising the standards of medical education, together with the enactment of more or less uniform medical practice acts in the various states, coupled with the forward looking policy of the medical profession itself, are reflected by the fact that there are now but three large, well-established, widely recognized, high grade Class A medical schools in Ohio—The Western Reserve School of Medicine; the College of Medicine of the University of Cincinnati, and the College of Medicine of Ohio State University; as compared to the numerous schools of former years, totaling 42 in Ohio, it is said.

Likewise latest figures show that there are

### Noteworthy Movement

"The most noteworthy movement in American university education in the last decade has been in the field of medicine. The school of medicine has become a true university school, and has come to realize its obligations to the community and to the public health as never before. Medicine is an applied science, and the physician or surgeon looks upon his career as a scientific profession, not as a business. The sense of responsibility for the prevention as well as the cure of disease has been enormously quickened. \* \* \* This notable educational advance has come in the main from influence outside the universities, and most of all from the leaders of the medical profession itself. \* \* \*

A university owes to its state something more than quick obedience to outside pressure; the state has a right to expect from it educational leadership. The right form of medical education is exactly the sort of question that a university is supposed to determine for itself.

For a modern university to stand sponsor for two conceptions of medicine—scientific and sectarian—involves not only a singular inconsistency, but a surrender of its educational leadership."

From the Ninth Annual Report of the Carnegie Foundation.

now but 86 medical schools in the United States, although graduates of 433 American institutions are practicing in the various states.

The elimination of the low grade, proprietary and private schools and the gradual elevation of the standards of medical education coupled with the advancement in the larger but fewer medical institutions, speak volumes for the genuine advances, which have been made in the past two decades alone.

Commenting on the successes and conclusions of the Council on Medical Education of the A. M. A. on the development in recent years, a recent issue of the Bulletin of the Cleveland Academy of Medicine says:

"Stopping the flood of low standard practitioners did not cause a shortage of physicians, but on the other hand figures carefully gathered, over a long period of years indicate the following conclusions:

1. There has been a remarkable increase in the quality of medical education in the United States due to the consolidation in a few medical schools, of faculties and facilities costing hundreds of thousands of dollars, which could not be afforded by small medical schools.

2. Fewer physicians are needed in a community when they are of good quality.

3. Public health conditions have improved greatly, due to the cooperation of highly trained medical practitioners with the Departments of Health in enforcing quarantine laws and sanitary regulations, a condition impossible when a large percentage of these in touch with individual cases are incompetent.

4. Carefully compiled figures show that high standards increase rather than decrease the supply of medical practitioners, as more of the higher type of young men required for the study of medicine, are attracted than was the case when they had to compete on unequal terms with low standard men. So that today there are more students taking pre-medical courses in the universities than can be accommodated in the medical schools of the United States.

5. The large medical schools of the United States are expanding to take care of the demands made upon their facilities.

According to late figures there is one physician in Ohio to 711 persons; in the United States, one to 726; Scotland, one to 1,475; Italy, one to 1,484; England and Wales, one to 1,537; Ireland, one to 1,943; France, one to 1,969; Germany, one to 2,124; Austria, one to 2,319; and Russia (1912) one to 7,865.

At the time this was written plans had not been definitely completed by the College of Medicine for taking over the homeopathic hospital. A number of perspective changes are imminent.

On the economic side of the situation, data which were under consideration by the board of trustees indicated that at least \$30,000 would be saved annually to the University under the new arrangement.

A brief submitted by a committee from the board of trustees on this point states that "the total cost of graduating a student from the College of Medicine, including only the four years professional course, was \$3500, while each graduate from the College of Homeopathic Medicine has cost the state nearly \$13,000. These figures do not include the cost of the preliminary two years in regular University courses, and even that of the College of Medicine is considerably higher than in some similar institutions. It is fair to say, however, that instruction is given by professors belonging to the College of Medicine in several other colleges of the University and only *pro rata* amount of the cost of their maintenance should be charged to medicine. It is difficult, however to ascertain just what this should be and as it would affect only the cost of the first two years of the medical course, the final estimate would not be greatly altered, though the resulting contrasts between the two colleges would be even greater than as here shown."

Shortly after the action of the Ohio State trustees was made public, the American Institute of Homeopathy announced it would investigate the legality of eliminating entirely the teachings of homeopathic medicine from the university, and may seek to prevent the abolishment of the course. Official opinion at the university is that the trustees will adhere to their action, although it is probable that any information or explanation officials of the homeopathic institute want will be given them.



## State Medical Board Licenses New Medics and Limited Practitioners, Including One Chiro

Ohio is enriched by the addition of one hundred and sixty licensed physicians who have been awarded certificates entitling them to practice in this state following their examination by the State Medical Board in June. Four applicants failed to pass the examinations. The list of new licensees with places of residence and schools of graduation is as follows:

### OHIO SCHOOLS

*Ohio State University College of Medicine*—G. D. Williams, Akron; W. B. Hutchinson, J. C. Peck, Julius Shamansky, Cleveland; W. M. Athey, N. L. Barnett, J. H. Cowan, W. F. Drake, W. H. Hamilton, J. M. Hiss, Max P. Kanter, G. F. Meuser, H. F. Ross, G. J. Searle, Jr., C. C. Solomonides, J. S. Stevens, L. H. Van Buskirk, J. H. Wilson, Columbus; M. M. Linder, C. F. Shonk, C. B. Snider, J. D. Spaid, Dayton; T. E. Zinkan, Lima; P. S. Fishbaugh, Mendon; M. S. Cherington, C. G. Egger, A. D. Vogelsang, Toledo; L. C. Schiff, Warren; A. R. Burkhart, Woodsfield; S. L. Agnone, L. G. Coe, Youngstown.

*Ohio State University College of Homeopathic Medicine*—D. J. Bradley, B. Goldberg, H. E. Reed, Cincinnati; S. M. Adams, G. R. Henshaw, H. G. Stack, Columbus; E. E. Rakestraw, Napoleon.

*University of Cincinnati College of Medicine*—F. P. Bennett, Alliance; R. B. Bailey, A. L. Brown, L. W. Gaker, G. M. Guest, G. L. Hardin, A. B. Hartman, E. M. Hendricks, L. G. Hendricks, Gwendolyn A. Jones, H. Keck, G. F. Koetter, A. G. Kreimer, G. W. McClure, Aurelia P. McIntyre, H. B. Miller, M. I. Miller, C. A. Mills, W. C. Paul, O. S. Pavy, L. P. Porras, C. K. Riddle, A. D. Ritenour, H. O. Theiss, C. S. Turner, W. C. Vester, C. A. Wilzbach, J. F. Wynn, V. G. Shelton, Hiram Slutz, R. K. Stix, E. R. Swepston, M. Zeligs, Cincinnati; S. Levin, Cleveland; O. B. Hall, Coolville; F. T. Beck, Crestline; W. L. Davis, Dayton; G. R. Lunger, Marion; M. S. Muskat, Marietta; C. H. Leech, New London; H. A. Schirrmann, Portsmouth; W. K. Templeton, Toledo; J. A. Fraser, Wellsville.

*Eclectic Medical College, Cincinnati*—H. R. Chester, Antwerp; D. C. Gaskins, Bentonville; J. S. Bernard, F. C. Burket, S. S. DeVaux, E. H. Edel, S. R. Gerber, R. H. Hermann, J. H. Kneisley, H. W. MacMillan, A. J. Mendelsohn, E. C. Morey, E. M. Morris, D. Parrella, D. R. Sipes, V. J. Sloan, Cincinnati; F. G. Gaspard, I. C. Myers, Cleveland; I. C. Wohrley, Columbus; G. R. Longnecker, Eaton; P. J. Love, Fayetteville; R. L. Lawwill, Manchester.

*Western Reserve University School of Medicine*—R. K. Ramsayer, Alliance; P. H. Beaver, R. I. Curry, J. S. Deering, E. H. Evans, M. H. Grossberg, R. B. Hauver, W. E. Hill, A. Irvine,

E. J. Kelley, Jr., W. P. Kilway, R. B. Krouse, D. A. Lanese, R. D. Leas, L. Lieberman, F. R. Lyne, S. H. Makman, A. Marcus, H. C. Nash, W. H. Odell, M. L. Siegel, F. M. Trump, Cleveland; E. C. Siddall, Dayton; E. L. Sherrer, Oberlin; E. E. Beard, Youngstown.

### OUT OF STATE

*Harvard*—H. H. Brittingham, Cleveland; E. C. Romberg, Cincinnati. *Johns Hopkins*—Beulah Wells, Cleveland; F. C. Conroy, Cincinnati; I. Baldwin, Youngstown. *Jefferson Medical College*—P. C. Langon, Akron. *Meharry*—W. B. Glenn, Elyria; L. C. Youngblood, Warren; E. F. Alleyne, Youngstown. *New York University and Bellevue Hospital*—K. D. Bryson, Cleveland. *Rush Medical College*—C. O. E. Lindbeck, Fort Recovery. *St. Louis University*—C. G. Czarnnecki, J. J. Gedert, Toledo; J. E. Hannibal, Cleveland; C. L. Weston, residence unknown. *Tufts Medical College*—F. W. Milward, Cleveland. *University of Pittsburgh*—D. H. Bermah, B. H. Bielski, C. S. Rosen, Cleveland; E. W. Jew, Steubenville; P. Z. Reist, J. Priestes, Youngstown; Alice E. Schmitz, L. C. Taylor, G. E. McKenzie, residence unknown. *University of Pennsylvania*—C. B. King, Warren.

*Imperial University, Tomsk, Russia*—R. Frolkis, Cleveland. *University of Budapest, Hungary*—J. A. C. Roth, J. Klein, Cleveland. *University of Naples*—R. Luongo, Akron. *University of Toronto, Canada*—F. G. Livingston, Cleveland. *University of Vienna*—S. Breenberg, Cleveland.

Six applicants were licensed to practice osteopathy and two other osteopaths were granted certificates to practice surgery. One chiropractor, four midwives, three cosmetic therapists and fifteen chiropodists were also licensed, having passed examinations in the fundamentals given by the State Medical Board and in their special branches of practice given by committees from their respective schools. Two osteopaths, one chiropractor, two masseurs, one cosmetic therapist and one chiropodist failed to meet the requirements of the examinations.

### Name Revised at U. C.

By action of the board of directors of the University of Cincinnati recently, the Christian R. Holmes Chair of Clinical Medicine was changed to the Christian R. Holmes Chair of Surgery. This action was taken after permission was granted by the Carnegie Foundation, which gave \$250,000 to establish a chair of clinical medicine in honor of Dr. Holmes. The name of the chair was changed because there is a chair of medicine in the College of Medicine.

## DEATHS IN OHIO

*Calvin A. Bonner, M.D.*, Medical College of Ohio, Cincinnati, 1890; aged 65; died at his home in Dayton, June 23, after an illness of several months' duration. Dr. Bonner was at one time health officer of Dayton. He leaves one daughter, one sister and one brother.

*John C. Campbell, M.D.*, University of Michigan Medical School, Ann Arbor, 1879; Rush Medical College, Chicago, 1882; aged 67; died at his home in Powell, June 26, from complications. Surviving are his widow, three daughters and three sons.

*Jesse Otis Davy, M.D.*, Medical College of Ohio, Cincinnati, 1869; aged 81; member of the Ohio State Medical Association; died at his home in Springfield, June 23, of a complication of diseases. Dr. Davy was numbered among the oldest members of the Clark County Medical Society, with which he had been affiliated for more than half a century. Returning to civilian life after service in the Civil War, Dr. Davy completed his medical education, entered practice in Miami County but later removed to Clark County. Besides his widow, he leaves one son.

*Guy S. Dunbar, M.D.*, University of Louisville Medical Department, Kentucky, 1915; aged 33; member of the Ohio State Medical Association; died recently from pneumonia. Dr. Dunbar's home was in Cleveland.

*William Henry Grothouse, M.D.*, Miami Medical College, Cincinnati, 1893; aged 54; died at his home in Columbus, June 30, from carcinoma. Dr. Grothouse practiced medicine in Millersburg before coming to Columbus 28 years ago. He was also a registered druggist and operated drug stores in Millersport and Columbus during his residence in both places. His wife and two brothers survive.

*George C. Hook, M.D.*, Columbus Medical College, 1885; aged 71; member of the Ohio State Medical Association; died at his home in Bellbrook, June 13, after a month's illness which followed an attack of paralysis. Dr. Hook had practiced in Fairfax and Berrysville before locating in Bellbrook, where he had practiced for the past 31 years. He leaves his wife and one son.

*Joseph Clark Lackey, M.D.*, Ohio Medical University, Columbus, 1896; aged 53; member of the Ohio State Medical Association and Fellow of the American Medical Association; died at his home in Jamestown, May 16.

*John T. Frawley, M.D.*, Cleveland University of Medicine and Surgery, 1896; aged 55; died at his home in Perry, Lake County, June 7, from

pneumonia. Dr. Frawley practiced in Cleveland a number of years, retiring several years ago.

*Edison Burr Starr, M.D.*, Jefferson Medical College of Philadelphia, 1905; aged 41; member of the Ohio State Medical Association and Fellow of the American Medical Association; died at Protestant Hospital, Columbus, June 19, from pneumonia which resulted from a week's illness with typhoid fever. Dr. Starr as chief of the division of industrial hygiene of the State Department of Health had just returned from a survey of conditions in the onion fields of Hardin County when he was taken ill with typhoid. He had been connected with the State Department of Health for three years, coming to Columbus from Washington, D. C., where he had served with the United States Public Health Service. Prior to that he had for three years been assistant director and for two years health director of Springfield. He had also practiced in Columbus and Springfield. Surviving are his widow and two small children.

*Floyd F. Swimley, M.D.*, Starling Medical College, 1898; aged 51; died at his home in Forest, June 24, from heart disease and other complications. Dr. Swimley was also a pharmacist. His widow survives.

*George Henry Whaley, M.D.*, Columbia University College of Physicians and Surgeons, New York, 1870; died at his home in Crawford, June 25.

*Joseph M. Gallen, M.D.*, Ohio Medical University, Columbus, 1907; aged 38; member of the Ohio State Medical Association and Fellow of the American Medical Association; died at his home in Columbus, July 11, after a year's illness. Dr. Gallen was a life long resident of Columbus. At the time of his death he was chief of staff of St. Ann's Hospital, assistant surgeon at St. Francis Hospital and a member of the faculty of Ohio State University College of Medicine. His widow and two children survive.

### For the Office Table

The Propaganda Department of the American Medical Association now has ready for distribution the following pamphlets: Female Weakness Cures, 68 pp., illustrated, price 15 cents; Epilepsy Cures and Treatments, 38 pp., illustrated, price 15 cents; Obesity Cures, 62 pp., illustrated, price 15 cents; The Nostrum and The Public Health, 16 pp., price 10 cents.

The first three pamphlets deal, as the names denote, with specific products of the types described in the titles. The fourth pamphlet does not deal with any specific nostrum, but discusses the general relation of the "patent medicine" evil to the public health. This pamphlet also contains an article on "Truth in Advertising Drug Products" and three short items on certain phases of the nostrum business.

## New Activities, Appointment of Splendid Committees, and Policy Pronouncements Feature Busy Council Session

### MINUTES

Council of the Ohio State Medical Association met July 2, 1922, at Hotel Deshler, Columbus, with the following members present: President Carothers; Ex-President Teachnor; Treasurer Platter; Councilors Geier, Hussey, Hendershott, Waggoner, Updegraff, Stevenson, Seiler and Goodman; Dr. Upham, Chairman, Committee on Public Policy and Legislation, Executive Secretary Martin; and by invitation, Dr. A. O. Peters, Dayton, president of the Montgomery County Medical Society. Dr. H. H. Snively, State Director of Health, Drs. Boudreau, Hayhurst and Leland, of the State Department of Health.

Dr. Goodman, chairman of the Committee on Auditing and Appropriations, submitted a detailed financial report of the recent annual meeting of the State Association in Cincinnati, which showed a balance of \$190.57. Upon motion, duly seconded, Council accepted and approved the report.

As provided by Chapter VIII, Section 9 of the By-Laws of the State Association, President Carothers appointed a committee of three members of Council as a Committee on Arrangements for the 1923 annual meeting, as follows: Dr. Geier, chairman, Drs. Hussey and Updegraff.

Dr. A. O. Peters, president of the Montgomery County Medical Society, who was present on invitation of the president of the Association, outlined tentative plans for the entertainment of the 1923 meeting in Dayton. His suggestions were referred to the general committee on arrangements and to the program committee. President Carothers then appointed the following three members to serve as the Council Program Committee: Drs. Goodman, Hendershott and Stevenson.

On motion by Dr. Stevenson, duly seconded and carried, Dr. L. G. Bowers, Dayton, was selected as the local general chairman on arrangements, to cooperate with the Council Committee on Arrangements for the 1923 meeting. On motion by Dr. Goodman, duly seconded and carried, the dates of May 1, 2 and 3, 1923, were tentatively selected as the time for the meeting.

On motion by Dr. Hussey, duly seconded and carried, a vote of thanks was extended to Dr. Peters for his interest and assistance in the arrangements for the meeting. On motion by Dr. Goodman, duly seconded and carried, Council authorized the payment of expenses incurred by Dr. Peters in coming from Dayton to be in attendance at the Council meeting on official business for the Association.

Dr. Goodman, chairman of the Auditing and

Appropriations Committee explained in detail the formation of a budget for the annual meeting, to be adhered to by the local committee.

On motion by Dr. Teachnor, duly seconded and carried, Council decided that the orations at the general session on Wednesday afternoon of the next annual meeting would be devoted to Surgery and Public Health. Dr. Hussey suggested that a national authority on the latter subject be secured, and mentioned favorably Dr. W. S. Rankin, Raleigh, secretary of the North Carolina State Board of Health.

Upon invitation by the president, Dr. Snively, State Director of Health, explained in a general way, the policy of his department in its endeavor to cooperate fully and cordially with the medical profession. He asked the advice and suggestions of the Council. In turn the other representatives of the State Department of Health explained briefly some of the problems in health administration, and it was agreed that the officers and Council of the State Association should endeavor to maintain constant contact between the State Department of Health, representing public health administration, and the members of the medical profession in order that mutual problems might be fully discussed and well understood.

Dr. Goodman called the attention of Council to the publication of articles in some women's magazines of criticism toward the medical profession for its attitude on the Sheppard-Towner Maternity and Infancy legislation. On motion, seconded by Dr. Updegraff, and carried, this matter was referred to the Committee on Public Policy and Legislation, with authority to act.

Dr. Upham reported on the part taken by the Ohio State Medical Association and its delegates in the deliberations and proceedings of the American Medical Association at its recent annual meeting. Attention also was called to the account of those proceedings outlined in the July issue of the *Ohio State Medical Journal*. On motion by Dr. Goodman, seconded by Dr. Stevenson and carried, the Council expressed its sincere and cordial appreciation to the Ohio delegates who served in the House of Delegates of the A. M. A., and to the other Ohio members who participated in the business and scientific proceedings at the St. Louis meeting.

Dr. Teachnor introduced the following resolution and suggested questionnaire, to be directed to a selected list of Ohio physicians who have had personal experience in the treatment of drug addicts and other disorders in which large doses of narcotic drugs have been required.

Whereas, if possible it is desirable that based

on experience, the medical profession agree on recommendations which shall exempt from the restriction and formality of the Harrison Narcotic Law one or more narcotic drugs which have demonstrated power to alleviate pain and induce rest without disagreeable side effects, and

Whereas, it will be remembered that the Harrison Narcotic Law, which became effective over six years ago, applied to "opium or cocoa leaves or any compound, manufacture, salt or derivative or preparation thereof." It was necessary, when the law was first applied, for it to be inclusive. It is now time that reasonable exemptions should be made. We should know which derivatives of opium are habit producing and which are not, and it should be feasible to particularize the former and omit the latter from the application of this law, and

Whereas, because of the interest aroused by recent discussion in the *Journal of the American Medical Association* on the non habit forming properties of codein it is possible that the profession might agree on this in order to approach the illegal opium problem, and

Whereas, many of the leading authorities are agreed that codein is one of the most useful and most commonly prescribed drugs; that it is not dangerous, though effective; that it is not habit-forming, and that to a large extent it may displace the use of morphin and heroin, which are habit-forming; therefore be it

Resolved, That in order to get the opinion of those members of the profession in Ohio who have had long experience in institution work in treating drug addicts, the following questionnaire, to which an early reply is requested, be submitted, to a representative number of Ohio physicians, and that a committee of three be appointed by the President to make a survey and report its findings to this Council.

#### QUESTIONNAIRE ON CODEIN

1. From your experience in treating drug addicts in public and private institutions is codein sulphate a habit-forming drug?
2. If so, how many cases have you seen and treated where codein sulphate was the only drug to which the patient was addicted? Please describe.
3. In cases of codein addiction encountered was the habit easily broken?
4. In your opinion would it be consistent with public interest to exempt codein sulphate from the operation of the Harrison Narcotic Law?

Comment and Explanations:

Name.....

Address.....

On motion by Dr. Waggoner, duly seconded and carried, the resolution and suggestions by Dr. Teachnor were adopted, pursuant to which Dr. Carothers appointed Dr. Teachnor chairman of a special committee to make such survey, and authorized him to select the other two members of his committee.

Pursuant to authorization by the Constitution and By-Laws, as well as the House of Delegates and Council, President Carothers announced the appointment of the following committees to serve until the next annual meeting of the State Association:

#### AUDITING AND APPROPRIATIONS

(From Council)

S. J. Goodman, Chairman.....	Columbus
R. R. Hendershott.....	Tiffin
J. S. McClellan.....	Bellaire

#### NURSE EDUCATION

Charles S. Hamilton, Chairman.....	Columbus
J. P. Baker.....	Findlay
John Phillips.....	Cleveland

#### HOSPITAL STANDARDIZATION

(Re-appointed)

C. D. Selby, Chairman.....	Toledo
S. S. Halderman.....	Portsmouth
J. C. Tritch.....	Findlay

#### MEDICAL EDUCATION

R. H. Birge, Chairman.....	Cleveland
E. F. McCampbell.....	Columbus
A. H. Freiberg.....	Cincinnati

#### CRIPPLED CHILDREN

(Re-appointed)

B. G. Chollett, Chairman.....	Toledo
A. H. Freiberg.....	Cincinnati
A. M. Steinfeld.....	Columbus

#### GENERAL SECRETARIES

J. S. Rardin, ex-officio, Chairman.....	Portsmouth
H. C. Messenger.....	Xenia
E. H. Porter.....	Tiffin
O. T. Sproull.....	West Union

#### MENTAL HYGIENE

T. A. Ratliff, Chairman.....	Cincinnati
C. W. Stone.....	Cleveland
E. A. Baber.....	Dayton
J. H. J. Upham, ex-officio.....	Columbus

#### PHYSICAL EDUCATION

P. B. Brockway, Chairman.....	Toledo
W. H. Peters.....	Cincinnati
Emilie Gorrell.....	Columbus
J. H. J. Upham, ex-officio.....	Columbus

#### ARRANGEMENTS 1923 ANNUAL MEETING

(From Council)

Otto P. Geier, Chairman.....	Cincinnati
M. F. Hussey.....	Sidney
R. K. Updegraff.....	Cleveland

#### PROGRAM 1923 ANNUAL MEETING

(From Council)

S. J. Goodman, Chairman.....	Columbus
R. R. Hendershott.....	Tiffin
D. W. Stevenson.....	Akron

The following suggestion in the form of a communication was submitted by Dr. Teachnor to Council:

In view of the desirability through cooperation with public health administration to educate the laity to the value and necessity of frequent and thorough medical examinations, and to prompt and efficient medical attention to even minor ailments, and in view of the possible efforts to this end without restricting the educational program to a limited field or disorders, and especially in view of the effort now being undertaken through the Council on Health and Public Instruction of the American Medical Association in this matter, it is recommended that there not be appointed a special cancer committee for the State Association, but that whatever educational efforts are undertaken in this state in conjunction with the American Society for the Control of Cancer be directly under the supervision of the Council.

In order that the medical profession in co-

operation with public health officials may properly educate the public in these matters, it is first necessary that the profession itself thoroughly understand the problem. A special committee several months ago was authorized by the Council on Health and Public Instruction of the American Medical Association to prepare material for the instruction of the medical profession on the "Early Signs and Symptoms of Cancer and Pre-Cancerous Conditions." The members of this committee are:

Dr. John C. Bloodgood, Baltimore, Chairman  
 Dr. John G. Clark, Philadelphia  
 Dr. R. B. Greenough, Boston  
 Dr. W. J. Mayo, Rochester, Minnesota  
 Dr. E. A. Codman, Boston  
 Dr. D. C. Cheever, Boston  
 Dr. J. M. T. Finney, Baltimore  
 Dr. Harvey Cushing, Boston  
 Dr. Dean Lewis, Chicago  
 Dr. John Da Costa, Philadelphia  
 Dr. J. B. Squier, Jr., New York.

It is advocated that the participation of the Ohio State Medical Association in this movement be based on the recommendations of such committee of the American Medical Association when it reports, and that such report be considered as a basis of activity by the Council of the Ohio State Medical Association.

On motion by Dr. Teachnor, seconded by Dr. Waggoner, and carried, Council voted not to authorize a special Committee on Cancer for the State Association until after report and consideration by Council of the special committee report of the American Medical Association.

Dr. Geier supplemented orally the suggestions which had been communicated to members of Council recommending an extension of councilor activities to include wherever possible, health addresses to lay audiences with the ultimate purpose of a clearer understanding by the public of the function and purpose of scientific medicine. Following this suggestion, there was a general discussion in which members of Council agreed that there must be a greater understanding between individual members of the profession of the complicated and rapidly developing social problems in which public health and medical practice are involved.

Dr. Updegraff moved, seconded by Dr. Stevenson, that a committee be appointed to outline a general course of activity for the councilors in their work in their respective districts. On being put to vote, this motion was lost, following which several councilors explained that there were many varieties of problems different in each community, and that a councilor must at all times endeavor to place himself in the closest possible contact with the county societies and the members in the respective councilor districts to the end that he might more clearly and directly represent their ideas, viewpoints and desires in the deliberations of the Council.

The draft of a tentative proposal on physical education in the schools of Ohio as approved by

the National Physical Education Service, was submitted for consideration of the Council. On motion, duly seconded and carried, this proposal was submitted to the special Committee on Physical Education, for cooperation with the Committee on Public Policy and Legislation, with the understanding that Council's approval is given to the general provisions and purposes of such bill.

Dr. Goodman read a formal communication addressed to the Council of the Ohio State Medical Association from eight members of the Sandusky County Medical Society, protesting against the action of that society in expelling them from membership, and requesting the Council to fix the time and manner in which appeal could be heard, as provided by Section 5, Chapter VII of the Constitution and By-Laws of the State Association.

Following a discussion of that situation by Dr. Waggoner, and on his motion, seconded by Dr. Updegraff, and carried, the president was requested to appoint three members from Council to represent that body in an effort to arbitrate the differences as set forth in the communication, and to report back to Council at its next meeting. Pursuant to this authorization, President Carothers appointed as members of such special Council Committee, Drs. Updegraff, Hendershott and Geier, with Dr. Waggoner, Councilor of that district, as ex-officio member of the committee.

Council discussed at length the situation in respect to the operation of the Workmen's Compensation Law in Ohio, and elaborated in detail on the general situation as expressed in recent issues of the *Ohio State Medical Journal*.

Pursuant to custom, and on motion by Dr. Teachnor, seconded by Dr. Updegraff and carried, Council authorized the acceptance by the State Association from the secretaries of county societies of pro-rated dues for NEW members of \$3.00 after July 1 until the end of the present calendar year; and of \$2.00 after October 1 until the end of the calendar year.

A summary of membership records submitted for the consideration of Council, showed that the membership in the State Association for 1922, to date is 4727; with a total membership on the same date, 1921, of 4796. Members of Council were agreed that there is a greater need than ever before for strong organization for increased membership and urged that renewed effort be made by the officers of the county medical societies to secure as members all eligible physicians in their respective jurisdiction.

On motion by Dr. Goodman, seconded by Dr. Waggoner, and carried, Council authorized transfer from the unassigned funds and appropriation of the sum of \$300.00 for councilor expenses, it being explained that the modest amount previously appropriated for this purpose had been exhausted. On motion Dr. Goodman, sec-

unded by Dr. Geier and carried, Council authorized the transfer from the unassigned funds and appropriation of the sum of \$300.00 for traveling expense of the assistant executive secretary for the remainder of this year.

On motion by Dr. Waggoner, seconded by Dr. Geier and carried, the expenses of the medical editor in attendance at the recent annual meeting of the State Association were authorized from *The Journal* fund, rather than from the annual meeting fund. On motion by Dr. Goodman, seconded by Dr. Geier and carried, the question of expenses of the medical editor was referred to the Publication Committee with request for definite recommendations to the Council.

Dr. Snively announced that there would be an annual meeting of the health directors of Ohio held in Columbus the week of September 4 at which time they expected among their speakers, Dr. W. S. Rankin, Secretary of the North Carolina Board of Health; President Vincent of the Rockefeller Foundation, and other nationally known speakers. He cordially invited members

of Council and members of the Association to be present if possible.

Legislative prospects and public policy were discussed at length by Dr. Upham, Dr. Goodman and others. The prospects for the next session of the legislature were analyzed and discussed. An unusual number of difficult problems were anticipated, and the desirability of interest of each local society was indicated.

A brief report of the medical defense situation showed that ten cases are pending from last year, and four suits and five threats of suit have been referred since January 1 of this year.

It being stated that there is a possibility that the office space now occupied by present headquarters of the State Association might be leased to other tenants, a special committee was authorized by Council to secure new quarters if necessary. President Carothers appointed Drs. Teachnor, Goodman and Platter as members of this committee to act for Council.

On motion, seconded and carried, Council adjourned to meet on Sunday, October 1, 1922, at 1:30 P. M.



## HOSPITAL NOTES

The State Department of Health is investigating by means of a questionnaire the reason why the hospitals of this state are said not to be used sufficiently. The questionnaire, directed to residents in various parts of the state, inquires why they do not send their sick to hospitals for care when records show that fewer die there than if cared for in their homes. While it is estimated that there should be one hospital bed for every 100 persons in a community, there are only two and three-tenths beds for every 1,000 persons in Ohio, and of these only 65 per cent. are being used. The state has 288 hospitals of all kinds, 44 being maternity and tuberculosis hospitals; 161 privately owned and devoted to general purposes and the remainder sanitariums and institutions for the treatment of special cases.

—The cornerstone of Rickly Memorial Hospital at the Ohio Masonic Home, Springfield, was laid June 27. Members of Masonic lodges from throughout the state took part in the ceremonies.

—At the annual reorganization meeting of the staff of Akron City Hospital, Dr. L. C. Eberhard was chosen president; J. H. Seiler, vice-president; and L. E. Brown, secretary-treasurer. Drs. R. G. Werner, A. R. Spindler, B. H. Gillespie, C. C. Pinkerton and H. J. Gordon were added to the junior staff and Drs. H. R. Conn and R. H. Smith to the active staff. Dr. D. M. Mc-

Donald, the retiring president, started a fund which is to be added to by other members of the staff for research work.

—One of the largest X-ray treatment machines in Ohio was placed in operation recently at Columbus Radium Hospital. It is capable of generating 300,000 volts of electricity as compared to the average maximum of 110,000 volts. The machine also includes new safety devices designed to protect both the patient and operator.

—The Youngstown Hospital Association has received \$100,000 from the will of the late Mrs. Grace Tod Arrel, the money to be used for the endowment of a maternity ward for the exclusive use of indigent women and their children, known as the "Grace Tod Arrel Maternity Ward Trust Fund."

—Alleging carelessness on the part of an attendant at a Columbus hospital in applying a hot water bottle to his foot, necessitating amputation, a patient has filed suit for \$50,000. The plaintiff alleges that while being given a sweat bath a hot water bottle blistered a toe, causing gangrene.

—A babies' and children's clinic for treatment of indigent ambulatory cases up to 12 years of age has been opened in the children's department of the Massillon City Hospital. The clinic is open for one hour daily except Sundays and holidays.

—Dr. Howard D. McIntyre, instructor in physiology, University of Cincinnati Medical College, and clinical instructor in nervous and

mental diseases at the General Hospital, recently resigned both positions to become director of psychiatric research at White Oaks Farm, Marion. His wife, Dr. Aurelia P. McIntyre, has become director of the clinical laboratory at the Marion institution.

—The College of Medicine, Ohio State University, has formally withdrawn from Protestant Hospital, Columbus. Because of this action the staff has been reorganized and, on account of the reduced space now available, trustees of the hospital are considering the construction of an addition which would approximately double the capacity.

—Formal opening and dedication of the Henry L. Wells Hospital, Cambridge, took place with impressive ceremonies, June 29.

—Miss Laura R. Logan, director of the School of Nursing and Health, University of Cincinnati, was elected president of the National League of Nursing Education at the closing session of the league, June 30, in Seattle. Miss Logan served as first vice-president of the league last year.

—Dr. Stanley Erlenback, formerly associated with Memorial Hospital, Syracuse, New York, assumed his new duties as a member of the staff of the Ohio State Sanatorium, Mt. Vernon, July 2. He succeeds Dr. H. W. Retan, resigned.

### Tuberculosis Conference Acts to Join Forces with State Hospital Association

Through the adoption of a suggested constitution and by-laws, the Ohio Tuberculosis Conference, at a meeting held in Mt. Vernon Thursday, July 6, took the first steps toward an affiliation with the Ohio Hospital Association as a section of that organization.

The possibilities offered by such an affiliation for more effective work between the governmental and voluntary agencies interested in the extension and improvement of organized and institutional care of the tubercular, were emphasized by members of the Conference, who have expressed hopes that favorable action will be taken by the Ohio Hospital Association.

Two types of membership for the conference are provided by the new constitution. These are: the active, consisting of owners, trustees, executive heads or chief executives of tuberculosis hospitals and dispensaries, the medical directors, heads of organizations, departments of government, or voluntary organizations of state-wide jurisdiction directly and actively interested in organized and institutional care of tuberculosis; and the associate members comprising the department heads of tuberculosis hospitals and dispensaries, those next in au-

thority to superintendents, members of the medical staff other than the medical directors, and contributors to, or officers or members of an association whose object is to promote organized and institutional care of tuberculosis.

Stark, Mahoning, Trumbull and Ashtabula counties are preparing to build new county tuberculosis hospitals. A district hospital for Lake and Geauga counties is also proposed. With this extension program in view, it was felt by the officers of the Conference that the proposed affiliation should be consummated without delay, and with this in mind adopted the constitution suggested by the Ohio Hospital Association.

Officers of the Conference are: Dr. F. C. Anderson, superintendent of the State Tuberculosis Sanatorium, Mt. Vernon, president; Dr. J. C. Frey, superintendent of the Warrensville Tuberculosis Sanatorium, Warrensville, vice-president, and Dr. J. A. Frank, chief of the Bureau of Tuberculosis, State Department of Health, Columbus, secretary.

The next meeting of the conference is to be held in Dayton some time in October, when officials of the Stillwater Sanatorium are to be hosts.

### Smallpox Film Available for Meetings

Through the kindness of the Metropolitan Life Insurance Company, a moving picture film illustrating the preparation and value of smallpox vaccine has been placed at the disposal of the State Department of Health. It is planned to use this film throughout the state, particularly in districts where it will be used in connection with an active campaign to secure vaccination of school children.

The title of the film is "One Scar or Many." It is over one thousand feet in length, and it takes at least twenty-five minutes to show. The film deals in an interesting and accurate way with the preparation of smallpox vaccine, the safeguards which surround it and the precaution taken to prevent any possible contamination. It illustrates proper and improper methods of performing the operation of vaccination and shows characteristic scars. The value of vaccination in preventing smallpox is shown in a graphic manner, and statistics are given showing that the prevalence of smallpox varies inversely with the degree of vaccination of the people. The film is interesting to the physician and layman alike.

In order to secure the film for their districts health commissioners must agree to provide a suitable hall, a standard moving picture machine, a trained operator and, last but not least, an audience. A good plan, the State Department of Health suggests, is to have an open meeting of the medical society, to which city and county officials and particularly members of boards of education should be invited.

## ACADEMIES AND COUNTY SOCIETIES

### Cleveland

(Lester Taylor, M.D., Secretary)

The 180th regular meeting of the Academy of Medicine of Cleveland, was held June 16 in the auditorium of the Medical Library, with President Dr. John Phillips in the chair.

The first paper was presented by Dr. H. G. Sloan, Cleveland, on "The Operation of Choice in Gastric Ulcer." Dr. Sloan discussed the various operations for gastric ulcer, recommending gastro-enterostomy as the operation of choice for small ulcers at the pylorus, and the Moynihan operation, as the operation of choice in case of hemorrhage or long standing chronic ulcers. He demonstrated by lantern slides the principles of the operations, and showed that under proper pre-operative and post-operative care the gastrectasis gave a small mortality and the complete absence of further symptoms. Dr. Sloane's paper was presented in a very concise and scholarly way and represented not only a wide general knowledge but an extensive personal experience with the subject. The paper was discussed by Dr. Nathan Rosewater.

Dr. G. W. Crile then introduced the guest of the evening, Dr. Chas. H. Mayo, Foundation Professor of Surgery of the University of Minnesota, who spoke on "The Relation of Focal Infection to Diseases." He prefaced his remarks with some personal reminiscences of his experiences in Cleveland, and the place that Cleveland held in the medical world. He drew an analogy, which was carried throughout his talk between a selective action of certain chemicals such as digitalis, with the chemical action of toxins liberated by Bacteria, showing that toxin from a given organism might have a similar selective action on joint muscles or glands.

He discussed, at length, the ability of bacteria to localize in given tissues and illustrated, with slides, the possible infection about the teeth. He emphasized the point that it was not adequate to wait until the focal infection was giving symptoms before it was removed, but showed that then it was usually too late, and that the time to cure was before the symptoms developed.

Dr. Mayo spoke in a delightfully humorous and informal way, drawing from a vast fund of experience, both personal and in the enormous institution, of which he is the head. Discussion by Dr. Weston A. Price. The academy extended a hearty vote of thanks to Dr. Mayo for his interesting talk.

The auditorium was completely filled with an attendance of 300. Many were turned away, unable to secure even standing room.

#### FIRST DISTRICT

*Adams County* Medical Society convened for

its annual meeting in West Union, on the morning of June 21. The principal speaker was Dr. Charles T. Souther, Cincinnati, on "Minor Surgery in General Practice." In the yearly election of officers, Dr. F. C. Leeds, Winchester, was chosen president, succeeding Dr. G. E. Neal, Manchester. Dr. O. T. Sproull, West Union, was reelected to the office of secretary-treasurer which he has held for a number of years. West Union members of the society were hosts at a dinner given in honor of the out-of-town members.

*Darke County* Medical Society held an exceedingly interesting meeting at Versailles, June 23, in the Trinity Lutheran Church. Forty members and guests were in attendance. An address on "Puerperal Sepsis" was given by Dr. J. F. Baldwin, Columbus. Dr. Baldwin prefaced his paper, which consisted largely of case reports, by a short talk on "Perkins Tractors." The ladies of the church served a bountiful dinner.—B. F. Metcalfe, Correspondent.

*Miami and Shelby County* Medical Societies held their semi-annual joint meeting at the Troy Club, Troy, June 1. The following program was interesting and well received: 1. The Physician, The Health Officer and Cooperation, Dr. M. F. Hussey, Sidney, councilor of the Second District of the State Association; 2. Removal of Foreign Bodies from the Esophagus and Bronchi, with Dog Demonstration, by Dr. M. F. McCarthy, Cincinnati. A noon luncheon was served.—G. J. Hance, Secretary.

*Montgomery County* Medical Society's newly elected officers for the coming year assumed office July 1. They are: Drs. A. O. Peters, president; C. H. Tate, first vice-president; H. H. Williams, secretary, and F. D. Crawl, reelected treasurer. Drs. Frank S. Thompson and A. L. Light were named delegate and alternate, respectively, to the next meeting of the State Association.

#### THIRD DISTRICT

*Auglaize County* Medical Society met in Wapakoneta, June 29. Election of officers for the next year was the principal business of the session, the balloting resulting in the selection of the following: Drs. Harry S. Noble, St. Marys, president; Charles P. McKee, St. Marys, vice-president; and C. L. Mueller, Wapakoneta, secretary. The latter has been secretary of the society for a number of years.—News Clipping.

*Sandusky County* Medical Society met for its sixtieth regular meeting of the year, June 29.

In order to give Dr. R. K. Updegraff, essayist of the evening, a chance to leave as soon as possible on his return trip to Cleveland, the usual order of business was modified and his paper on "Arthritis Deformans" heard first. The numerous names by which the entity is known were mentioned. Its etiology was left to the man who is attempting to discover same. Focal infection as a



Patients requiring hospitalization are treated at Mt. Carmel, Grant, Protestant, St. Francis, or McKinley Hospitals at the option of the physician or surgeon referring the patient.

**RADIUM  
TREATMENTS**

**BEN R. KIRKENDALL, M. D.**  
137 EAST STATE STREET,  
COLUMBUS, OHIO.

factor in etiology was considered inadequate, the removal of same being of no avail except in general health once the disease is started and well under way. The spinal column must be examined in all suspected cases. The mandibuloglenoid articulation never involved. Rest during active stage essential. Never encourage exercise till after acute symptoms have subsided. Keep a hopeful or at least a cheerful determined outlook. Drugs of no avail. Salicylates even harmful. A spirited general discussion was led by President M. O. Phillips, and participated in by every one present, developing some interesting and instructive points.

The society extended a vote of thanks to Dr. Updegraff for making such a long journey to bring his message to the Society, and elected him to honorary membership. Dr. Clarence Ordway, Toledo, honorary member of the society, was also a guest at this meeting.—C. I. Kuntz, Secretary.

#### SIXTH DISTRICT

*Wayne County* Medical Society enjoyed an excellent meeting at Orrville, June 13. Two Columbus physicians, Drs. S. J. Goodman and L. L. Bigelow, were guests and speakers of the occasion. The former spoke on "Thymus Hyperplasia of the New Born," and the latter on "Tuberculous Adenitis." Both papers were extra fine and kept the members alert until a late hour.—O. G. Grady, Secretary.

#### SEVENTH DISTRICT

*Columbiana County* Medical Society counts its meeting of June 25, held at the Buckeye Country Club, near East Liverpool, one of the most successful in its history. Eighty-one physicians from the county and visitors from nearby counties as well as Pittsburgh, Cleveland, Wheeling, Youngstown, Steubenville and other cities attended. Dr. George W. Crile, Cleveland, gave a splendid lecture on "Diagnosis and Treatment of Surgical Lesions of the Abdomen". Other speakers were: Drs. W. W. G. MacLachlan, Clement R. Jones, R. E. Brenneman, J. A. Lichy, of Mercy Hospital, Pittsburgh; Drs. E. W. Meredith, R. R. Snowden, George W. Wright, of St. Francis Hospital, Pittsburgh; Dr. C. Aufhammer, of Allegheny General Hospital, Pittsburgh; Drs. W. H. Bunn and O. J. Walker of the Youngstown General Hospital research laboratories, Youngstown; Drs. William M. Beach and Charles A. Hill of the Presbyterian Hospital, Pittsburgh; Drs. Frank Lamoyne Hupp and R. J. Reed of the Ohio Valley General Hospital, Wheeling; and Drs. Edwin Zugsmith and W. H. Mercer of Pittsburgh.—News Clipping.

#### EIGHTH DISTRICT

*Licking County* Medical Society met at the Hotel Warden, Newark, June 29. The program consisted of papers on "Functional Disturbances of the Heart and Their Treatment", by Dr. John D. Dunham, Columbus, and "Endocarditis" by

Dr. C. E. Evans, Newark.—W. E. Shrontz, Secretary.

*Morgan County* Medical Society held its June meeting at the home of Dr. J. F. Leeper in McConnelsville on the 21st, with a good attendance. A delicious four-course dinner was served, after which the society greatly benefited by an excellent paper on "X-ray Diagnosis" by Dr. Maurice Loebell, Zanesville. To stimulate larger attendance at meetings and assure greater benefits and social gathering of the members, the program committee has arranged to hold future meetings at the homes of the various members, serve dinner on these occasions, and present programs of merit.—D. G. Ralston, Secretary.

*Muskingum County* Academy of Medicine held its July meeting on the 5th in Zanesville. Dr. Frank G. Boudreau, of the State Department of Health, gave a talk on "Modern Methods for the Prevention of Diphtheria." Dr. Boudreau illustrated his talk with the results of the Schick test which had been administered on the previous Monday, to 37 people of various ages. About fifty per cent. were positive, and will be given the after treatment of toxin-antitoxin later. Twenty-five members, many of them from the smaller towns surrounding Zanesville, were present.—Beatrice Hagen, Secretary.

#### NINTH DISTRICT

*Pike County* Medical Society's regular monthly session on June 19 was well attended. The nurse question was further considered and the preliminary report of a committee appointed to study this subject was accepted. Several interesting cases were reported by Drs. O. C. Andre, E. W. Tidd, R. M. Andre, E. M. Dixon and I. P. Seiler. A resume of the proceedings at the annual meeting in Cincinnati and the address of the president of the State Association were discussed and commended.—I. P. Seiler, Secretary.

#### TENTH DISTRICT

*Knox County* Medical Society at a luncheon meeting in Mt. Vernon, June 29, heard a paper on "Analysis of Abdominal Pain and the Reasons Why Cathartics Should Not Be Given in Appendicitis Cases", by Dr. F. C. Larimore. The address was appropriately illustrated by drawings by Dr. Larimore, and thoroughly discussed by Dr. I. S. Workman. Ten members were present.—News Clipping.

### Tribute to Deceased Physician

A memorial window has been placed in Christ Episcopal Church, Cincinnati, in honor of the late Dr. George B. Orr of that city. The window, which was made in London, England, by noted designers and manufacturers of art glass, is the gift of Dr. Orr's family. Three of the most beautiful stories in the Bible, picturing the healing work of Christ's ministry as typical of the physician's life are symbolized in the scenes making up the design.

*X-Ray,  
Radium,  
Removal of  
Foreign Bodies*

CHAS. F. BOWEN, M. D.  
344 East State Street  
Columbus, Ohio

## Radium Rental Service

Radium loaned to physicians at moderate rental fees, or patients may be referred to us for treatment if preferred.

Careful consideration will be given inquiries concerning cases in which the use of Radium is indicated.

BOARD OF DIRECTORS

William L. Baum, M. D.    N. Sproat Heaney, M. D.    Frederick Menge, M. D.  
Louis E. Schmidt, M. D.    Thomas J. Watkins, M. D.

## The Physicians Radium Association

1110 Tower Building, 6 N. Michigan Ave.  
CHICAGO, ILL.

Telephones: Randolph 6897-6898

William L. Brown, Manager

### Annual Conference of Health Commissioners and State Department in September

The annual conference of health commissioners with the State Department of Health has been scheduled for the week of September 4 and will probably take place on the 5th, 6th, 7th and 8th. State Director of Health Snively has issued a cordial invitation to all the members of the Ohio State Medical Association to attend the conference.

Besides local talent, Dr. W. H. Park, director of the New York City Health Department Laboratories and professor of hygiene at Bellevue Hospital Medical College, has been invited to attend. Dr. George E. Vincent, president of the International Health Board, a branch of the Rockefeller Foundation, and formerly president of the University of Minnesota, will address the health commissioners probably on September 7. Dr. W. S. Rankin, health commissioner of North Carolina, will continue his discussion of his method of placing health work on a cost basis. Health Commissioners are assured of an interesting and stimulating program.

### Plans of Correspondence-Study School for the Summer

Members of the committee of the State Department of Health in charge of the Correspondence-Study School for Health Commissioner have decided to suspend any further assignments until the first week in October. In the meantime, each student is asked to submit to the committee a number of problems which should be worked out in his district and for which credit will be given in the course. After these problems are submitted they are considered by the committee in charge, and each student is required to carry on special investigative work leading to the solution of the problem. Theses based on the work done in making these investigations will be submitted by the students and graded by the committee in charge.

So far 83 students have been enrolled in the Correspondence-Study School and 21 assignments have been sent out, including public health administration, communicable diseases, sanitary engineering, laboratory work and vital statistics. The autumn session of the school will be devoted to tuberculosis, child hygiene, venereal diseases, public health nursing, hospitals and industrial hygiene. A number of health officials of other states have asked for the material, and quite a number of public health schools are on the mailing list. The Correspondence-Study School as a means of educating health officials actually in the field is a conception which has received much praise from many parts of the country.



## The Holzer Hospital

Gallipolis, Ohio

*Radium for all  
therapeutic  
uses*

## Radium Laboratory

350 East State St., Cor. Grant Ave.  
Columbus, Ohio



**Edward Reinert, Ph. G., M. D.**  
**R. R. Kable, Ph. B., M. D.**

Citz. 9215

Bell, M. 7417

# Artificial Pneumothorax

in

## Pulmonary Tuberculosis



**LOUIS MARK, M. D.**

327 East State Street  
Columbus, Ohio

# Cincinnati Radium Laboratory

22 West Seventh Street

Needle, Tube and Plaque  
Applicators



CHARLES GOOSMANN, M. D.

X-Ray Treatment When Indicated.



THE pride of the craftsman in his handiwork is exemplified in the zeal with which Parke, Davis & Company's pharmaceutical chemists, biologists, and physiologists maintain the unvarying quality of Adrenalin. And that quality is the natural result of highly specialized scientific skill gained through twenty years' experience in the manufacture of the original product.



THE NAME "ADRENALIN" IS LINKED INSEPARABLY WITH THE GOOD NAME OF PARKE, DAVIS & COMPANY

## Aims of Mobile Psychiatric Clinic of Bureau of Juvenile Research Explained by Dr. Baehr

Mention has been made in previous issues of *The Journal* to the plan of the State Department of Welfare to hold a series of mobile psychiatric clinics in various parts of the state through the agencies of the Bureau of Juvenile Research, the State Department of Health, state and local health departments, state institutions, etc.

The first of these clinics was held in Warren, Trumbull county, on May 18, by the staff of the Bureau of Juvenile Research under the direction of Dr. Edmund M. Baehr, chief psychiatrist, and Dr. Henry Goddard, formerly chief psychologist and director, assisted by Mr. Mervin Durea, assistant psycho-clinician, Dr. Arthur G. Hyde, superintendent of the Massillon State Hospital, Natalie D. Merrill of the State Department of Health, and Dr. Henry Thornburgh, health commissioner of Trumbull county.

It was arranged primarily, according to Dr. Baehr, as an experiment to determine the present state of health of those residents of the county who, during the past ten years, had been returned to their homes on trial visit, or who had been discharged as improved or cured. Furthermore, it was expected to disclose the condition of the children of men and women at present in the hospital, especially those suffering from syphilitic disease of the brain. Data and records of such patients having been obtained, they were invited by letter to come to the clinic for examination and advice.

It was desired, furthermore, that the Juvenile Court and the county schools bring in their problem cases for physical examination and mental investigation the results of which might furnish an intelligent basis for their subsequent disposition and care. Likewise, the authorities of the County Home were asked to bring in those inmates who had displayed signs of feeble-mindedness or insanity.

The actual purpose of the clinic, therefore, was to get in touch with its own problems, more

specifically, problems that were of concern or had been of concern to the State Department of Welfare. It was believed that by some method such as this flying clinic the department might secure the very important information concerning the welfare of its former patients subsequent to the return to their homes. Only with this information will it be possible to gauge the value and the permanency of the therapeutic measures provided by the state hospitals for its patients. Of greater importance, however, is the fact that by this means there is provided a beginning in the extremely important matter of follow-up care and control of these discharged patients. Should these efforts prove to be justified they can be succeeded by and improved upon by the use of permanent field workers who should be attached to the district state hospital.

Likewise, those problems in juvenile misconduct coming to the attention of the juvenile courts and the schools are essentially those for whose solution the Bureau of Juvenile Research was originally established by the legislature. It is customary to send such cases for periods of observation and study to the Bureau in Columbus but the clinic provides an occasion for ex-

URINE  
BLOOD  
SPUTUM  
EFFUSIONS  
STOMACH  
CONTENTS  
WASSERMANN &  
NOGUCHI  
REACTIONS  
GONORRHEAL  
COMPLEMENT  
FIXATION TEST  
BLOOD CHEMISTRY  
PROTEIN  
SENSITIZATION  
TESTS

BASAL METABOLISM  
AUTOGENOUS  
VACCINES  
FAECES  
GENITO-URINARY  
SURGICAL and  
GYNECOLOGICAL  
PATHOLOGY  
DARK FIELD  
ILLUMINATING  
FOR  
SPIROCHETA  
PALLIDA  
MEDICO-LEGAL  
POST MORTEM  
X-RAY

## LABORATORY

Clinical and Pathological

COLUMBUS, OHIO 370 East Town Street

J. J. Coons, B. S., M. D., D. Sc.  
H. M. Brundage, M. D.  
Dorris Coss, B. S., M. S.  
Ruth Miller, B. S.

PROMPT SERVICE

Immediate Report on Frozen Sections of all Tumors.

Do you believe that the fitting of trusses is a part of the Practice of Medicine? If so, send your patients needing trusses to

### The Columbus Truss & Optical Co.

PARKER W. PHENEGER, M. D., Mgr.

We Specialize in  
Elastic Stockings Made to Measure

Office and Fitting Rooms  
Suite 303-309 Rowlands Bldg., Broad and Third Sts.  
COLUMBUS, OHIO

# Useless to Remain --- Dangerous to Move ---

at least it would appear that way until consideration is given to the fact that the Doctor holds a Medical Protective Contract.

"The Medical Protective Company,  
Fort Wayne, Indiana.

Dear Sirs:

I have understood that the other side could hold my office equipment, drugs, etc., and prevent me from moving same out of the office or town to another location. This also affects even a checking account in bank, local or otherwise.

I will be here if needed but I have planned on changing my location long before this case came up, but I wanted to get my collections in first. Now, if I should change locations and they try to hold my belongings what is best to do as a preventive, etc.?

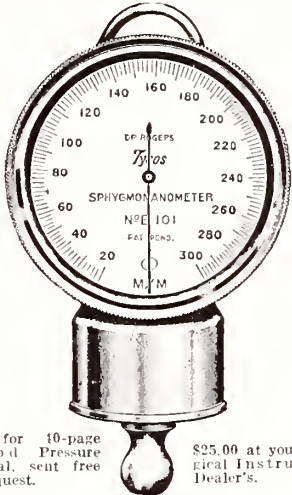
Yours very truly,

\_\_\_\_\_

In many states there is no exemption against a judgment in a malpractice suit, and in other states practically none. A suit for malpractice sounds in tort and a judgment can be levied against everything you own, or may acquire in the future. You must pay or quit, or both, if you do not have protection.

*For Medical Protective Service Have  
a Medical Protective Contract*

**The Medical Protective Co.**  
of  
Fort Wayne, Indiana



Ask for 10-page  
Blood Pressure  
Manual, sent free  
on request.

\$25.00 at your Sur-  
gical Instrument  
Dealer's.

**Tycos SPHYGMOMANOMETERS**

Tycos dominates in blood pressure work. Accurate, durable, portable. Lends itself readily to every demand of medical practice—gives excellent, dependable service under severest conditions.

*Taylor Instrument Companies*  
ROCHESTER, N. Y.

Office Type Sphygmomanometers, Fever Thermometers, Urinary Glassware S-75

# To Prevent Hydrophobia

Use

## Pasteur Treatment

With a

Potent Product and Prompt Service  
PRICE \$25.00

\_\_\_\_\_

Order from

**James McIlvaine Phillips, M. D.**  
2057 N. High St.

Columbus,

Ohio

amination of a considerable group scarcely meriting the trouble and expense of transportation.

The clinic has no interests in the mental welfare of the community other than these. However, since it is of the utmost concern to the Department of Welfare, which observes the overcrowded condition of institutions, that an intensive effort be made by everyone qualified to recognize incipient mental disorders early and then attempt their prevention or cure, this clinic invites the medical profession of the community to bring its perplexing cases for discussion and opinion. In consequence of this it will be reasonable to expect that in the course of time selected cases may enter the State Hospitals voluntarily for short treatment periods there to receive the most modern care and attention that the state is capable of providing. In other words this flying clinic is planned to take the place in the smaller communities of the large modern psychopathic clinics of the cities.

A second psychiatric clinic is planned for September. Dr. Baehr, psychiatrist and newly appointed director of the Bureau of Juvenile Research, solicits the interest and cooperation of the medical profession of the state in the matter of the early recognition of nervous and mental disease with the hope of its prevention and cure by early care and treatment.

The following is a summary of the cases examined at the Trumbull County Clinic in May:

SUMMARY OF CASES

Number of patients at present in Massillon State Hospital .....	103
Number of former patients now on trial visit or discharged .....	132
Number appearing in this clinic.....	7
Number of children appearing in clinic parents in M. S. H.....	20
Total number clinic cases.....	64
Defective mental development.....	18
Imbecile .....	1
Idiocy, Mongolian .....	2
Post encephalitis retardation.....	3
Post meningitis retardation.....	1
Psychosis, maniac-depressive.....	1
Paranoid state .....	1
Neurasthenia .....	1
Constitutional Psychopathy .....	2
Not abnormal .....	14
Recommended to Institution for Feeble-minded .....	7
Recommended to Bureau of Juvenile Research .....	2
Recommended special medical attention.....	6
Recommended removal from school:	
Place in special class.....	5
Give work certificate.....	3
Give manual training.....	1
Commit to Massillon State Hospital.....	1
Return to Massillon State Hospital.....	1

## Dares Haemoglobinometer

Candle lighted, or Electric lighted.  
We are accepting orders for prompt delivery.  
Write for booklet and prices.

## Tycos Office Sphygmomanometer

With 6 inch silvered dial.  
A distinct advance over the pocket type.  
Immediate delivery. Price \$37.50.

Surgical Instruments—Dressings,  
Pharmaceuticals, Biologicals

Your orders will receive prompt attention—  
"You will do better in Toledo."

## The Rupp and Bowman Co.

319 Superior St.  
TOLEDO, OHIO

## SAVE MONEY ON YOUR X-RAY SUPPLIES

Get Our Price List and Discounts on Quantities Before You Purchase  
HUNDREDS OF DOCTORS FIND WE SAVE THEM FROM 10% TO 25% ON X-RAY LABORATORY COSTS

### Among the Many Articles Sold Are

- X-RAY PLATES. These brands in stock for quick shipment. PARAGON Brand, for finest work; UNIVERSAL Brand, where price is important.
- X-RAY FILMS. Duplitzed or Dental—all standard sizes. Eastman, Ilford or X-graph metal backed. Fast or slow emulsion.
- BARIUM SULPHATE. For stomach work. Finest grade. Low price.
- COOLIDGE X-RAY TUBES. 5 Styles. 10 or 30 millamp.—Radiator (small bulb), or broad, medium or fine focus, large bulb—Lead Glass Shields for Radiator type.
- DEVELOPING TANKS. 4 or 6 compartment stone, will end your dark room troubles. 5 sizes of Enameled Steel Tanks.
- DENTAL FILM MOUNTS. Black or gray cardboard with celluloid window or all celluloid type, one to eleven film openings. Special list and samples on request. Price includes your name and address.
- DEVELOPER CHEMICALS. Metol, Hydroquinone, Hypt, etc.
- INTENSIFYING SCREENS. Patterson TE, or celluloid-backed screens. Reduce exposure to one-fourth or less. Double screens for film. All-metal Cassettes.
- LEADED GLOVES AND APRONS. (New type glove, lower priced).
- FILING ENVELOPES with printed X-Ray form. (For used plates). Order direct or through your dealer.

If You Have a Machine Get Your Name on Our Mailing List



## GEO. W. BRADY & CO

771 So. Western Ave.,  
Chicago



# PERIFUSED LENSES

## A Rimless Lens with Improved Appearance

Has a dark rim fused on the flat edge, thereby eliminating the glare which ordinarily comes through the edge of rimless lenses, and which is also prevented by the zylonite or shelltex rims.

Perifused lenses will increase your rimless business by furnishing your customers with something new, namely, rimless glasses in the latest improved style.

## The White-Haines Optical Co.

Columbus, Ohio

Indianapolis, Ind.  
Springfield, Ill.  
Pittsburgh, Pa.

Huntington, W. Va.  
Lima, Ohio  
Wheeling, W. Va.

## Buying Power of Our Members

There are 4816 members of the Ohio State Medical Association and readers of this Journal, located in every important city and town of this State.

This means 4816 circles of practice, which touch and influence over 2,408,000 people in the homes, industries and institutions throughout the State.

Think of the BUYING POWER of these physicians! If their average expenditure is only \$1000, that amounts to \$4,816,000 a year. But medical supplies bought on physicians' prescriptions and goods purchased on their orders or recommendations for Sanitariums, Hospitals, Boards of Health, etc., would fully equal that amount,—or a total of \$9,500,000.

If members will give preference in all their buying to advertisers in their State Medical Journal, other advertisers will want space, and the publishers can then print a LARGER and BETTER Journal.

If you do not find advertised here the goods you want, please write *The Journal*. We will secure the information for you.

**Indigent Tuberculars Urged To Get Well at Home**

"Don't go West for tuberculosis without plenty of money." This is the advice of the Ohio Public Health Association in a pamphlet just issued which is intended to check the indigent migratory consumption problem which is said to be acute in western and southwestern states. The warning sounded in the pamphlet is as follows:

1. There is little light work to be had in the states to which consumptives migrate and living costs are higher than in Ohio.
2. If patients should break down there are no public sanatoria for free care of non-residents in these "health climate" states. They do not have enough hospitals to take care of their own tuberculosis sufferers.
3. To be stranded hundreds of miles away from friends, faced with poverty, forced to hunt employment too soon, and worrying about home and family means killing every chance for recovery.
4. A tuberculous person needs REST, FOOD, FRESH AIR, PEACE OF MIND and to be under the care of a competent physician and follow his advice.

The pamphlet issued by the Public Health Association states "that our own tuberculosis sanatoria, our public health nurses and dispensaries, health education in the schools and better diagnosis by physicians which have come with the campaign of popular education against tuberculosis, are doing more toward stamping out tuberculosis than any other methods." Because the treatment of the disease is slow and the campaign against the disease lacks spectacular phases many are still going west for their health, the pamphlet states. Statistics are cited to show that "slowly but surely" the fight is being won—a decline in the Ohio tuberculosis death rate of from 150 per 100,000 population to 89 per 100,000 population in the past ten years. This means a saving of some 300,000 lives.

**Experience, Experience**

A member of the State Association recently brought to the attention of *The Journal* the tactics of a new line of collecting agencies with which he had had an unpleasant experience and suggested that it would be well to warn other physicians through these columns.

The representative of the agency calls and solicits unpaid accounts—old or new, small or large, representing that the work will be done on the "no collection no pay" plan. If the physician's signature can be secured to a contract for this work he is charged sixty cents for each account "for docket fee and office filing," as the agency will later explain. The moral is: unless the physician wishes to pay this fee, whether or not collection is made, let him be cautious.

**Juvenile Research Staff**

Dr. E. M. Baehr, director of the Bureau of Juvenile Research, has announced the appointment of the following as members of the consulting staff of the bureau:

Drs. I. B. Harris, surgery; Joseph Leist, medicine; W. H. Miller, X-ray; Charles Hoffhine, ophthalmology; Hugh G. Beatty, laryngology; Herbert Platter, dermatology; Milton Jones, genito urinary; Andrews Rogers, obstetrics gynecology.

*An Outfit for Determining Variations in*

**The Hydrogen-ion Concentration of the Blood**

The apparatus includes a series of standard color solution tubes—PH range 6.6 to 8.6—and is quite useful in diagnosing acidosis. It is also being used quite extensively in determining the concentrations of culture media.

The PH range—6.6 to 8.6—permits the use of this apparatus for determining the hydrogen-ion concentrations, within practical limits, of

**INTRAVENOUS SOLUTIONS.**

As indicated in the papers of Williams and Swett, "The Journal," A. M. A., April 8, 1922, p. 1024, and Mellon, *ibid*, p. 1026, it is dangerous to inject relatively large volumes of solutions into the blood stream which have a hydrogen-ion concentration differing appreciably from normal blood, approximately, PH 7.4. Solutions outside of the PH range—6.6 to 8.6—would, of course, be unsafe to use.

**Hynson, Westcott & Dunning**

BALTIMORE, M. D.

**Luer Hypodermic Syringes**

2cc

45c

5cc

60c

10cc

1.00

All Glass



20cc

1.25

30cc

1.50

50cc

2.00

—To pay more is a waste of money—Quality and workmanship guaranteed second to none or money promptly refunded.

**Charles E. Findlay Co.**

Physicians' and Hospital Supplies  
677 N. High Street Columbus, Ohio  
Bell Phone, Main 6518



**Rheumatism**

**Gout**

**Neuralgia**

**Neuritis**

**Sciatica**

**Lumbago**

**Migraine**

## “Twice gives he who gives promptly”

says a Latin proverb. The remarkably prompt pain and inflammation relief bestowed by ATOPHAN, is truly such a two-fold gift.

What's more, it's rational, safe and reliable relief.

Genuine ATOPHAN is manufactured at our Bloomfield, N. J. plant by a special process, precluding the possibility of even traces of irritating empyreumatic admixtures.

*Complimentary Trial Package and Information from*

**SCHERING & GLATZ, Inc.**

150 Maiden Lane

NEW YORK

# Fort Wayne Medical Laboratory, Inc.

(Established 1905)

**DR. BONNELLE W. RHAMY**

Manager and Director of Pathological and Serological Department

**DR. ROE J. MAIER**

Director of X-Ray and Radium Department

**PAUL H. ADAMS, B. S., Ch. E.**

Director of Industrial and Organic Chemistry Department

Equipped for making complete examinations of blood, urine, sputum, feces, spinal fluid, pathologic tissue, secretions and excretions of any character, and doing blood chemistry, protein sensitization, blood typing for transfusion, Wassermanns (ice box and heat), tuberculosis and gonorrhoeal complement fixation tests, making autogenous vaccines, dark field examination for spirochetes, basal metabolism, toxicology, medico-legal investigations, eugenic tests, and for making every test of clinical value for diagnostic study in medical and surgical cases.

**Wassermanns Daily Except Sunday**

All serologic tests \$5.00 each blood.

The X-Ray Department includes complete diagnostic and therapeutic X-Ray laboratory, with a new twenty-inch machine for deep therapy; radium in adequate amounts to meet all requirements of malignant and other diseases where indicated, and a complete ultra-violet ray equipment.

The Industrial and Organic Chemistry Department is equipped for any kind of chemical investigation, including medical, physiological and blood chemistry, toxicological and other medico-legal investigations, and the analysis of milk, water, seeds, fertilizers, feeds, iron, steel, ores, coal, oils, etc.

Fee bills and containers sent on request.

Special delivery postage insures prompt delivery of specimens.

327 WEST BERRY STREET

FORT WAYNE, INDIANA

(One block South from Interurban Station)



## NEWS NOTES of OHIO

*Columbus*—Dr. S. J. Goodman, councilor for the Tenth District of the Ohio State Medical Association, is in Vienna attending the clinics. He will return September 1.

*Dayton*—Dr. J. Morton Howell, formerly of this city, diplomatic agent and consul general at Cairo, Egypt, has been promoted to envoy extraordinary and minister plenipotentiary to Egypt. The change was necessitated because Egypt has recently become a free state instead of being under British rule.

*Ashtabula*—Dr. William S. King is a candidate for the Democratic nomination to the Ohio Senate from the 24-26 district.

*Lima*—Dr. Paul J. Stueber was one of thirteen physicians who were awarded the degree of Doctor of Ophthalmology by the American Academy of Ophthalmology and Oto-Laryngology recently.

*Toledo*—Drs. A. J. Girardot, L. B. Goodyear, C. A. Tallman and G. B. Booth, holders of commissions in the Medical Reserve Corps, are serving as examiners of recruits for the Toledo and Lucas County units of the Infantry Reserve Corps.

*Hillsboro*—Dr. and Mrs. J. C. Larkin and sons have returned home after a visit in Atlantic City and Washington. While in the east Dr. Larkin underwent treatment for an X-ray burn of the hand which is reported improved.

*Cincinnati*—Dr. Henrietta Blackford has been appointed to the corps of district physicians by the local board of health.

*Circleville*—Dr. Dudley V. Courtright, secretary of the Pickaway County Medical Society, enjoyed a three weeks' tour of the East during June.

*Sycamore*—Dr. A. L. Walton is a candidate for the Democratic nomination to the House of Representatives from Wyandot County.

*Cleveland*—Fire starting in the residence of Dr. Richard E. Stifel, recently, during the absence of the physician and his family, caused a loss of \$7,000.

*Columbus*—Among the officers elected by the Ohio Veterans of Foreign Wars, during their recent encampment in Akron, was Dr. J. C. Mc-Nerney, who was chosen as departmental surgeon.

*Defiance*—Dr. F. A. Rieckhoff, who for the past two years has been connected with the Earl Clinic, St. Paul, Minnesota, has taken over the offices in this city formerly occupied by Dr. G. A. Rigrish. The latter has removed to Charleston, West Virginia.

*Glouster*—Dr. E. LeFever, state senator from the 9-14 Senatorial District in the 84th General

## Our Business

is confined exclusively to the manufacture of Strictly High Grade Medicines and Pharmaceuticals for Physicians, Dispensing and Prescribing.



Our Offices and Laboratories are now located in our New Building, 330-336 Oak Street, one square north of Grant Hospital.

NO GOODS SOLD AT RETAIL

**The COLUMBUS PHARMACAL Co.**  
COLUMBUS, OHIO

## Every Physician

Is Interested In

## Physician's Supplies

In dispensing, he requires a great variety in his office—in prescribing he uses the PRESCRIPTION DEPARTMENT that is UP-TO-DATE.

If you are unacquainted with our plan of handling the physician's requirements, you may profit by giving us an opportunity to show you what we can do.

## The Wendt Bristol Co.

47 South High St., Columbus, Ohio

FINE PHARMACEUTICAL SPECIALTIES

**T**HE CONSTANT, UPPERMOST DESIRE OF THE OHIO MEDICAL PRODUCTS COMPANY IS TO DEVISE BETTER MEANS AND METHODS OF SERVING PHYSICIANS AND HOSPITALS. A COMPLETELY EQUIPPED MODERN LABORATORY IS AT THEIR DISPOSAL FOR THE MANUFACTURE OF INDIVIDUAL FORMULAS, SCIENTIFICALLY AND ACCURATELY COMPOUNDED, FOR A REASONABLE COST PRICE THAT IS CONSISTENT WITH REFINED CHEMISTRY, WHERE QUALITY IS VALUED MORE THAN VOLUME.

A COMPLETE AND VARIED STOCK OF SUPPLIES ARE ALWAYS AVAILABLE.



1104-1108 North High Street

Columbus, Ohio

The Management of an Infant's Diet

# A Temporary Diet in Summer Diarrhea

**Mellin's Food** . . . . . 4 level tablespoonfuls  
**Water** (boiled, then cooled) . . . . . 16 fluidounces  
 To be given in small amounts at frequent intervals.

Each ounce of this mixture has a fuel value of 6.2 Calories and furnishes immediately available nutrition well suited to spare the body-protein, to prevent a rapid loss of weight, to resist the activity of putrefactive bacteria, and to favor a retention of fluids and salts in the body tissues.

Mellin's Food Company, Boston, Mass.

Assembly, is up for renomination to that position at the August primaries.

*Galion*—Dr. M. L. Helfrich has returned to his home after completing a course at the New York Post-Graduate Medical School and Hospital.

*Portsmouth*—Dr. Clyde M. Fitch, a graduate of Johns Hopkins Medical School, 1921, is now associated in practice here with his father, Dr. James W. Fitch.

*Cleveland*—Dr. John R. McDowell, who was connected with the Lake Division of the American Red Cross until its branch here was discontinued a short time ago, has opened offices for practice in the Medical Building, Lakewood. Dr. McDowell was at one time health commissioner of Springfield and a member of the staff of the State Department of Health.

*Akron*—Two local physicians—Drs. H. S. Davidson and E. L. Mather—are seeking Republican nomination to the state legislature at the August primaries. The former, who is a member of the Committee on Public Policy and Legislation of the Ohio State Medical Association, is a candidate for the House of Representatives, and the latter for the Senate in the 24-26 district.

### Small Advertisements

*For Sale*—Property and practice in a town of 900, with first-class high school, parochial school, three churches, in well-to-do farming community in northwestern Ohio. Price right, with liberal terms to a good man. Write M. F. D., care *The Journal*.

*For Sale*—Property and position in city of 40,000 population, cosmopolitan. Rich community, excellent schools, roads, churches, etc., in an up-to-date county. Do not write for particulars unless interested and qualified to do public health work. Address K, care *The Journal*.

*For Sale*—Unopposed practice of the late Dr. N. C. Satterlee of Williamsfield, Ohio; also drugs, instruments, books, home and office. For information address Mrs. N. C. Satterlee, Williamsfield, Ohio.

*For Sale*—Doctor's property in Creston. Fine opportunity for a young man. Address Dr. C. D. Barrett, Creston, Ohio.

*For Sale*—One gas sterilizer on stand, suitable for physician's office. Instrument and dressing compartment 17x8x11 in. Three gallon water sterilizer. Entire outfit in splendid condition. Reason for selling: Have electric sterilizer. Price \$50.00. Address F. W. B. care *Journal*.

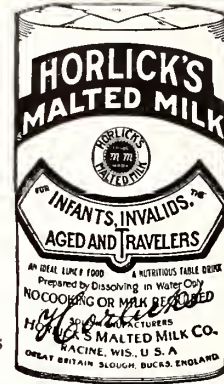
*Wanted*—Resident interne for 50-bed general hospital for general service. State qualifications and salary expected. Address Superintendent, Hospital Clinic, 8803 Euclid Ave., Cleveland, O.

*For Rent*—Physician's home and office combined, in a good live-wire community with no other doctor. Ten rooms, two office rooms, furnace, bath, electricity and garage. Hospital 9 miles. Address Box 104, Bellbrook, Ohio.

*Location for Physician*—The village of Randolph, Portage County, is without a physician. Thrifty village on state highway, three general stores, etc., electric lights, and large surrounding agricultural community. No opposition. For full particulars address W. G. Sheets, Randolph, Ohio.

## Safe and reliable for the summer feeding of infants

A  
Complete  
Food



Used  
1/3  
Century

Avoid  
Imitations

Samples  
Prepaid

Hermetically sealed in sterilized glass  
containers

Send for Literature

**HORLICK'S - Racine, Wis.**

WILLIAM SCHEPPEGRELL, A. M., M. D.

President American Hayfever Prevention Association.  
Chief of Hayfever Clinic, Charity Hospital, New Orleans.

Says:—

“IF the patient applies for treatment during an attack of hayfever, the pollen extracts are usually ineffective, and a vaccine should be used, these being injected at intervals of one or two days until the severity of the attack subsides.”\*

\*From Dr. William Scheppegrell's new book on  
Hayfever and Asthma.  
Lea & Febiger, Publishers

Bacteriological Laboratories of

G. H. SHERMAN, M. D.  
DETROIT, MICH.

# LOESER'S INTRAVENOUS SOLUTIONS



CONTROLLED BY

CHEMICAL,  
PHYSICAL and  
BIOLOGIC TESTS

Loeser's Intravenous Solution  
of

## IRON and ARSENIC

A sterile, stable solution in hermetically sealed nonsoluble glass ampoules. Each ampoule contains 64 milligrams (1 grain) of Iron Cacodylate.

Permits the Intravenous Injection of a Hemotonic of Established Therapeutic Value.

The Intravenous Injection overcomes every question of absorption and warrants the expectation of improved clinical results as compared with other methods of administration.

READY—July Journal of Intravenous Therapy.  
Special Anemia Number.

Abstracts and references from American and foreign Journals.

COPY ON REQUEST

**New York Intravenous Laboratory**  
100 West 21st Street  
New York, N. Y.

*Producing Ethical Intravenous Solutions  
for the Medical Profession Exclusively.*



## CORRECTED ROLL OF DISTRICT AND COUNTY SOCIETIES

Societies	President	Secretary	
<b>First District</b>	G. D. Lummis, Middletown.....	Eric Twachtman, Cincinnati.....	
Adams.....	F. C. Leeds, Winchester.....	O. T. Sproull, West Union.....	3d Wednesday in April, June, Aug., Oct.
Brown.....	R. B. Hannah, Georgetown.....	Geo. P. Tyler, Jr., Ripley.....	4th Wednesday in Feb., May, and Nov.
Butler.....	James G. Grafft, Trenton.....	F. M. Fitton, Hamilton.....	2d Wednesday, monthly
Clermont.....	T. A. Mitchell, Owensville.....	O. C. Davison, Bethel.....	3d Wednesday, monthly
Clinton.....	F. A. Peele, Wilmington.....	Elizabeth Shrieves, Wilmington.....	2d Tuesday, monthly
Fayette.....	E. F. Todhunter.....	Lucy Pine, Washington, C. H.....	1st Thurs., March, June, Sept. Dec.
Hamilton.....	Mark A. Brown, Cincinnati.....	L. H. Schriver, Cincinnati.....	Monday evening of each week
Highland.....	J. C. Bohl, Hillsboro.....	H. H. Lowe, Leesburg.....	1st Wednesday in Jan., April, July, and Oct.
Warren.....	T. E. Keelor, Lebanon.....	Herschel Fisher, Lebanon.....	1st Tuesday in May, June, July, Sept., Oct. and Nov.
<b>Second District</b>	C. I. Stephen, Ansonia.....	D. B. Conklin, Dayton.....	Dayton
Champaign.....	David H. Moore, Urbana.....	J. F. Stultz, Urbana.....	2d Thursday, monthly
Clark.....	A. R. Kent, Springfield.....	C. E. M. Finney, Springfield.....	2d and 4th Monday each month
Darke.....	G. W. Burnett, Greenville.....	A. F. Sarver, Greenville.....	2d Tuesday each month
Greene.....	W. A. Galloway, Xenia.....	H. C. Messenger, Xenia.....	1st Thursday each month except July and August
Miami.....	H. E. Shilling, Troy.....	G. J. Hance, Troy.....	1st Thursday each month
Montgomery.....	A. O. Peters, Dayton.....	H. H. Williams, Dayton.....	1st and 3d Friday each month
Preble.....	S. P. Carter, W. Manchester.....	H. Z. Silver, Eaton.....	3d Thursday, monthly
Shelby.....	V. W. LeMaster, Sidney.....	C. C. Hussey, Sidney.....	1st Thursday, monthly
<b>Third District</b>	C. H. Clark, Lima.....	Norris Gillette, Toledo.....	Lima
Allen.....	A. F. Basinger, Lima.....	A. N. Wiseley, Lima.....	1st and 3d Tuesdays
Auglaize.....	Harry S. Noble, St. Marys.....	C. L. Mueller, Wapakoneta.....	3d Thursday, monthly
Hancock.....	W. J. Zopfi, Findlay.....	Nellie B. Kennedy, Findlay.....	1st Wednesday, monthly
Hardin.....	LeRoy L. Belt, Kenton.....	W. A. Belt, Kenton.....	1st Thursday, monthly
Logan.....	C. K. Startzman, Bellefontaine.....	M. L. Pratt, Bellefontaine.....	1st Friday, monthly
Marion.....	R. C. M. Lewis, Marion.....	D. O. Weeks, Marion.....	1st Tuesday, monthly
Mercer.....	J. E. Hattery, Celina.....	D. H. Richardson, Celina.....	2d Tuesday, monthly
Seneca.....	V. L. Magers, Tiffin.....	E. H. Porter, Tiffin.....	3d Thursday, monthly
Van Wert.....	L. A. Ellis, Van Wert.....	C. R. Keyser, Van Wert.....	2d and 4th Monday, monthly
Wyandot.....	Frederick Kenan, U. Sandusky.....	B. A. Moloney, U. Sandusky.....	1st Thursday, monthly
<b>Fourth District (With Third District in Northwestern Ohio District)</b>			2d Tuesday, Feb., April, June, Aug., Oct., Dec.
Defiance.....	W. S. Powell, Defiance.....	F. W. Watkins, Defiance.....	
Fulton.....	C. F. Murbach, Archbold.....	Geo. McGuffin, Pettisville.....	Semi-monthly
Henry.....	I. H. Boesel, McClure.....	C. H. Skeen, Napoleon.....	3d Wednesday, monthly
Lucas.....	J. F. Wright, Toledo.....	E. J. McCormick, Toledo.....	Friday, each week
Ottawa.....	A. A. Brindley, Pt. Clinton.....	S. T. Dromgold, Elmore.....	2d Thursday, monthly
Paulding.....	F. F. DeMuth, Cecil.....	R. J. Dillery, Paulding.....	3d Wednesday, monthly
Putnam.....	Frank Light, Ottawa.....	J. A. Harold, Ottawa.....	1st Thursday, monthly
Sandusky.....	M. O. Phillips, Fremont.....	C. I. Kuntz, Fremont.....	last Thursday, monthly
Williams.....	D. S. Burns, Bryan.....	F. E. Solier, Bryan.....	2d Thursday, each month
Wood.....	J. W. Rae, Bowling Green.....	F. V. Boyle, Bowling Green.....	2d Thursday, monthly
<b>Fifth District (No District Society)</b>			
Ashtabula.....	R. B. Wynkoop, Ashtabula.....	J. J. Hogan, Ashtabula.....	2nd Tuesday, monthly
Cuyahoga.....	John Phillips, Cleveland.....	Lester Taylor, Cleveland.....	Every Friday evening
Erie.....	F. F. Lehman, Sandusky.....	H. N. Sarchet, Sandusky.....	Last Thursday, monthly
Geauga.....	F. T. Myler, Burton.....	Isa Teed-Cramton, Burton.....	2d Thursday, Jan., March, July and Sept.
Huron.....	R. L. Morse, Norwalk.....	J. D. Coupland, Norwalk.....	2d Thursday, monthly
Lake.....	V. H. Tuttle, Madison.....	West Montgomery, Mentor.....	1st Monday, monthly



Societies	President	Secretary	
Lorain.....	R. D. A. Gunn, Oberlin.....	W. E. Hart, Elyria.....	2d Tuesday, monthly
Medina.....	M. F. Miller, Wadsworth.....	H. P. H. Robinson, Medina.....	3d Wednesday
Trumbull.....	J. J. Tyler, Warren.....	John D. Knox, Warren.....	3d Thursday monthly except June, July and August
<b>Sixth District..</b>			
Ashland.....	G. B. Fuller, Loudonville.....	L. G. Sheets, Ashland.....	1st Tuesday, Jan., March, May, July, Sept., Nov.
Holmes.....	M. B. Pomerene, Millersburg.....	A. T. Cole, Millersburg.....	1st Tuesday, monthly
Mahoning.....	J. L. Washburn, Youngstown.....	A. W. Thomas, Youngstown.....	3d Tuesday, monthly
Portage.....	G. J. Waggoner, Ravenna.....	E. J. Widdecombe, Kent.....	1st Wednesday, monthly
Richland.....	Chas. R. Keller, Mansfield.....	J. S. Hattery, Mansfield.....	3d Thursday, monthly
Stark.....	D. F. Banker, Canton.....	George S. Hackett, Canton.....	3rd Tuesday, Jan., March, May, July, Sept., Nov.
Summit.....	R. H. McKay, Akron.....	A. S. McCormick, Akron.....	1st Tuesday, monthly
Wayne.....	O. P. Ulrich, Orrville.....	O. G. Grady, Orrville.....	2d Tuesday, Jan., April, July, Oct.
<b>Seventh District</b>			
Belmont.....	F. S. Wright, Bellaire.....	J. S. McClellan, Bellaire.....	2d Wednesday, monthly, at 1:45 p. m.
Carroll.....			
Columbiana.....	J. M. King, Sr., Wellsville.....	C. R. Larkin, East Liverpool.....	2d Tuesday, monthly, alternately, in Lisbon, Salem and E. Liverpool
Coshocton.....	D. Edmund Cone, Coshocton.....	J. D. Lower, Coshocton.....	4th Thursday, April, June, Sept., Dec.
Harrison.....	H. I. Heavilin, Cadiz.....	R. P. Rusk, Cadiz.....	1st Wednesday, monthly
Jefferson.....	B. F. Collins, Steubenville.....	G. F. Gourley, Steubenville.....	2d Tuesday, monthly
Monroe.....	G. W. Steward, Woodsfield.....	J. H. Pugh, Woodsfield.....	2d Wednesday, monthly
Tuscarawas.....	E. C. Davis, Dover.....	P. J. Alsbaugh, N. Philadelphia.....	2nd Thursday, monthly
<b>Eighth District</b>			
D. J. Matthews, Zanesville.....	E. M. Brown, Zanesville.....		
Athens.....	J. F. Weber, Amesville.....	T. A. Copeland, Athens.....	1st Tuesday, monthly
Fairfield.....	C. H. Hamilton, Lancaster.....	Ralph H. Smith, Lancaster.....	2d and 4th Tuesday, monthly
Guernsey.....	C. A. Moore, Cambridge.....	G. F. Swan, Cambridge.....	1st and 3d Tuesday each month
Licking.....	T. L. Baxter, Newark.....	W. E. Shrontz, Newark.....	Last Thursday, monthly
Morgan.....	C. V. Davis, Pennsville.....	D. G. Ralston, McConnelsville.....	1st Wednesday, monthly
Muskingum.....	C. P. Sellers, Zanesville.....	Beatrice Hagen, Zanesville.....	1st Wednesday, monthly
Noble.....	G. H. Zimmerman, Belle Valley.....	J. L. Gray, Caldwell.....	1st Thursday, monthly
Perry.....	H. W. Shaw, Junction City.....	C. B. McDougal, N. Lexington.....	3d Thursday, monthly
Washington.....	J. W. Donaldson, Marietta.....	A. G. Sturgiss, Marietta.....	2d Wednesday, monthly
<b>Ninth District..</b>			
S. B. McKerrihan, Portsmouth.....	J. G. Murfin, Portsmouth.....		Portsmouth
Gallia.....	C. G. Parker, Gallipolis.....	Milo Wilson, Gallipolis.....	1st Wednesday, monthly
Hocking.....	O. V. Donaldson, Gore.....	M. H. Cherrington, Logan.....	
Jackson.....	A. G. Ray, Jackson.....	R. W. Caldwell, Jackson.....	1st Tuesday, monthly
Lawrence.....	O. H. Henninger, Ironton.....	E. E. Ellsworth, Ironton.....	1st Thursday, monthly
Meigs.....	P. A. Jividen, Rutland.....	L. A. Thomas, Middleport.....	1st Wednesday, April, July and Oct.
Pike.....	R. M. Andre, Waverly.....	I. P. Seiler, Piketon.....	1st Monday, monthly
Scioto.....	Ira Martin, Portsmouth.....	W. A. Quinn, Portsmouth.....	2d Monday, monthly
Vinton.....	O. S. Cox, McArthur.....	H. S. James, McArthur.....	4th Wednesday, monthly
<b>Tenth District..</b>			
J. T. McCarty, Delaware.....	Rees Philpott, Delaware.....		Delaware
Crawford.....	C. E. Kimerline, New Wash.....	K. H. Barth, New Washin'g'n.....	2d Thursday, monthly
Delaware.....	I. T. McCarty, Delaware.....	Rees Philpott, Delaware.....	1st Friday, each month
Franklin.....	E. A. Hamilton, Columbus.....	James A. Beer, Columbus.....	1st four Mondays
Knox.....	C. K. Conard, Mt. Vernon.....	I. S. Workman, Mt. Vernon.....	2d and 4th Wednesday, from March to middle of Dec.
Madison.....	R. H. Trimble, Mt. Sterling.....	F. D. Postle, London.....	4th Thursday
Morrow.....	W. L. Case, Mt. Gilead.....	Todd Carls, Mt. Gilead.....	1st Wednesday, monthly
Pickaway.....	A. F. Kaler, New Holland.....	D. V. Courtright, Circleville.....	1st Friday, monthly
Ross.....	L. E. Hoyt, Chillicothe.....	G. S. Mytinger, Chillicothe.....	1st Tuesday, monthly
Union.....	H. C. Duke, Richwood.....	C. W. Hoopes, Marysville.....	2d Tuesday

## Value of Health Education of Public Demonstrated

The efficacy of educating the public on health matters is strikingly reflected in reports received by the State Department of Health from physicians in various parts of the state to the effect that they have had more early contacts with tuberculosis this year than ever before. This is seen as a result of the diagnostic clinic campaign conducted this year by the State Department with the cooperation of the local health departments, county medical societies and other welfare agencies.

The clinics have aroused much interest all over the state in complete physical examination for the discovery of ailments, with the result that in 24 counties in which 26 clinics have been held there has been unprecedented demand for such examinations. More persons have been examined for tuberculosis by their family physicians since the inception of the clinic campaign than were examined in the clinics.

Reports received by the State Department of Health show that more than ninety per cent. of the 659 persons diagnosed as positive or suspicious cases of tuberculosis in the clinics are undergoing treatment, thus fulfilling one of the principle objects of the clinics—to get those infected to their physicians for treatment at as early a stage of the disease as possible. Another result is found in the definite plans in several localities for the creation of tuberculosis hospital districts and the erection of sanatoria.

Probably one of the greatest steps toward combating tuberculosis in Ohio in recent years was made with the establishment in June of a camp for unhealthy children at Middletown. The camp, financed by the Red Cross and various industries of Middletown, is situated on an ideal site a mile north of the city and covers approximately 395 acres over which the children may romp. Camp activities proper, however, are confined to ten acres.

Under the supervision of Dr. J. A. Frank, chief of the division of tuberculosis of the State Health Department, a clinic was conducted, June 20 and 21, for the purpose of selecting eligibles for admittance to the camp. Eighty-seven patients applied, out of which 29 positive and 13 suspected cases were determined. These, together with cases diagnosed similarly at a clinic conducted last January, were admitted to the camp.

An interesting side light on the tuberculosis problem was reported by Dr. Frank recently on his return from an investigation in the mining districts of eastern Ohio, when a clinic was conducted at Cambridge, Guernsey County. It was found that the number of positive cases were approximately 60 per cent. of those examined, an extremely high rate. The condition was attributed to financial depression among the striking miners, prohibiting them from securing necessary medical attention.

### MEAD'S

## MEAD'S INFANT DIET MATERIALS

**MEAD'S DEXTRI-MALTOSE**  
combined with Cow's Milk and water, will give gratifying results in feeding the average baby.

**MEAD'S CASEC**  
(Calcium Caseinate)

As a corrective diet for babies with fermentative diarrhoeas.

### THE MEAD JOHNSON POLICY

Mead's Infant Diet Materials are advertised only to physicians. No feeding directions accompany trade packages. Information regarding their use reaches the mother only by written instructions from her doctor on his private prescription blank. Literature furnished only to physicians.

Full literature on Mead's Dextrin-Maltose and Mead's Casec sent immediately upon request.

MADE BY MEAD—MADE RIGHT

MEAD JOHNSON & COMPANY,

Evansville, Indiana

# MEDICAL ECONOMICS

PUBLIC HEALTH ~ SOCIAL WELFARE *and* ORGANIZATION PROBLEMS  
WITH EDITORIAL COMMENT *by* D. K. M.

## Anticipating Future Problems

The interdependence and complexity of modern life places an evitable restraint upon individual effort. Advantages of society that may accrue, are secured by conformity to rules and cooperation with its parts. With forces constantly seeking to make it increasingly the business of government to establish more detailed government of business, the individual has countered with organization and cooperation.

During the five years preceding the World War, the four thousand members of the national and state assemblies enacted 62,014 statutes. The legislation of these bodies for 1914 and 1915 alone required 43,500 printed pages; which is but another lurid illustration of the complex clamors and demands of today.

Cooperation through organization is the only effective means by which the medical profession may combat the horde of selfish interests that seek to destroy its high standards and create distrust. It is the only means by which forces, hostile to the health of the community, may be met and overcome.

Every physician should feel duty-bound, both as a citizen and a member of the oldest and most highly respected profession, to assist in the establishment of a plan of harmonious cooperation, through the county society as a local unit; the Ohio State Medical Association as a state unit; and the American Medical Association as a national unit.

A new year is approaching. County societies are preparing plans for future activities, with programs crammed with interesting things. The State Association is concerned with numerous committee activities and preliminaries preparatory to the coming session of the legislature. From a legislative standpoint alone, the coming twelve-months will be of vital concern to the profession.

Out of a field of more than one thousand contestants, the two major parties have selected, through the August primary, their candidates for the 85th General Assembly. From the ranks of these nominees, the citizens of Ohio will select 130 members for the House of Representatives and 35 members for the Senate at the November election.

Among the nominees will be found those who have demonstrated a consistent and sustained attitude toward those measures and policies af-

fecting the field of public health; and have repeatedly sought and accepted the recommendations and views of the professional groups most directly concerned with these problems. There are others inimical to the high standards of public health that have been set up in Ohio.

The imperative need of informing and educating those who are to make up the personnel of the next assembly upon public health question, is obvious. And the recommendations of the physicians will undoubtedly wield great influence in determining legislative attitude, because of their medical insight into such questions.

This is your organization. Its effectiveness depends upon the interest and cooperation of every member. And every eligible physician should be a member.

Unofficial returns from the August Primary, indicate that seven members of the medical profession will be candidates for election to the state legislature this fall. Those who have secured nominations include:

*Ohio Senate:*—Ninth-Fourteenth District, (Fairfield, Hocking, Athens, Morgan, Washington, part Noble and part Monroe counties), Dr. E. LeFever, Glouster, Republican.

Twenty-First District (Stark and Carroll counties) Dr. Seth Hattery, Massillon, Democrat.

Twenty Fourth-Twenty Sixth District (Summit, Portage, Geauga, Lake and Ashtabula) Dr. W. S. King, Ashtabula, Democrat.

*Ohio House:*—Champaign County: Dr. D. C. Houser, Urbana, Democrat. Noble County: Dr. L. F. Cain, Caldwell, Republican. Summit County: Dr. H. S. Davidson, Akron, Republican. Wyandot County: Dr. A. L. Walton, Sycamore, Democrat.

The list of nominees also includes two veterinarians and four druggists.

For the Senate, there are 21 Republican and 2 Democratic nominees who have had previous legislative experience; and in the House, there are 54 Republican and 7 Democratic nominees with former experience.

### Where Education and Logic Are Both Superfluous

Those two staid old states of Ohio and Indiana, carved from the Northwest Territory more than a century ago and neighborly since, with nothing more serious between them than presidential timber possibilities, seem to be involved—humorously entangled, as it were, in a chiropractic muddle.

A paradox in chiropractic logic, while not infrequent, is often provocative of mirth, and in this instance it affords a wholesouled, neighborly laugh.

Ohio might be responsible; but perhaps Indiana is not aware of it.

All because of the calumnious clamor of the various species, sub-species and super-species of the chiropractic cult and kin in Ohio, for a form of state licensure patterned and fashioned to meet the lack of educational qualifications of a large proportion of its practitioners, has apparently fallen upon eager ears across the border.

The wails of the Ohio cultists were first raised following the enactment of the Medical Practice Act, which prescribes the qualifications for all those who would administer to the sick.

These "Frosty Morning Fellows" must have felt that if Ohio was determined to protect public health, then those of their ilk and calling must take steps to secure a licensing board of their own; one that would recognize the educational deficiencies of their rank and file. For each session of the General Assembly since has been harrassed with chiropractic licensing bills.

While at their "listening posts" across the border, the Curators of Chiropractic must have heard and misunderstood as to what it was all about, for forthwith the clan gathered and a "model licensure bill" was drafted.

Now comes a Satellite of the Great Mogul, the editor of a publication issued by a Fort Wayne College and points out the errors of his associates. It's all wrong! Entirely superfluous!

"To begin with", this editor asserts, "there is absolutely no need of a chiropractic licensing and examining board in Indiana today. The existing lot of chiropractors in Indiana cannot be improved upon. You are not persecuted or prosecuted, you are left severely and strictly alone to practice your profession without let or hindrance from any source or any group of any kind. In fact, Indiana today is the best chiropractic state in the entire country. Chiropractic conditions are as near ideal as it is humanly possible to approach that condition."

Embodied within this Paradigm of Chiropractic Correctness is a clause that would require the applicant for a license to submit satisfactory proof of a preliminary education, equal in effect to a high school course. And the eagle-eye of the Fort Wayne editor foresees portentous possibilities.

"How many chiropractors in Indiana today could qualify under that rule" interrogates this editor. "Of all the chiropractors in Fort Wayne, I do not happen to know one that is a high school graduate. In fact, I believe that the total number in Indiana able to comply with that ruling would be less than two per cent. of all the chiropractors in the state."

With one shift of his typewriter the editor asserts that "the existing lot of chiropractors in Indiana cannot be improved upon" and with the next, admits that "less than two per cent" could muster educational qualifications equal to a high school training.

My! Ain't Nature Grand?

### Health Service

But ten per cent. of the rural population of the United States has local health service under "whole-time" county, or district officers.

Through "Public Health Reports", the U. S. Public Health Service expresses serious concern for the future welfare of our country if this condition is permitted to continue without genuine effort toward an adequate remedy.

Sound as the principle of full-time health service is, it is possible that the Public Health Service is unduly exercised over the necessity for "full-time" service even in small communities. Those who are in position to know point out that the intelligent, part-time service of a strictly modern physician, awake to the latest advances in hygiene and medical practice, is more adequate and superior to inefficient, "full-time" service afforded by the opposite type.

Ohio is fortunate in not being among the majority of states where the general health problem has been neglected; for in response to a demand for relief from a previous haphazard health system, the 83rd General Assembly in 1919, enacted the Hughes-Griswold model health code.

This code, like many far-seeing and meritorious pieces of legislation, was not without its enemies. While in its infancy, it was assailed as unconstitutional. A bitter fight was waged through the various courts until its validity was sustained by the Supreme Court, in a memorable decision which stated that "the peace, morals, health and safety of the citizens are a matter of concern to the state and the small divisions of government may be compelled to contribute their share of the expense."

The Hughes-Griswold Act became effective January 1, 1920. Its validity was sustained December 26, 1921.

If consideration be given to the relatively brief time that has transpired since the enactment of this law and the activities it has already set-up, its most exacting critics concede results in time through necessary adaptations based on practical conditions and judicious direction.

### Winding Red Tape

Still imbued with the one thought that the sole purpose of federal prohibition enforcement is aimed at the suppression of illicit "thirst quenching" and apparently forgetful of the fact that there is a legitimate use for alcohol, the latest "regulation" creating further red tape for the legitimate practitioner of medicine was placed in effect with little regard for medical needs.

Only fifteen days were allotted to the physicians of Ohio, who are vested with authority to prescribe alcoholic liquors, to return all unused prescription blanks to the office of the federal prohibition director, Columbus, and secure in return the new forms.

Apparently no need for the issuance of such prescriptions was recognized during the period following the relinquishment of the old prescription forms and the receipt of the new. Official system with its adherence to formal authority not allowing for the delegation of authority in hastening the return of new prescription blanks caused added delay.

The official announcement of this change, not only directed attention to the illegality of using the old forms but added that "the issuance of such a prescription (upon the old forms) will be sufficient cause for revocation of your permit."

Changes in the new form consist of minor details. Space has been allowed upon the prescription form proper for a description of the prescription and a dotted line allotted for the name of the druggist designated to fill it. The receipt stub also has space for the druggist's name.

Permits issued to physicians to prescribe intoxicating liquors prior to September 1st, will expire December 31, 1922, while those issued after September 1st will expire December 31, 1923, according to a statement secured at the office of the director.

Physicians desiring 1923 permits are urged by the federal director to forward application blanks to the Columbus office as soon after September 1st as convenient. An effort is to be made, it was stated, to place prescription blanks for the year 1923 in the hands of all physicians making applications, before January 1st, 1923.

---

### More Teeth for Prohibition Enforcement

A penalty of from one to ten years in prison and a fine of from \$1,000 to \$10,000 for counterfeiting a liquor permit is proposed by a measure recently introduced in Congress by Senator Frank B. Willis, of Ohio.

The purpose of this bill, it is stated, is to prevent forging permits to obtain liquor from bonded warehouses and forging physician's prescription blanks. Any person advising, aiding,

procuring or connecting himself in any way with such an offense is also deemed equally guilty.

The bill, Senate No. 3871, has been referred to the Judiciary Committee.

---

### Legality of Sheppard-Towner Act

Since the Attorney General of the State of Massachusetts submitted his opinion, holding the provisions of the Sheppard-Towner act unconstitutional, Representative H. M. Towner, co-author of the measure, in an address before the House of Representatives, has endeavored to prove that the act is constitutional.

Under Article 1, section 8 of the Federal Constitution, he asserts, Congress is given the power "to levy and collect taxes, duties, imposts and excises to pay the debts and provide for the common defense and general welfare of the United States."

With this in mind, he attempts to prove from the preamble and various classic works on the constitution, debates, statements of eminent authorities, and other interpretations, the scope of the welfare clause.

The Public Health Service, he insists, finds justification for its existence under this clause and cites other departments whose work would be illegal were it not for this specific clause.

"Invasion of the police power of the States", he declares, is the source of most objections against every extension of governmental activity to cure abuses or "relieve untoward conditions."

In support of his argument, that Congress has power over general welfare, a number of court decisions were cited. The Land Grant College appropriations, the Smith-Lever Act of 1914 for instruction in agriculture; the Smith-Hughes Act of 1917, for vocational education; and federal aid to highway construction were offered as precedents for the type of legislation, as represented by the Maternity and Infancy Act.

The U. S. Children's Bureau has announced that plans for administering the provisions of this act in 36 states during the coming year, ending June 30, 1923, had been approved, and that so far, 42 states have accepted the act.

A summary of the opinion of the Massachusetts Attorney General will be found on page 474 of the *July Journal*.

Undoubtedly the highest courts will eventually be called upon to determine the entire question of constitutionality of this sort of legislation.

---

### "As Goes Maine, Etc.?"

Terms of the Sheppard-Towner Maternity Act have been emphatically declined by the Governor of Maine, who in his proclamation declared he was taking this course along with

(Continued on page 631)

## Premature Separation of Normally Implanted Placenta\*

By WM. D. FULLERTON, M.D., F.A.C.S., Cleveland

*Editor's Note.*—The complication presented by Dr. Fullerton may occur at any time during the last three months of pregnancy or labor. It has been called *ablatio placentae* or *utero-placental apoplexy*. Premature separation involves considerable bleeding, which may be apparent or concealed. As the complication occurs once in every 117 labors and the bleeding is so severe as to require the termination of pregnancy in many instances, the condition is well worthy of consideration. Presumably it may be due to some mechanical interference with the venous return of blood from the uterus and may be the result of rotation of the uterus or torsion from any cause. Prevention consists in adequate support and prevention of torsion. Delivery should be accomplished as soon as possible and every effort made to obviate the loss of more blood and the re-establishment of circulatory integrity by means of blood transfusion.

THE COMPLICATION referred to is the ante-partum separation of the normally implanted placenta at any time during the last three months of pregnancy or during labor. Prior to this time, especially in the early pregnancy, a similar accident may occur when the placenta is imperfectly attached, and is very often the etiological factor in abortion.

This condition was probably first recognized by Louise Bourgeois in 1609, although it is to Rigby<sup>1</sup>, who, in 1776, published a monograph on the subject, that credit is due for our first accurate information. He differentiated the bleeding from such an accident and that resulting from placenta previa, terming the former as *accidental*, and the latter *unavoidable*.

Other terms have been used to designate the condition, such as *ablatio placentae*, suggested by Holmes, or the *utero-placental apoplexy* of Essen-Moeller. The latter term merely describes a marked pathological picture and differs only in degree from the more simple cases.

When premature separation of the placenta takes place, such separation may be complete or partial. In either case blood sinuses from the uterus to the placenta are torn through, and bleeding occurs and continues, although it may be more or less intermittent, until the birth of the child, when it usually ceases, although as will be mentioned later, it may continue and result fatally post-partum.

The blood lost from the torn vessels may collect behind the placenta and membranes, or it may break through the membranes into the amniotic cavity where it may be retained. In such instances, the hemorrhage is spoken of as concealed. If the blood dissects the membranes from the uterine wall and finds its way out through the cervix, or if after breaking into the amniotic cavity the membrane over the cervix ruptures and the blood escapes, the hemorrhage is termed external. In most cases there is a combination of these two varieties.

### FREQUENCY

Rigby claimed that hemorrhage, from premature separation of the placenta, occurred equal-

ly as frequently as that from placenta previa. Holmes<sup>2</sup> stated that the condition was more common than was generally believed and estimated its frequency as once in every 200 labors. Writers of fifteen to twenty years ago undoubtedly overlooked many cases without marked signs, and especially those with slight or moderate degrees of external hemorrhage, confining their observations principally to those cases with marked symptoms and concealed hemorrhage. Their figures would place the frequency of the condition as once in every 500 to 1000 late pregnancies.

Dorman<sup>3</sup>, reviewing 27,000 deliveries at the Sloane Maternity Hospital, found this accident once in every 115 cases, many of which, however, would have been overlooked without careful inspection of the placenta. In this series, concealed hemorrhage alone occurred in less than one case in ten.

Williams<sup>4</sup>, at Johns Hopkins Hospital, reports 17 cases of premature separation in 2,000 deliveries, or a frequency of once in every 117 labors. There was external bleeding in all cases and eight of them required termination of the pregnancy.

### ETIOLOGY

Many careful observers favor a toxæmic theory as the etiological factor of this condition. Some believe it to be the same as causes the usual eclampsia or at least to be genetically connected with this unknown toxin. Some believe it to be maternal in origin, others attribute it to the fetus. Willson believes it is liberated by the placenta and to be of a hemorrhagic nature, producing its maximum effects locally and more general symptoms remotely, the severity of the condition depending upon concentration or amount of toxin liberated.

Until 1918 no experimentally proved cause of premature separation had been advanced. Winter, in 1885, and since then a host of other observers, have emphasized the frequency with which albuminuria was associated with this condition. Trauma, short cord, endometritis, and emotional states, have been suggested as etiological factors. Although about half of the cases show some trace of albumin in the urine, the others are quite free from such finding, and

\*Read before the Section on Obstetrics and Pediatric of the Ohio State Medical Association, during the Seventy-Sixth Annual Meeting, at Cincinnati, May 2-4, 1922.

among these are some of the most severe examples. Albumin when present, is more often only in small amounts and usually clears up rapidly. Rarely is renal insufficiency shown. In view of these facts it would seem improbable that there was any constant direct association between the two conditions, and that the association will be found to be that each are separate evidence of some common causative condition.

Mechanical causes, short cord and trauma, may occasionally be of etiological importance, but they are definitely eliminated in the great majority of cases. Endometritis, although presented by some writers as the etiological factor, is so rarely really found that it may be disregarded when considering the cause of this accident.

In 1917, before the American Medical Association, Morse<sup>6</sup> presented the only experimentally proved etiological factor for this condition. On two occasions, at Caesarean section for premature separation, he had noted the similarity in the appearance of the uterus to that of pedunculated fibroids or ovarian cysts with twisted pedicles, both being bluish black in color from the congestion and extravasation of blood in the tissues. Sections of such tumors, and of uteri removed for accidental bleeding, showed identical lesions. The possibility of interference with the blood supply being an etiological factor in premature placental separation was at once suggested.

To summarize the experimental work, Morse found that when the venous return from one horn of the bicornute uterus of rabbits was greatly obstructed, separation of the placentae in this horn invariably took place after a short interval, the untreated horn and its contained placentae being unaffected. In these experimental uteri, pathological lesions were found identical to those in the uteri removed from women for the same condition.

Morse concluded that the underlying cause of accidental hemorrhage, is an obstruction of the uterine circulation. Although noted only in rare instances, some isolated cases of thrombi reported in the ovarian veins, followed by this accident, would confirm these deductions.

The most common interference with the uterine circulation will be found due to the inadequate support of relaxed abdominal walls, allowing the uterus to prolapse forward and downward and become more or less rotated to the right or left. The cervix being relatively fixed and firmer, rotation of the large fundus will produce a twisting or torsion at the junction of the two in the region of the soft lower uterine segment and involve the broad ligaments. This results in a twisting or stretching of the vessels supplying the fundus, greatly reducing their cross-section and thereby the volume of blood they can pass to and from the fundus.

There has been some question raised as to

whether the torsion found of the human uterus is sufficient to produce venous obstruction. Animal experiments would seem to disprove the fact, but less torsion may be required in the human to produce sufficient obstruction than is required in animals.

Morse's conclusions would seem logical as the accident is predominant in women with relaxed abdominal walls. The thin walled veins naturally suffer constriction before the arteries, and since the venous obstruction has proved experimentally productive of similar pathological lesions, we may conclude that venous obstruction is of great importance in the production of this harrowing accident. It is unwise to conclude that nothing excepting venous obstruction may cause this accident. It is proved that such lesions do follow such obstruction, but a similar accident may of course follow from some other cause, possibly one of the toxæmias. At least more than one etiological factor for this condition may explain why we often find evidences of toxæmia in one severe case, while they are entirely lacking in another case equally severe. Nor should we lose sight of the fact that we may have such an accident occurring in toxæmic cases, the condition being superimposed on the toxæmia, although possibly in no way related to it.

#### PATHOLOGY

The degree of pathological change, as observed in the uterus and placenta, will depend to a marked extent upon the severity of the case, which, however, is not always directly dependent upon the amount of blood lost. It is naturally only the more severe cases, necessitating radical measures for relief, or those culminating in autopsy, in which we have an opportunity for pathological study. It would seem fair to assume, that the less severe cases clinically, present the same pathological lesions, but to a lesser degree than the severe clinical cases, and that these milder cases recover spontaneously without any special treatment directed towards the pathological lesions.

First, Couverlaire<sup>6</sup>, in 1911, and subsequently Morse and Williams, have given us very accurate descriptions with excellent illustrations of the pathological findings in the severe cases. Upon opening the abdomen, frequently a considerable quantity of clear or slightly blood-stained free fluid is found. The uterus is firm, bluish black or purplish in color, having quite the same appearance as an ovarian cyst with a twisted pedicle. This discoloration may be uniform or irregularly distributed over the uterine surface, and may extend into one or both broad ligaments, tubes and ovaries.

Upon opening the uterus, normal amniotic fluid is found if the membranes have not ruptured, or if the free blood from without has not

ruptured into the fetal sac. If this has happened, more or less free blood is encountered.

Further pathological study of these uteri show that they are unusually flabby, and that the discoloration seen through the peritoneum is due to the extravasation of blood between the muscle fibers, this change being usually limited to the outer half of the uterine wall. This free blood in the uterine wall is not connected directly with the large vessels, which are often dissected free from the muscle fibers, but comes from the arterioles and through the veins by diapedesis. The large veins are described both with and without thrombi, which are more common in the smaller veins and especially so at the placental site. The large arteries are normal, though some of the smaller ones have been described as having some degenerative changes within their walls. The decidua vera and serotina are without inflammatory change and are normal, excepting occasionally showing some slight hemorrhages.

Changes similar to those in the uterine wall are found in the tubes when they are involved, as a marked dissociation of the muscle fibers is noted. When the ovary is involved its component parts are widely separated by free hemorrhage.

The wide separation and dissociation of muscle fibers by free hemorrhage and edema, as seen in the uterine wall, unquestionably accounts for its loss of contractile power and the atony, which not infrequently results in severe and often fatal post-partum hemorrhage. Exactly similar gross and microscopic pathological conditions were found in the uteri of rabbits, which had had a premature separation of the placenta experimentally produced.

No specific pathological changes are found in the placenta. An occasional infarct is found and some hemorrhagic areas described in the decidua of the maternal surface. Of most importance and interest is the varying area of maternal surface which may have become prematurely separated. This varies from a comparatively small area of a few square millimeters to the entire area of attachment. Such areas may be recognized by the old blood clots which are found on the maternal surface, and frequently by larger or smaller areas of compression of the placental substance. These pits or craters vary in depth from a few millimeters to practically the entire thickness of the placenta.

From the appearance of the placenta in these cases, it seems most probable that premature separation starts at one point, from which, the enlarging clot with the accumulation of fluid blood, gradually dissects more and more of the placenta from the uterine wall.

#### DIAGNOSIS

With certain important symptoms in mind, the condition should rarely if ever be overlooked.

Premature separation with completely concealed hemorrhage is very rare, but accompanied by external hemorrhage occurs about once in every 120 pregnancies terminating after the seventh month. The symptoms are quite the same in either type excepting for the blood lost through the vulva.

Whenever, late in pregnancy or during labor, the uterus is found very firm, as at the height of a strong contraction, but stays so and does not relax, the condition is most probable. If in addition, there is external hemorrhage, and on vaginal examination no placental tissue can be felt above the internal os, eliminating placenta previa, the diagnosis is assured.

It should be remembered that the amount of blood lost externally is not a true index of the amount of bleeding that may have taken place, or of the severity of the condition. Careful and hourly hemoglobin estimations will be found of value in this respect, even before the pulse rate becomes much elevated.

In the more severe cases, the fetus usually perishes *in utero*, so that if the symptoms are of any duration, it will very often be impossible to hear the fetal heart sounds.

The patients complain of pain to a varying degree; some have acute, intense, intermittent pain which becomes constant, others have but slight discomfort. The degree of shock varies with the severity of the condition, which is not necessarily dependent upon external bleeding, or, upon the amount of blood lost when such sign is present.

A falling blood pressure, increasing pulse rate with decrease in force and volume, increased pallor, falling hemoglobin, cold sweating and restlessness, are evidences of progressive shock which demand prompt attention. In severe cases the urine is usually decreased in amount and may contain some albumin and casts.

#### TREATMENT

In so far as we are able, with our present knowledge of the etiology of this condition, we should primarily aim to prevent its occurrence. Since interference with the blood supply of the uterus is experimentally proved to constantly produce similar changes in animals as are found in women suffering from accidental hemorrhage, we should include in our pre-natal care, observation and attention to the condition of the abdominal walls and consequent position of the uterus.

With relaxed and widely separated recti muscles, an increasingly heavy uterus will prolapse forward and downward, which may readily cause a stretching or twisting, particularly of the veins in the broad ligaments. This results in stasis, which may be productive of premature separation of the placenta. Attention should, therefore, be directed towards securing by means of adequate supports and binders, a more normal upright position for the uterus, especially in



multiparae in whom the abdomen is excessively pendulous.

When premature separation has been diagnosed, irrespective of the patient's condition at the time, preparation should be immediately made to deal with any emergency. Immediate admission to a well-equipped hospital is of utmost importance. Hard and fast rules cannot be formulated for the treatment of every case. Expectant treatment followed by spontaneous delivery gives excellent results in the majority of cases when the symptoms are not severe. When external bleeding is noted, it is certain to continue until delivery, and no means of stopping such bleeding, such as rupture of the membranes or packing are justifiable, as they only mask the real condition and cause unwarranted and possibly fatal delay.

If bleeding is slight and the symptoms are not severe or progressive, the case should be let alone, particularly if the condition of the cervix promises a short, easy labor. However, if the bleeding is profuse, the symptoms marked and progressive, immediate interference is demanded. The means elected of affecting delivery, forceps, version, Voorhees bags, or Caesarean section, will depend upon the condition of the cervix and the urgency of the condition.

It must be remembered that all danger is not ended with the delivery of the child, as not infrequently severe and fatal hemorrhage follows a short and otherwise satisfactory terminated labor. Recalling the pathology of the condition, with the great dissociation of muscle fibers by hemorrhage in the uterine wall, we readily understand its resultant loss of contractile power and subsequent atonic bleeding. For hours after delivery, every case should be most carefully watched, and if bleeding is anything beyond normal, the uterus should be immediately and firmly packed with gauze, and ergot and pituitrin administered hypodermically. If this does not promptly stop all hemorrhage, immediate transfusion should be done, after which the abdomen should be opened at once, and if, as usually will be the case, the uterus is found flabby and hemorrhagic, the fundus should be amputated, as otherwise bleeding is most apt to continue until death results.

With external bleeding, or particularly with concealed hemorrhage, if the symptoms are marked and acute, and if the cervix is firm and undilated or but slightly so, abdominal section is indicated, followed by hysterectomy if the fundus does not promptly and firmly contract after delivery of the child. Such apparently radical measures are really conservative, as they give the mother her greatest chance for recovery, and afford the child its only though small chance of survival.

With the simplification and perfection of blood transfusion in recent years, it is of great importance for obstetrical patients to be properly

grouped, not later than in their early labor, and for such patients as we are speaking of, to have a group donor ready at all times. Transfusion is not expected to stop the bleeding, but supplying 700 to 1,000 c.c. of blood to a patient who has bled profusely, and is more or less exsanguinated, and in shock from hemorrhage, will very often be the means of saving her life. This holds good, irrespective of the most skillful handling of her accidental condition. Transfusion should be unhesitatingly resorted to whenever there has been any material loss of blood, and before the symptoms of such loss become too pronounced. When such conditions exist before delivery, whether contemplated from above or below, the time *par excellence* for transfusion is immediately preceding the delivery. This procedure is also of greatest value to all such cases as may have suffered the loss of large quantities of blood before and during delivery, and should be carried out whenever there is the least question of the safety of the patient. Transfusion is particularly indicated where bleeding continues after delivery, the patient's condition is not satisfactory and interference from above may probably or possibly become necessary.

Wilson<sup>1</sup> has this year collected and summarized 69 cases of this condition, associated with hemorrhagic infarction of the uterus. An abstract of his summary is very interesting.

The age of the patients varied from 17 to 42 years and averaged 32 years.

*Parity:* Eighteen patients, or 26.8 per cent., were primiparae, the average parity being 5.3. The condition was three times as common in primiparae as in any other parity.

*Period of Gestation:* In the seventh month, 5 cases; in the eighth month, 10 cases; ninth month, 21 cases and in the tenth month and at term, in 22 cases. It will be seen, therefore, that from the seventh month to term the condition becomes progressively more common.

*Toxaemic Symptoms:* The urine showed albumin in variable amounts in 86 per cent. of the cases in which it was sought. In only 9 cases was the blood pressure recorded and varied from 100-280. This number is too few from which to draw any conclusions.

Oedema was noted in 12 cases; headaches in 7 cases. In 14 cases no mention was made of toxic symptoms and in seven others they were lacking, so it may be assumed that one-third of such cases are without evidences of toxemia.

*Bleeding:* More than two-thirds of the cases had external bleeding.

*Placental Separation:* The placenta was completely separated three times as often as it was found but partially separated.

*Delivery:* Porro and conservative Caesarean each 21 times; abdominal hysterectomy without opening uterus 4 times; vaginal hysterectomy 2 times; extraction of fetus 12 times; spontaneous delivery 4 times; 3 patients died undelivered.

*Mortality:* Maternal 55 per cent.; fetal 92.5 per cent. For the Porro operation 47 per cent.; for conservative section 19 per cent. It should be remembered that the Porro cases were undoubtedly the most severe. Hysterectomy for post-partum bleeding was fatal in all 3 cases. Probably packing and early transfusion would have been the preferable procedure. Post-partum bleeding was fatal in 11 cases delivered vaginally, but in none delivered by conservative section.

#### ILLUSTRATIVE CASE REPORT

A typical case seen recently and treated conservatively may be of interest.

CASE 1.—Mrs. W—, Para one, aged 41 years, with normal pelvic measurements, had been easily delivered two years previously of a full term, six and one-half pound child, which, however, died thirty hours later of delayed intracranial hemorrhage. Three months before this delivery the patient's urine had shown a faint trace of albumin, but no casts. Her blood pressure had reached 180 systolic and 110 diastolic, but with proper diet and care was reduced and kept under 150 for the balance of her pregnancy, after which these findings rapidly disappeared.

One year ago the patient had an early abortion when less than two months pregnant. This accident was complete without interference and recovery prompt. A month later a small fibroid two or three centimeters in diameter, was found to the left of the mid-fundus, sub-peritoneal in type.

The patient had her last period eight and one-half lunar months prior to her present illness, and for eight months thereafter progressed normally in her pregnancy, felt well at all times, urine was normal, blood pressure 110-80. On several days, three weeks ago, she had some slight intermittent bleeding. Careful examination at that time revealed nothing abnormal. The external os admitted one finger and there was no evidence of placenta previa. This oozing promptly stopped. Two days before admission, her husband, who is a physician and who had been taking her blood pressure and examining her urine twice a week, found that her blood pressure had suddenly risen to 160-100 and that her urine showed a faint trace of albumin, but no casts. There was no oedema or other sign of toxæmia.

I saw the patient within twenty-four hours and found her blood pressure 180-110, urine with a faint trace of albumin, no casts, no oedema, no other sign of toxæmia. She complained of nothing specific, but said that she did not feel very well. The uterus was soft and the child active. There was no bleeding. In view of the rise in blood pressure and the slight trace of albumin found during her first pregnancy, expectant treatment was outlined for a chronic

nephritic. Ten hours later, and sixteen hours before delivery, she began having some very slight abdominal pains, the membranes ruptured shortly, and she was at once taken to the hospital where I saw her three hours later.

When seen at this time, twelve hours prior to delivery, the patient was having no pains and was in no way uncomfortable. Her uterus was quite firm, constantly so, without periods of relaxation. Accurate palpation of the child was impossible and no fetal heart sounds could be heard. There was a slight constant oozing of blood from the vagina, which continued until delivery, being only sufficient to soil six or eight pads during the day. Her pulse was 80 to 90 and at no time went over 100. By rectal examination, her cervix was long and rather firm, it was high behind the symphysis and dilated about two centimeters. The head was above the pelvic brim, blood pressure was 180-110. Urine showed slight trace of albumin, but no casts.

In view of the findings, a diagnosis was made of premature separation of the placenta with external bleeding, and a dead fetus. Considering the fact that the patient's condition was excellent, she was let entirely alone and constantly watched. The uterus did not relax at any time, and if anything, became firmer and more board-like, though without any subjective pain to the patient until about three hours prior to delivery, when some moderate cramp like pains began and progressed rapidly, without any increase in the external bleeding or untoward symptoms on the part of the patient.

Facilities were constantly at hand for immediate interference had such steps become advisable; the character of the interference would have depended upon the condition of the cervix at the time the necessity arose. After about three hours of mild, first stage pains, at three to five minute intervals, the head appeared at the vulva and was lifted over the perineum by a simple low forceps extraction. One c.c. of pituitrin was immediately given hypodermically. During the short five minute third stage, bleeding was practically nil, and after spontaneous expulsion of the placenta, thirty minimums of ergotole were given intermuscularly. The fundus contracted promptly and firmly and remained so. At no time subsequently was there any abnormal bleeding. Immediately following the expulsion of the placenta, a large amount of old and clotted blood was expressed, aggregating 1,200 grams.

The day after delivery the patient's blood pressure dropped from 180-110 to 160-90, and continued to fall, until on the sixth day post-partum it was 100-80, where it was stationary. The faint trace of albumin in the urine persisted for several weeks. Involution was rapid and normal. One month after delivery pelvic examination showed normal pelvic structures and the presence of a small fibroid in the left mid-

fundus. The patient has since been perfectly well.

The child was stillborn, weighed 2,800 grams, length 42 cm. There was a marked haematoma on the left occiput posterior, but no evidence of maceration. At autopsy there were many small punctate hemorrhages beneath the pericardium, in the lungs and kidneys, and also an excessive amount, 20 c.c., of free clear fluid in the pleural and peritoneal cavities. The brain showed an engorgement of the meningeal vessels, and a small amount of fluid blood between the bones and the dura.

#### MICROSCOPIC EXAMINATION

*Histological Description:* Section of lung shows marked engorgement of small and large blood vessels. There is great collapse of alveoli, in places in the lumen there is a small amount of amorphous pink-stained material and here and there a desquamated cell. The blood in general in the vessels and elsewhere laked, red cells are present as shadows; there is marked desquamation of the bronchial epithelium. The picture is that of marked atelectasis with engorgement and some oedema and hemorrhage; considerable post-partum change. In general the walls of the alveoli are quite oedematous. Section of myocardium shows no abnormalities except some post-mortem change.

*Section of thymus:* Richly cellular, scattered small Hassal's corpuscles observed. The blood vessels are somewhat engorged, tissue somewhat oedematous, in places there are small hemorrhages (ante-mortem?) *Spleen:* Section shows Malpighian bodies about average size, the venules are engorged, the blood in great part laked or present in shadows. The reticulum is somewhat more prominent than average. *Section of scalp* shows some oedema of the subcutaneous tissue, in addition, there is a large hemorrhage covering many low power fields apparently recent. The blood here is part laked, no ruptured vessels of any size in the section however. *Section of kidneys* shows marked post-mortem change, especially striking in the tubules, the epithelium in great part shows poorly stained nuclei. The cell lines in general obliterated, the structures are separated from each other by a moderate amount of amorphous pink-stained material. *Section of liver:* Shows moderate engorgement of the vessels between the liver cords, the cells are somewhat swollen, the nuclei poorly stained, there are numerous blood islands present here as in the other tissues.

*Pathological Diagnosis.*—Pulmonary Atelectasis; general anasarca (slight); subserous and parenchymatous hemorrhages; cephalohaematoma.

Very few autopsy reports on these children are available. Willson<sup>7</sup> quotes but two in 69 collected cases. In both hemorrhages were noted



Figure 1, showing the maternal surface of the placenta with blood clot *in situ* after hardening. Other similar clots were present, but have been removed as they completely filled the crater like depression on this surface. Excepting for a narrow margin of normal placental tissue around the periphery, all the structures seen in this photograph surrounding the large formed clot, are clotted and hardened blood.

into the viscera. He raises the question as to whether these are due to the asphyxia caused by placental separation, or to an unknown toxin which may also account for the changes in the maternal uterus. I am more impressed by the former assumption.

The placenta, (Figs. 1 and 2), measuring 16x13 cm., presented an unusual picture. Its fetal surface was normal excepting for several white infarcts up to 2 cm. in diameter, varying from a few millimeters to a centimeter in thickness. The maternal surface was one huge crater, filled with many large blood clots which had so compressed the placental tissue, that upon removal of these clots, its thickness was not over four to five millimeters. A narrow border of normal maternal surface one-half to one centimeter in width, was seen to almost completely surround the central crater and formed the extreme periphery of the placental margin.

As is the usual finding, the microscopic examination of the placenta showed nothing abnormal, excepting the area compressed by the tissues being normal.

Figure 1 shows a large clot *in situ*. There were several other equally large clots which were removed. The structure immediately surrounding this clot is not placental tissue, but clotted blood

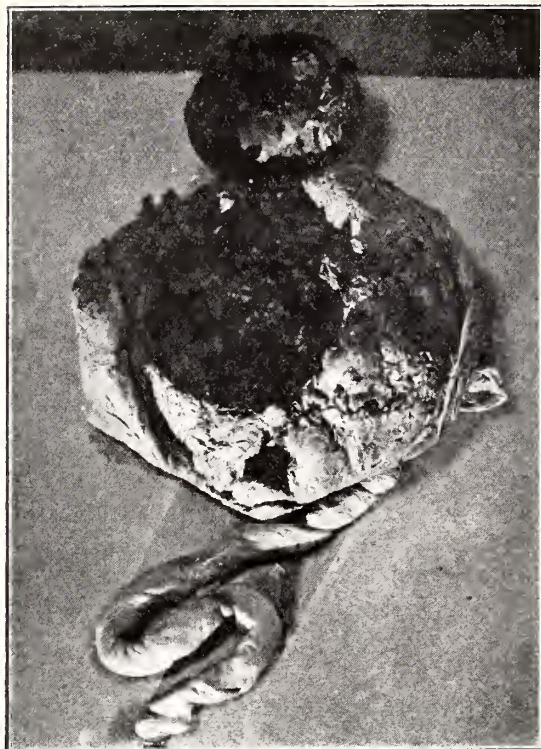


Figure 2. The large formed and hardened clot has been raised out of its bed or deep depression in the maternal surface. Careful study of the photograph, shows the bases of the attached tits or plugs, which were thrombi pulled from the venous sinuses of the placental site.

excepting for a narrow rim at the external margin. This is not clearly seen in the photograph.

Figure 2 shows a large clot lifted from its deep bed in the maternal surface. A very striking feature, of this and others of the firmer clots, was that they were covered by many small spines or tit-like processes which were apparently the broken-off plugs or thrombi from the blood sinuses in the placental site of the uterine wall. Some of these can be distinctly seen in the photographs. Many of them were broken off in handling and during hardening. Microscopic examination of the placenta, excepting occasional infarcts, showed nothing abnormal in addition to the extreme compression of the tissues under the clots. There was no evidence of inflammation or lues. The cord and membranes were normal macroscopically and microscopically.

465 ROSE BLDG.

#### REFERENCES

1. Rigby: An Essay on the Uterine Haemorrhage which Proceeds the Delivery of the Full-Grown Foetus. London 1811, 5th edition.
2. Holmes: Am. Jour. Obst., 1901, Vol. 44, p. 753.
3. Dorman: Sloane Hospital Reports, 1913, p. 73.
4. Williams: Surg. Gyn. Obst., 1915, Vol. 21, p. 541.
5. Morse: Surg. Gyn. Obst., 1918, Vol. 26, p. 133.
6. Couvelaire: Ann. de Gynec. et d'obst., 1911, Vol. 8, p. 591. Idom, 1912, Vol. 9, p. 486.
7. Willson: Surg. Obst., 1922, Vol. 34, p. 57.

## A Case of Double Kidney and Double Ureter: With a Review of the Literature\*

C. M. HARPSTER, M.D., T. H. BROWN, M.D., and H. A. DELCHER, M.D., Toledo

*Editor's Note.*—The important point for practical medicine, concludes Dr. Harpster, is the fact that anomalies of the kidney and ureter occur with far greater frequency than the average practitioner has believed, and that this frequency warrants and compels every urologist and surgeon to consider the occurrence of such anomalies as very possible and probable and to act accordingly. Modern diagnostic methods make the discovery of such anomalies in the living subject rather easy if only they are looked for.

**A**LTHOUGH ANOMALIES of the kidney and ureter were known to ancient medical writers, they have always been treated rather as anatomical curiosities. It is only recently, since the introduction of systematic diagnostic procedures connected with the kidney and its adnexae, that such anomalies as double ureter and double kidney pelvis can be accurately determined in the living subject.

#### ILLUSTRATIVE CASE REPORT

The following case recently came to our notice, referred to the Genito-Urinary Department of St. Vincent's Hospital by Drs. R. L. Bidwell and A. E. Cone.

\*Read before the Section on Dermatology, Proctology and Genito-Urinary Surgery of the Ohio State Medical Association, during the Seventy-Sixth Annual Meeting, at Cincinnati, May 2-4, 1922. From the Genito-Urinary Department of St. Vincent's Hospital, Toledo.

*Case Report.*—Miss K., 40 years; white; entered Hospital, September 29, 1921.

*Personal Antecedents:* Usual children's diseases; scarlet fever and diphtheria; tonsillitis. In 1912 appendix and both ovaries removed.

*Family Antecedents:* Nothing of interest bearing on case.

*Present Illness:* Began September 24 with pain in upper right abdominal quadrant and back; steady non-radiating pain; occasional nausea and vomiting; pain more acute after eating; no disturbance of micturition.

*State on Examination:* Urinalysis: color dark; s.g. 1013, acid reaction; negative for albumen and sugar; some epithelial and pus cells with debris. Nothing abnormal was observed in the thorax. The spinal column showed some marked kyphosis and scoliosis. In the abdomen

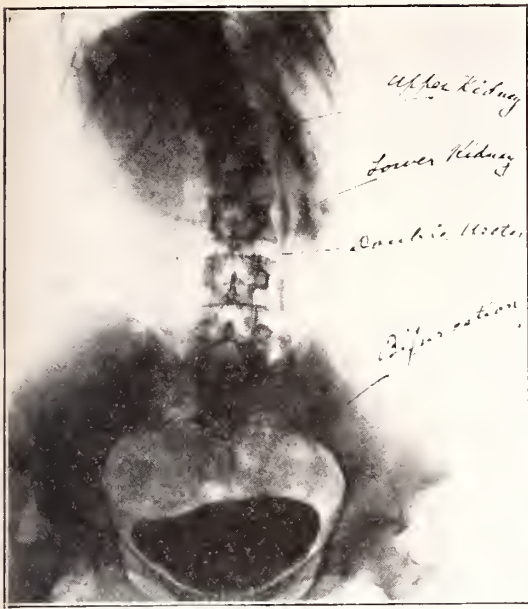


Figure 1. Kidneys and ureters, bladder, ureters and kidney pelvis injected Sodium Bromide.

there was dull pain on pressure over the lower border of ribs on the right side and marked pain in the corresponding region in the back.

Roentgenogram after cystoscopy shows a shadow of calculus in right kidney. The catheter goes to the kidney on this side. The left kidney shows two distinct ureters and two kidney pelvis in a kidney shadow about twice the size of normal. The right kidney shadow is normal. The left side was injected with sodium bromide and showed bifurcation of the left ureter about two inches above the ureteral orifice in the bladder. From the X-ray findings a diagnosis of double ureter and double pelvis was made. The X-ray pictures were made by Dr. John Murphy at St. Vincent's Hospital. Fig. 1 shows ureter injected with sodium bromide, with the double ureter and double pelvis clearly distinguished as well as the bifurcation about two inches above the orifice in the bladder. Fig. 2 shows X-ray catheter in a normal ureter (there is a small calculus in the kidney).

#### REPORT OF THIS ANOMALY BY OTHERS

It is now generally admitted that the occurrence of double ureter, either complete or incomplete is not an infrequent event. Poirier<sup>1</sup>, Bostroem<sup>2</sup>, Huntington<sup>3</sup>, Papin<sup>4</sup>, and Motzfeld<sup>5</sup>, and others have variously estimated the anomaly as occurring in from one to four and even a higher per cent. of all individuals. Although there is much discrepancy among the figures given by different investigators still the facts are sufficient to show that the condition is one which any urologist is liable to meet. The presence of a double ureter is a disturbing element in the clinical picture of kidney disease and

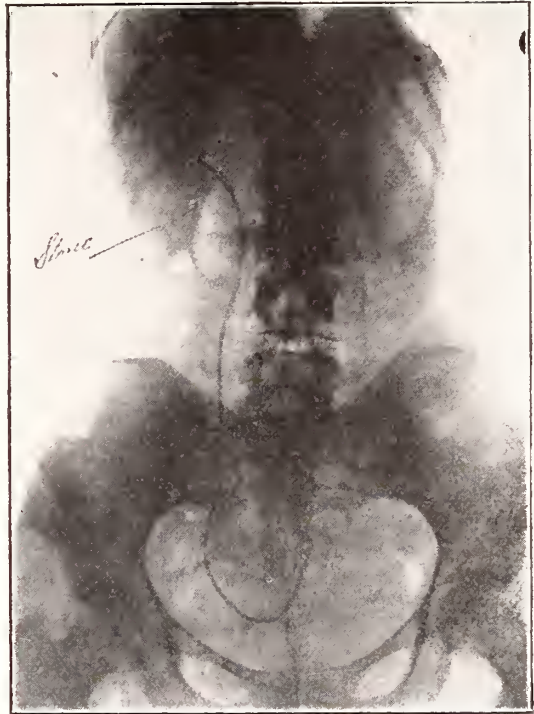


Figure 2. Catheter in ureter. Stone lower pole of kidney.

likely to lead to diagnostic errors. From the surgical point of view it is not only manifest that an unsuspected duplicate ureter may lead to untoward complications; but also, looked at from another angle, in a pathologic kidney when such a condition is known, the fused or double kidney, which usually accompanies the double ureter, permits of conservative surgery which is not possible with a single normally developed organ.

Duplication of the ureter is usually accompanied by double or fused kidney, and as a consequence by duplication of the kidney pelvis. In a few cases in the literature the two kidneys on the same side are quite distinct, the third kidney being in fact supernumerary and ectopic. From this condition all grades of double kidney exist down to that in which the kidney is composed of two parts, which are only separated by some connective tissue. The existence or the degree of completeness of kidney duplication accompanying a double ureter is not always stated in reports in the literature; nor even has the existence of duplicated pelvis been always demonstrated or reported. Even when the ureteral duplication is incomplete such duplication of the kidney including the pelvis may be surmised. Braasch<sup>6</sup> in a number of cases found that there was always a double pelvis and he says that for all practical purposes the kidney may be considered as double. Bruci<sup>7</sup> thinks it plausible to admit that duplicity of the ureters is a frequent index of renal duplicity more or less manifest. Considering (a) that the kidney

blood supply is usually distinct in the upper or lower parts; (b) that the two parts of the kidney are separated by a band of strangulated separate pelves, Bruci concludes that these are separate pelves. Bruci concludes that these are really cases of double or fused kidney. Papin\* who made a thorough study of the condition remarks that while some authors have reported two ureters coming from one pelvis he has never observed such a condition in any specimen seen by him, nor has he found it substantiated by the more detailed reports in the literature. He is quite satisfied that even in cases of unilateral bifid ureter the pelvis is always doubled. This is contrary to the opinion of Schwarz<sup>2</sup>, who from reports of 68 collected cases states there was only one pelvis in the majority. Delmas<sup>3</sup>, however, in 251 cases of ureteral anomalies (including duplicity) most frequently found two distinct pelves accompanying duplicated ureter.

The two pelves are generally placed one above the other. Papin<sup>4</sup> states that one is never in front of the other. Generally the lower pelvis is larger than the upper. It is exceptional that the two ureters drain equal portions of the kidney. The form of the kidney is usually normal and from external inspection alone there may be little reason to suspect ureteral duplication, unless where there is a distinct band which separates the parts of the duplex kidney. On the duplicated side the fused kidney may be larger than its congener.

The two ureters from a fused kidney may run a distinct course ending each by its own distinct orifice in the bladder, or one ureter may end normally in the bladder and the other may end in some other part of the genito-urinary tract. In the male such abnormal discharge may be in the prostatic urethra, in the ejaculatory duct, or seminal vessels. In the female the discharge may be in the urethra or vulva. Occasionally the two ureters may run side by side, enclosed in a common sheath, to the bladder. The normal ureter on the duplicated side usually discharges in the normal orifice in the bladder.

The duplex may, however, join together and enter the bladder by a single orifice. This bifurcation may take place close to the hilum of the kidney; but its more frequent situation is within 3 to 5 cms. from the bladder. In a number of cases Papin<sup>4</sup> found that there was high bifurcation in thirteen, medium in sixteen, and low in twenty-two. Unilateral bifid ureter of this kind is the most frequently observed anomaly. It is more usually found on the left side. Although there is apparent bifurcation it is sometimes found that the two ureters continue their course separately to the bladder wall enclosed within a single sheath. When the two are thus enclosed the ureter coming from the upper part of the kidney is usually posterior to the other though it may pass to the anterior position before they enter the bladder.

When there are separate orifices in the bladder, Sacquefée<sup>10</sup> says that in some cases they are neighbors and situated in the normal position at the posterior angle of Lieutand's triangle; but frequently one orifice is normal and the other more or less distant discharging abnormally in the bladder or outside the bladder.

#### CLASSIFICATION AND INCIDENCE OF VARIOUS ANOMALIES

We are now in a position to classify the various types of duplicated ureter. If the duplication occurs on both sides, it is bilateral, and may be complete or incomplete according as there are four, or only two or three distinct ureteral discharge orifices. Moreover, the kidney may be distinctly supernumerary or of the fused or double-kidney type. It is assumed that in all cases the pelvis is duplex. If the duplication is on one side only then it is unilateral, and may be complete or incomplete according as each of the duplex ureters has a distinct discharge orifice or join together to discharge by one orifice. As mentioned, duplication of the pelvis and kidney are assumed. In a few such cases there is also a distinct supernumerary kidney.

An exhaustive search through the literature has shown that a large number of the different types of anomalies have been reported. Of complete bilateral duplication there are 40 cases.

There are 28 cases of incomplete bilateral duplication. This table includes cases in which there is complete duplicity on one side accompanied by incomplete duplicity on the other.

There are 181 cases of complete unilateral duplication and 133 cases of incomplete unilateral duplication which latter table includes our case.

It is very possible that incomplete unilateral duplication occurs much more frequently than is reported. We have been compelled to omit a few probable cases, either because we could not get access to the original report or because it was of such a meagre nature that it could not be classed. Altogether 382 cases of complete or incomplete ureteral duplication have been collected.

It may be remarked that bifurcation of the lower extremity of a single ureter with two bladder orifices has been reported. Papin<sup>4</sup> does not admit the possibility of such an anomaly especially on embryological grounds. It is probably a case, in which the two ureters in their upper part continued separately under a common sheath. It has not been verified by anatomical findings.

#### DIAGNOSIS

The cases, in which a supernumerary ureter opened in an abnormal situation in the bladder or extra-vesically, are distinguished in the tables, as far as reported. Most of the cases

now reported were autopsy findings; but a fair number were discovered during operation. *Only a few have been diagnosed pre-operatively.* The cases of Stark, Seelig, Klose, Unterberg, Nemenov, Herrick, Young and Davis, Gottfried, Thumin, Simon and Mertz, Wossidlo, Lewis, Kakouch, Voelker, some of the cases reported by Mertz and our own were diagnosed. When there are distinct bladder orifices the diagnosis is of course at once suggested; but when there are only two orifices in the bladder and pathological conditions which cannot be satisfactorily accounted for, and cystoscopy and separate deviation of urine fails to give a clew, the more modern diagnostic methods of pyelography and X-ray examination will often bring such a condition to light. The fact of the establishment of the great relative frequency of double ureter and its more frequent diagnosis in recent years since the introduction of pyelography should put every urologist on his guard and pyelograms should be made as a matter of routine in any condition where there is the least reason for suspicion.

#### PATHOLOGY

It is a general law that an abnormal organ is more susceptible to pathological conditions than a normal organ. A very large proportion of double kidneys and ureters will therefore be found diseased. The point has already been discussed by Botez<sup>11</sup> who by a statistical study demonstrated that malformation predisposes to disease. In 51,504 autopsy records Botez found the frequency of horseshoe kidney to be one in 715 while in a series of one thousand kidney operations the proportion was one in 143, or five times as great. Botez concluded from this that a horseshoe kidney is more liable to become diseased than a normal one. In double kidney and double ureter hydronephrosis and pyelonephrosis is quite common but many have not been diagnosed or operated. Young and Davis<sup>12</sup> recently found in the literature of such a lesion in 25 of 29 cases in which some surgical operation was done for double kidney, twenty-one of these operations were nephrectomies. In their own case (which was correctly diagnosed pre-operatively) they did a successful resection of the diseased portion of the double kidney occupied by a large calculus.

Albarran<sup>13</sup> had previously done this operation; and three cases were apparently so treated in the Mayo Clinic according to Braasch. Herrick<sup>14</sup> and Rumpel<sup>15</sup> also did successful resections in double kidney. Resection is of particular value in tuberculous kidney.

Bruce<sup>7</sup> remarks that one should be prudent in deciding upon resection in these cases, even when the independent part of the kidney is apparently healthy, because even in this latter microscopic examination will frequently show little disseminated miliary abscesses. Bruce

says that these are due, either to the fact that the arteries are not terminated at the division of the kidney parts, or because the septic matter travels through the lymphatics, or by a more circuitous blood route.

The upper part of the double kidney is almost always the diseased part, but the lower part is more voluminous, its shape is more approximately normal, and its ureter is generally normally discharging. The upper part of the double kidney is from these considerations the supernumerary or abnormal part.

Sacquepée<sup>10</sup> observes that when the duplex ureters have orifices that are neighbors the kidney does not show any visible alteration, but if one orifice is abnormal, it is constantly found that the part of the kidney corresponding to the abnormal opening is diseased.

#### CAUSE OF DOUBLE KIDNEY

A good deal has been written regarding the cause of double ureter and double kidney. Pohlman<sup>16</sup> wrote an important article on the embryological origin of the condition, in 1905; Sacquepée<sup>10</sup> also deals with the embryology, discussing the earlier theories. Recently Young and Davis<sup>12</sup> have also made a study of the embryology. These authors say that during embryological development of higher mammals there are three successive types of excretory organs: pronephros, mesonephros, and metanephros. The first two are temporary only and the third becomes the permanent kidney. All are of mesodermal origin from the nephrogenic cord. The pronephros has become atrophied before the embryo reaches the length of 5 mm. Its duct persists to form the Wolffian duct, the excretory duct of the mesonephros. The mesonephros or Wolffian body also undergoes atrophy in the human embryo. Its duct persists as the vas deferens in the male and Gaertner's duct in the female. The metanephros appears first as a budding or evagination from the lower end of the Wolffian duct. This bud is destined to form the ureter, pelvis, calyces, and collecting tubules, *viz.* the whole efferent apparatus, while the secretory portion of the kidney is derived from a mass of mesodermal cells forming the so-called metanephrogenic tissue originating from the caudal portion of the nephrogenic cord.

About the 8 mm. stage of embryonic life the metanephros bud splits into upper and lower divisions the first evidence of the calyces. The formation of incomplete double ureter is, according to most authors, accounted for by a premature or exaggerated bifurcation of the tip of ureteral bud, the split extending down the ureteral stalk instead of being confined to the tip. Regarding complete double ureter, some consider it as resulting from separate outbuddings from the Wolffian duct.

According to Sacquepée the Wolffian duct by splitting gives origin to the Muellerian duct. In

the male the lower portion of the Wolffian duct becomes the vas deferens and prostate and the Muellerian duct atrophies. In the female the Muellerian duct forms the uterus, ovaries and tubes and the lower part of the Wolffian duct atrophies. Double ureter and double kidney may arise from persistence of those ducts which normally atrophy. Sacquepée says that when double ureter is found without double kidney, or that the ureteral ends terminate in cysts, a persistent Wolffian or Muellerian duct must be thought of.

The question of the origin of the various anomalies is by no means clear and none of the explanations given up to now seem satisfactorily to account for all types of anomaly.

#### CONCLUSION

The important point for practical medicine, however, is that these anomalies occur with a far greater amount of frequency than the average practitioner has believed, and that this fre-

quency warrants and compels every urologist and surgeon to consider the occurrence of such anomalies as very possible and probable and to act accordingly.

WEDGEWOOD BLDG.

#### REFERENCES

1. Poirier: Compt. rend Soc. de Biol., Paris, 1891, Vol. ix, p. 585.
2. Bostroom: Beitr. z. path. Anat. d. Nieren, 1884.
3. Huntington: Amer. Jour. Obst., 1915, Vol. lxxi, p. 669.
4. Papin: Rev. de gynéc., 1910, Vol. xv, p. 105.
5. Motzfeld: Norsk. Mag. f. Laegevidensk., July, 1914.
6. Braasch: Ann. of Surg., 1912, Vol. lvi, p. 726.
7. Bruci: Ann. de mal. d. org. gén. urin., 1911, Vol. xxix, p. 961.
8. Schwarz:
9. Leimas, I. and P.: Ann. de mal. d. org. gén. urin., 1910, Vol. xxviii, p. 769.
10. Sacquepée: Jour. de l'anat., 1900, Vol. xxxvi, p. 103.
11. Botez: Jour. d'urolog., 1912, Vol. i, p. 193.
12. Young and Davis: Surg., Gynec. and Obst., Chicago, 1918, Vol. xxvii, p. 1.
13. Albarran: Med. Opér. d. voies urin., Paris, 1909, p. 265.
14. Herrick: Surg., Gynec. and Obst., 1920, Vol. xxx, p. 506.
15. Rumpel: Zeitschr. f. urol. Chir., 1914, Vol. iii, p. 33.
16. Pohlman: Bull. Johns Hopk. Hosp., 1905, Vol. xvi, p. 51.

## Significance of Meningeal Reactions\*

By OSCAR BERGHAUSEN, M.D., Cincinnati

*Editor's Note.*—It is now quite possible to definitely associate meningeal reactions with the cytological examination of the spinal fluid, and in the experience of Dr. Berghausen spinal puncture has become a valuable therapeutic as well as a diagnostic measure in handling pathological conditions of the central nervous system. Peculiarly certain meningeal conditions predicate an alkaline and other bacteremias indicate an acid spinal fluid. The cell and globulin estimation are also diagnostic as well as the Tschirch test. These newer methods are becoming more and more valuable in differential diagnosis. Dr. Berghausen appends a number of case reports with the findings in various types of meningeal conditions.

**P**ATHOLOGIC CHANGES in the central nervous system are meningeal, vascular or parenchymatous in type. The agent producing the changes is carried to the system by the blood or lymph stream in the majority of cases. Direct infection is possible as a complication in bone erosions or fractures. Thrombosis and a resulting stasis may follow; more frequently we have an associated meningitis and frequently an involvement of the brain and cord substance.

The clinical syndrome which follows is dependent upon the localization or the spreading of the inflammatory process to the remaining nervous system. Frequently the inflammation is localized in type, but more generally it spreads and involves the meninges of the brain and cord and then the parenchyma. Clinically we recognize what may be termed the *symptomatic types*, with a well known and defined clinical syndrome. We must concede the possibility of an *asymptomatic type*, the result of congestion or of infection, and not leading to a definite clinical syndrome. Spinal fluid examinations have shown the presence of cells and increased globulin in

many cases of epidemic parotitis or *mumps*, when no definite symptoms on the part of the central nervous system were present. In fact many acute infections are attended by congestion of the meninges of the brain and cord, though clinically we do not speak of the presence of meningitis.

#### CLASSIFICATIONS

From a *cytological examination* of the spinal fluid we are justified in speaking of serous, lymphocytic and polynuclear types of meningitis. Peculiarly as a result of the activity of infectious organisms any one of these types may be encountered. Frequently the meningitis may begin as a serous inflammation and later develop into a lymphocytic or polynuclear type.

From a chemical examination of the spinal fluid we are justified in speaking of *alkaline fluids* containing a slight or heavy increase in the protein substance, or of *acid fluids* containing a heavy increase in protein. The alkaline fluids are obtained from patients suffering from tuberculous meningitis, syphilitic meningitis, influenza meningitis, encephalitis lethargica, epidemic parotitis and acute poliomyelitis. The acid fluids are obtained from patients suffering from meningitis due to a pyogenic organism as

\*Read before the Medical Section of the Ohio State Medical Association, during the Seventy-Sixth Annual Meeting, at Cincinnati, May 2-4, 1922.



the meningococcus intracellularis, pneumococcus, streptococcus, staphylococcus and typhoid bacillus. Peculiarly in meningism or serous meningitis with little protein substance in the spinal fluid, we commonly find a fluid which is acid in reaction, but becomes alkaline on shaking or on standing.

#### SEROUS MENINGITIS

Serous meningitis frequently follows at the outset of many infectious diseases, with or without particular symptoms on the part of the central nervous system. The patients are suffering from fever and its consequences and frequently of a headache. There may be more or less rigidity of the neck and this arouses the suspicions of the possibility of an attending meningitis. If a spinal puncture is made at this time the fluid as a rule comes away under a distinct increase in pressure and frequently results in the abatement of the symptoms on the part of the central nervous system. The fluid is clear, acid in reaction, is free from cells and contains only a slight increase in protein, if any. This condition may result from intoxications other than bacterial in origin. Not infrequently we see it in children when the gastro-intestinal tract has become deranged. One patient presenting a clinical picture typical of cerebro-spinal-meningitis which followed ten days after the administration of anti-tetanic serum, was relieved immediately by a spinal puncture yielding a clear fluid free from cellular elements and an increase in globulin. Such a fluid may be found in conditions other than those caused by infections and toxæmias. In chronic meningitis following alcoholism a clear fluid free from formed elements is commonly obtained and the relief from pressure is followed by improvement clinically.

In idiopathic epilepsy the fluid comes under increased pressure and frequently contains an increase in globulin and occasionally in the number of cells, but the puncture is not followed by an improvement in the clinical condition.

#### LYMPHOCYTIC TYPE

In the lymphocytic type we have an increase in the pressure, in the globulin and usually in the number of lymphocyte cells. Until recently we thought that this type of reaction was due to tuberculosis or syphilis. Experience during the past few years has taught us however, that such findings are not uncommon in other infections acute in origin. We now know that in infantile paralysis, mumps, influenza, post-diphtheritic paralysis and encephalitis lethargica, the spinal fluid is of the lymphocytic type and that spinal puncture relieves temporarily, but not necessarily permanently as is so often the case in the serous type of inflammation.

#### POLYNUCLEAR TYPE

When ordinary infectious organisms invade the central nervous system and begin to multiply

then the polynuclear type of meningitis develops. In the beginning of this condition the spinal fluid may be free from formed elements and bacteria, but a second puncture made later when the symptoms do not abate will reveal the presence of infection. The organisms encountered are usually the ordinary pus formers, the diplococcus intracellularis, typhoid bacilli, more rarely the colon bacillus, Friedlanders bacillus and others. The literature contains histories of cases in which most unusual types of organisms have been isolated from the fluid obtained by spinal puncture. The fluid is usually turbid and may be creamy in nature. The cells are predominately the ordinary polynuclear leucocytes which may contain the infectious organism. Clinically we may meet with cases in which the findings in the fluid may not correspond to the clinical syndrome. In these cases it may be wise to make a second examination a day or two later. Again the pathologic process may be circumscribed and the formed elements do not reach the fluid as it is withdrawn from the lumbar region.

Frequently in infections about the nasal passages and in cases of otitis media the question arises as to the presence or absence of an associated meningitis. If the meninges are involved it has been my experience that the fluid most commonly contains cellular elements, that the globulin is increased, and the type of infectious organisms may be isolated. Recently I saw a patient in whom the clinical symptoms of meningitis followed a unilateral otitis media. The spinal fluid was of lymphocytic type, no organism was isolated. A simple mastoid operation was followed by a clinical cure. Where a localized brain abscess follows an infection about the head, the finding of formed elements in the spinal fluid usually indicates that the end is near. Cases are on record however, in which despite the development of a meningitis, the successful drainage of the abscess cavity resulted in the cure of the patient.

#### CYTOLOGICAL AND CHEMICAL EXAMINATIONS OF THE SPINAL FLUID IN THE VARIOUS TYPES OF MENINGEAL REACTIONS

##### I. SEROUS MENINGITIS.

Case No.	Cells	Globulin	Taschiro Test	Sulfo	Hg. Sal. Reaction
1	none	not increased	1	1	acid
2	none	not increased	$\frac{1}{2}$	$\frac{1}{2}$	acid
3	none	not increased	1	1	acid

##### II. LYMPHOCYTIC TYPE.

Case No.	Cells	Globulin	Taschiro Test	Sulfo	Hg. Sal. Reaction
----------	-------	----------	---------------	-------	-------------------

##### (a) Acute Meningo-Encephalitis.

(Following influenza, infections about the nasal passages, or of unknown origin).

4	20	not increased	1	1	alkaline
5	18	not increased	1	1	alkaline
6	30	not increased	1	1	alkaline
7	4	slightly increased	1	1	alkaline
8	none	not increased	1	1	alkaline
9	40	increased	2	1	alkaline

10	none	not increased	1	1	alkaline
11	present	increased	2	1	alkaline
12	40	increased	1	2	acid
13	10	increased	2	1	alkaline
14	9	increased	2	1	alkaline
15	none	increased			
16	1	increased			
(b) <i>Infantile Paralysis.</i>					
17	15	slight increase			acid
18	100	slight increase	$\frac{1}{2}$	$\frac{1}{2}$	acid
(c) <i>Lethargic Encephalitis.</i>					
19	18	not increased	1	1	alkaline
20	30	greatly increased	1	1	alkaline
21	none	not increased	1	1	alkaline
22	present	increased	1	1	alkaline
(d) <i>Tuberculous Meningitis.</i>					
23	100	increased	2	1	alkaline
24	20	increased	2	1	alkaline
(tubercle bacilli found)					
25	present	increased	2	1	alkaline
26	lym. and polynuclears	increased	2	1	acid
(tubercle bacilli found)					

## III. POLYNUCLEAR TYPE.

Case No.	Cells	Globulin	Taschiro Test	Sulfo	Hg. Sal. Reaction	
27	turbid,	polynuclear	increased	2	2	acid
28	turbid,	polynuclear	increased	3	3	acid
29	turbid,	polynuclear	increased	1	4	acid
30	turbid,	polynuclear	increased	1	4	acid
31	turbid,	polynuclear	increased	1	2	acid
32	turbid,	polynuclear	increased	1	2	acid

## IV. SIMILAR EXAMINATIONS OF THE SPINAL FLUID OF PATIENTS HAVING A CEREBRAL

Case No.	Cells	TUMOR Globulin	Taschiro Test	Sulfo	Hg. Sal. Reaction
33	none	increased (microscopic blood)	2	1	alkaline
34	none	not increased	$\frac{1}{2}$	$\frac{1}{2}$	
35	2	increased			

The reagents used were 1 per cent. aqueous mercuric chloride solution, 3 per cent. sulfosalicylic acid, and 1 per cent. alcoholic phenolphthalein as indicator. The butyric acid method was employed in the determination of the globulin.

From a study of the above results we find that the Taschiro test which is dependent upon the precipitation of protein by mercuric chloride and sulfosalicylic acid, has no greater significance than that of the globulin determination. Taschiro claimed that in tuberculous meningitis, the precipitate obtained with the mercuric chloride solution is twice in volume that obtained with the sulfosalicylic acid reagent, if both be allowed to stand undisturbed for a day or two. We are able to substantiate this finding but also found the same difference in the amount of precipitation in spinal fluid obtained from patients suffering from acute meningo-encephalo-myelitis secondary to influenza or infection about the upper air passages.

From a study of the literature we find that a high sugar content of the spinal fluid should not be regarded as a positive diagnostic sign of lethargic encephalitis, but that a low sugar content is very strong indication of an acute or tuberculous meningitis. The normal value of sugar in cerebrospinal fluid is 0.069 per cent. The ratio between creatinin of normal spinal fluid

and blood reveals the existence of a still greater variability than for sugar. The ratio between creatinin of pathological spinal fluid and blood is not sufficiently constant to justify clinical application. The average ratio of urea of normal spinal fluid and blood is 62.15 per cent., this ratio being slightly increased in diseases of cerebrospinal involvement.

## DIFFERENTIAL DIAGNOSIS

As a rule there is little difficulty in making a diagnosis of serous meningitis both clinically and serologically. The characteristic symptoms of meningism occurring at the outset of an acute infectious disease or complicating an infectious process usually located in the respiratory or intestinal tract, at once suggests the diagnosis to the clinician. At times the clinical picture resembles that of an acute cerebrospinal meningitis, but an examination of the cerebrospinal fluid should make the differential diagnosis reasonably certain. The clear fluid under pressure, and free from an increase in cells and globulin, and the early improvement in the clinical condition following the puncture, are characteristic.

The differentiation of the various lymphocytic types of meningitis is far more difficult, and a careful consideration of the clinical history and symptoms is essential. Tuberculous meningitis is so common before the age of thirty that the possibility of its presence should always be considered. A careful examination of the spinal fluid should aid us, for it frequently contains fibrinous masses, may be slightly turbid, contains many lymphocyte cells and frequently polynuclear cells as well, the Taschiro test is positive, and a diligent search for the tubercle bacillus will often disclose its presence. A positive Wassermann reaction of the blood or spinal fluid should aid us in differentiating the syphilitic infections. The colloidal gold reaction of Lange is not characteristic except the so-called paretic zone reaction in clinical paresis or severe types of cerebrospinal syphilis. The other infections or conditions associated with increased globulin or pleiocytosis can only be differentiated after a thorough study of the clinical symptoms.

The polynuclear types of meningitis are usually easily differentiated by the presence of a turbid fluid, the increase in globulin and number of polynuclear cells, and the finding of the microorganism causing the infection. At times it becomes necessary to make a second puncture and examination of the fluid.

ILLUSTRATIVE CASE REPORTS  
SEROUS MENINGITIS

Case 1.—A man aged 25 years, had an attack of epidemic parotitis with orchitis. Ten days later the temperature suddenly rose to 105° accompanied by severe attacks of headaches with meningeal symptoms. Improvement followed a spinal puncture, the fluid coming away under increase pressure, it was clear, contained no lym-

phocyte cells; there was no increase in globulin and the Wassermann reaction was negative.

*Case 2.*—A boy aged 8 years, took ill on February 8, 1922, with symptoms of influenza and ear symptoms. On February 18 hyperpyrexia developed with temperature running as high as 107°. The ear drums were punctured and a serous like fluid exuded. On February 21 typical lobar pneumonia developed on the right side with hyperpyrexia, restlessness, delirium and signs of meningeal irritation, some rigidity of the neck, no paralysis of the ocular muscles, no Kernig's sign. The spinal fluid was found to be under greatly increased pressure, it was clear, contained no lymphocytes, the globulin was not increased.

#### LYMPHOCYTIC MENINGITIS INFANTILE PARALYSIS

*Case 3.*—A boy aged 12 years was in perfect health on September 24, 1921; went to a party that night. On the following morning he felt tired, went to sleep again, awoke in the afternoon when he noticed that he could not swallow properly, the food seemed to come out of the nostrils. A physician was called who found a paralysis of the pharyngeal muscles. The mentality was clear, temperature of 100°. The spinal fluid was found to be clear, contained 15 lymphocytes per cumm., the pressure was increased, the globulin only slightly so. The patient made an uneventful recovery.

*Case 4.*—A boy aged 4 years took sick with nausea and vomiting. Three days later he developed choreiform movements of the extremities, some rigidity of the neck, convulsive seizures at times, paralysis of the pharyngeal muscles and the intercostals and occasional twitchings of the diaphragm. The patient died the same day. The spinal fluid was clear, pressure slightly increased, the globulin was not distinctly increased, the lymphocyte cells numbered 100, no bacteria were found.

#### LETHARGIC ENCEPHALITIS

*Case 5.*—A boy 18 years took sick on December 30, 1920, with nausea, no vomiting, no chills, no fever, no headaches, but severe pain in the left ear. On January 5, 1921, the patient was not delirious, restless, slight temperature, marked twitching of the epigastric muscles. The left side of the face was immobile, the pupils were semi-dilated but reacted to light, divergent strabismus, no rigidity of the neck and no Kernig's sign. The ears were found to be normal. After prolonged illness the patient recovered. The spinal fluid was found to contain 18 lymphocytes per cumm., the pressure was increased, but the globulin was only slightly increased.

#### ACUTE MENINGO-ENCEPHALITIS

*Case 6.*—A girl aged 14 was taken ill rather suddenly with headache and fever, no nausea, no vomiting, temperature varied from 100°-103°. The headache was very severe, mostly frontal.

There was no history of preceding attack of infection in the naso-pharynx. The patient was conscious and complained bitterly of headache. The pupils were equal and reacted to light; there was no strabismus. No rigidity of the neck, no Kernig's sign, no Babinski. Immediate improvement and recovery followed the spinal puncture. The spinal fluid came away under greatly increased pressure, the lymphocyte cells were increased; the globulin was distinctly increased, no bacteria were found.

*Case 7.*—A boy aged 6 years had headaches for three weeks. On January 13, 1921, he was taken suddenly ill with vomiting and convulsions, some rigidity of the neck and right arm; the pupils were dilated and reacted to light. No Kernig's sign and no Babinski. There was nothing to indicate a recent catarrhal condition of the nasal passages. The patient was in a stuporous condition. A spinal puncture was followed by immediate improvement and recovery was rapid. The spinal fluid was clear, under increased pressure, contained 30 lymphocytes per cumm., the globulin was not distinctly increased and no bacteria were found. In cases six and seven the source of the infection was undetermined.

*Case 8.*—A man aged 52 years was in a stuporous condition and presented a clinical picture which made the differentiation from encephalitis lethargica somewhat difficult. Following the drainage of the ethmoid cells the patient made a complete recovery. The spinal fluid came away under increased pressure, the globulin was increased, the lymphocyte cells numbered 40 per cumm., the Wassermann was negative.

#### INFLUENZAL TYPE

*Case 9.*—Boy aged 7 months, nine days after an attack of intestinal grippe developed convulsive seizures, and was in a stuporous condition. The pupils were equal and reacted to light; the eyeballs were turned upward; apparently there was no paralysis of the ocular muscles. No evidences of spasmophilia; there was slight rigidity of the neck but no Kernig's sign. The spinal fluid taken at this time was clear, not under increased pressure, contained only one lymphocyte per cumm., but the globulin was distinctly increased; the Wassermann test was negative. The patient made a quick recovery and was able to go home in a week's time.

*Case 10.*—A young man aged 25 years was taken ill with a cold on February 10, 1922. Three days later he complained of severe headache but went to work. On February 15 he was forced to remain home and a physician was called. Temperature 102°, pulse 120 and regular. The patient was very restless, delirious; the condition grew worse during the day and gradually he became unconscious of his surroundings. On February 16 there was marked photophobia, rigidity of the neck, Kernig's sign

and Babinski present. The lungs were negative. The left side of the face became paretic. The spinal fluid came away under greatly increased pressure, it was clear, contained 10 lymphocytes per cumm., the globulin was slightly increased, the Wassermann test negative. No bacteria found. A bad prognosis was made, since it was thought that the patient would die within 24 hours time. Sodium salicylate in 50 grain doses given per rectum, three times a day. By February 18 the patient was conscious, the temperature was lower and the symptoms were fast disappearing. By February 21 he had completely recovered.

*Case 11.*—A school girl aged 17 years was taken ill in November, 1921, with acute abdominal pain, at first thought to be due to appendicitis, later attributed to pleurisy. Improved but was never perfectly well. A short time ago was sent to Florida for her health. Three weeks ago she was in bathing at Miami. She grew worse and was brought to this city. Now there are distinct evidences of miliary tuberculosis involving both lungs; severe headaches, strabismus, rigidity of the neck, Kernig's sign, exaggerated knee jerks with Oppenheim and Babinski signs present. The patient is still conscious, cries a great deal and has a temperature of 99°-101°. Clinically the diagnosis is miliary tuberculosis of the lungs, tuberculous meningitis second stage. The spinal fluid is slightly turbid, contains many flakes, many lymphocytes and polynuclear cells, the former predominating, the pressure was increased, acid in reaction at first, alkaline on standing, the Taschiro test for tuberculosis was positive, tubercle bacilli were found in the sediment.

#### POLYNUCLEAR TYPE

*Case 12.*—A boy aged 4 years had a typical attack of influenza and broncho-pneumonia. He was recovering when suddenly chills and fever developed, then rigidity of the neck, Kernig's sign, Babinski sign were present, loss of control of bladder and rectum. The vomiting was persistent. The patient died within 24 hours. The spinal fluid was turbid, contained many polynuclear cells, and pneumococci were found.

*Case 13.*—A boy aged 16 had the influenza two weeks previously and was apparently in good health when he went to bed and had been playing the piano. About midnight he awoke and noticed numbness in both lower extremities. He soon was unable to move his legs. Within the next 24 hours acute cerebrospinal meningitis of the Landry type set in. The bladder and the rectum became paralyzed, next the intercostals, and finally the upper extremities and the pharyngeal muscles. He died the same day at 11 P. M. about twenty-three hours after the onset. The spinal fluid was turbid, contained many polynuclear cells. The organism was not determined.

*Case 14.*—A boy aged 13 years had tonsillitis one month previously. He went to school and developed an attack of influenza. He was in bed two weeks suffering from pain in the head, a

low grade fever and mitral disease. Then rather suddenly the temperature increased, delirium, opisthotonos, Kernig's sign and Babinski sign developed and the patient died four days later. The spinal fluid was turbid and contained many pus cells and a diplococcus was isolated.

*Case 15.*—A man aged 31 years, had an acute sore throat and three weeks later developed an irregular, septic temperature and sinus infection. Then symptoms typical of cerebrospinal meningitis set in and death occurred on the following day. The spinal fluid was turbid, contained many polynuclear cells and streptococcus pyogenes.

#### BRAIN TUMOR

*Case 16.*—A child of 16 months following a fall developed chills, fever, and acute gastrointestinal disturbances. The physicians feared infantile paralysis and advised removing the child to its home in the city. Six days later the child had no fever, no gastric symptoms but was able to move the right leg and arm only with difficulty. The left side of the body was not involved. The spinal puncture made at this time contained free blood and was yellowish in color; the diagnosis of tumor or recent hemorrhage followed by absorption was suggested. I next saw the child after an interval of eight months, during which the improvement set in. Now a second spinal puncture was made, under anesthesia with perfect technique, the needle being introduced quickly and causing no hemorrhage. The spinal fluid was under pressure, it was clear, contained microscopic blood, the lymphocytes were not increased, the globulin slightly so, the Wassermann test was negative. The diagnosis of cerebral tumor was again made. An autopsy secured a few days later disclosed the presence of a cerebral cyst which had ruptured.

*Case 17.*—Boy aged 3 years, had peculiar convulsive seizures beginning about a year ago. At the time the diagnosis of epilepsy was made. On January 20, 1922, another attack set in, was associated with fever, convulsions and slowly developing paralysis of the right side of body with facial twitchings. The spinal fluid was clear, under increased pressure, no lymphocyte cells were found, the globulin was negative, the Wassermann test was negative. The condition is growing steadily worse.

*Case 18.*—A boy aged 3 years had been ill for four months. Had vomiting spells which grew worse later, associated with pains in the head and vertigo. Would fall to one side. Had a beginning choked disc. The clinical diagnosis was cerebellar tumor. The spinal fluid came away under very great increase in pressure, contained 4 lymphocytes per cumm., the globulin was moderately increased, it was clear and the Wassermann reaction was negative. The autopsy showed the presence of a bilateral glioma of the cerebellum.

Acknowledgement is due for the courtesy of the many physicians who made this study possible.

19 WEST SEVENTH STREET.

# Diagnosis and Interpretation of Symptoms in Cerebral Injuries\*

By J. EDWARD PIRRUNG, M.D., F.A.C.S., Cincinnati

*Editor's Note.*—Dr. Pirrung is quite convinced that it is impossible in a given case to foretell what the results of a cranial injury may be. Hence he stresses the routine necessity of a thorough examination based not only on the objective and subjective symptoms but also on the evidence that can be elicited by means of a neurological, X-ray, ophthalmoscopic and spinal puncture examination. Especial attention should be given the so-called sinus syndrome and it should be remembered that not infrequently police court and jail cases exhibit delayed brain injuries associated with alcoholism. Handling cerebral injuries requires team work between the surgeon, neurologist and specialists.

**A** THOROUGH UNDERSTANDING of the physiology of the brain, together with a knowledge of its influence upon the other organs of the body, is essential before one can essay an interpretation of altered function as a factor in a diagnosis. We are greatly indebted to the surgeon-physiologist, the clinical-pathologist and the neurologist for our present knowledge of brain pathology and physiology. We are favored with much knowledge on the localization of function within the brain. We know much of the pathways through which impulses travel to and from the brain. Our knowledge is farther advanced on those of motion than of sensation. While much is known about the origin, the function and the course of the special sense fibres, our knowledge is as yet incomplete. A purview of the origin, distribution and proper functioning of the cranial nerves is of the very greatest importance in aiding diagnosis.

## GENERAL CONSIDERATIONS

Symptoms of brain and head injury will vary, depending upon the location and extent of the injury and upon the time since injury has occurred. *It is impossible in a given case to foretell what the result of a cranial injury may be. Remember it is possible to have severe damage done to the brain, its vessels or coverings without apparent injury to the skull. On the other hand you may also have severe bone injury without brain complications, or the bone injuries may be so slight as to escape notice for a long time.*

As a rule, if an injury is severe enough, there will be impairment of consciousness. If the unconsciousness is transient and due exclusively to head injury, it is spoken of as concussion. Concussion is a clinical term only. Whenever compressions, hemorrhages or contusions of the brain occur, there may be coma, stupor or delirium, and vomiting frequently follows. In the interval when consciousness is returning, the patient complains of pain and headache if he assumes an upright position, or if he moves about in bed, he may complain of vertigo. Nervousness, restlessness and insomnia are quite common. When the injury has been severe, there is

a general flaccidity of the muscles with a loss of the reflexes. There may also be a loss of the sphincter control.

If the cerebellum is included in the contusions there may be *rebound phenomena*, *adiadokinkensia*, *hypo-tonia*, *vertigo*, *tremor*, *spontaneous nystagmus* or *past-pointing*. Injury of the motor centers or tracts produces paralysis, irritations causing convulsive seizures, local or general. There may also be alteration in the gait and attitude, *asynergia*. The function of the cerebellum might be properly considered to synergize all movements of the body; therefore, in disease or injury or instability of cerebellar functions, there is a tendency to overshoot the mark in movements, or an exaggeration of movement. Nystagmic movements properly do not belong to the cerebellum but to the pons, and are an associated defect. Pontine lesions, if of any degree of severity, are rapidly fatal.

## NOTICEABLE SYMPTOMS

Upon examination of a patient with a head injury, a careful observer will notice changes in the rate of the pulse and respiration, as well as variations in the blood pressure and the temperature curve. The pulse rate, immediately after the injury, is rapid and weak, the temperature is lowered and the respiration is weakened. The skin is covered by a cold clammy sweat. This is the stage of depression and is caused by shock and cerebral anaemia, or a lack of blood to medullary centers. The symptoms following slight concussion, head shock or cerebral anaemia may rapidly pass away. When the injury is more severe, it will be followed by a gradual stage of reaction; the circulation being slowly re-established, and stimulation of the medullary centers occurs. Continued stimulation of the vagal center causes a slowing of the pulse. If the vaso-motor center, which was at first depressed, causing a dilatation of the vessels, is now stimulated, causing a contraction of the peripheral vessels, an increase in the general blood pressure results, which equals the intra-cranial pressure, and there is a re-establishment of the cerebral circulation.

If the injury be a severe one and the depression arising from the shock, cerebral anaemia, compression or contusion persists, the patient

\*Read before the Surgical Section of the Ohio State Medical Association during the Seventy-Sixth Annual Meeting, at Cincinnati, May 2-4, 1922.

will die with symptoms of medullary paralysis. The same fatal termination frequently occurs as the result of medullary oedema. Increased **intra-cranial pressure** may be brought about by one of several of the following factors: Compression, contusion and lacerations of the brain, with the resultant oedema, by inter-cranial hemorrhage, or by an increase in the amount of cerebro-spinal fluid. By far the most frequent cause is cerebral oedema, the result of injury of infection. Inter-cranial pressure can never exceed that of the blood pressure, since the brain is incompressible, either the blood or the cerebro-spinal fluid must be displaced.

#### HEMORRHAGE FOLLOWING HEAD INJURIES

The symptoms of intracranial hemorrhages should be divided, *first*, into those of hemorrhages within the substance or upon the surface of the brain; and *second*, those outside of the dura. The general symptoms are those already described,—impairment or loss of consciousness, headache, vomiting, vertigo, variations in pulse, respiration and temperature; all general symptoms depending upon the force or the extent of the injury, and focal symptoms depending entirely upon which part of the brain is injured or pressed upon.

Spinal puncture is an invaluable aid in diagnosis and should be performed routinely in all suspected cases of hemorrhage. There is a type of intra-cranial hemorrhage, the second above mentioned, extra-dural, in which the hemorrhage being entirely outside of the brain covering, the tap of the spine will be negative for blood. In such a condition, not associated with bloody cerebro spinal fluid, the general symptoms are usually transient and unconsciousness clears rapidly. The general condition of the circulation and respiration re-acts for a time only, to be followed by a relapse into stupor, coma or unconsciousness. Increasing symptoms of inter-cranial pressure, with head ache, pain and vomiting; with focalizing symptoms, either as convulsive seizures or paralysis; with the rapidly increasing compression of the cerebral contents being evidenced by changes on the part of the heart, the circulatory apparatus and organs of special sense; these, with dilated pupil on the side of the lesion, make the diagnosis of extra-dural hemorrhage. Extra-dural hemorrhage almost always arises from branches of the middle meningeal artery or from a ruptured cranial sinus.

The association of lacerations and contusions of the brain with intra-dura hemorrhages are quite common, wherefore, in addition to evidence of hemorrhage, as secured by spinal punctures, and the general symptoms previously mentioned, there may be found one or more of the following symptoms: Motor or sensory paralysis, disorder or disturbance on the part of speech, or there may be psychic disturbances, there may be

hemianopsis, deviation of the head and eye, in short, cortical, sub-cortical, or central brain lesions may give rise to many and varied symptoms depending upon the location and extent of the injury.

Symptoms on the part of the cranial nerves may arise and in order of their frequency, they are the 2-3-4-6th, eye movements, and vision, 7-12th, motor to face and tongue, 7th, taste, anterior part of tongue, the first, olfactory sense of smell, is usually interfered with when injury occurs involving the optic or in fractures involving the anterior and middle fossae. The loss of smell, in my experience, seldom returns after head injuries. Of course taste is changed, as smell and taste are necessary for proper functioning of either of these special senses.

*Local Evidence.*—The evidence on the part of the scalp and skull are not to be entirely ignored. They include, in addition to the wound or haematoma, pain in region of the injury, depression or fissure in the bone, ecchymosis under the conjunctive, as well as evidence of the escape of blood, brain tissues or cerebro-spinal fluid from the wound, from the ear, the nose or the nasopharynx. Emphysema into the tissues about the face and skull frequently occurs whenever fracture extends into or across the facial air sinuses. A discoloration about the mastoid—the blue mastoid, is frequently a symptom of fracture through that region of the temporal bone.

*Direct Method of Diagnosis.*—The value of lumbar puncture as an aid in diagnosis has already been described in considering the symptoms arising from intra-dural hemorrhage. The X-ray, the ophthalmoscope and the readings of the blood pressure and cerebro-spinal fluid pressures will now be considered. A positive X-ray is always valuable. It sometimes reveals a fracture that might otherwise be overlooked. A negative X-ray should only be considered as evidence against bone injury. It is advisable to secure several plates taken from different postures. In any event, presence or absence of fractures as determined by X-ray does not determine whether damage has occurred to the cranial contents, neither does it record the need for or against an operation, unless depressed fragments be shown.

*The Ophthalmoscope.*—The eyes grounds should be examined after all head injuries, if it be at all possible to do so. Surgeons should familiarize themselves with the use of the ophthalmoscope. It is not always an easy matter to examine the fundus of a comatose or delirious patient, nor is it always possible to do so because of swelling, emphysema, or haematoma in or about the orbit. Immediately after the injury, an intra-ocular examination will give very little information of value to the surgeon, later a slight distension of the vessels or blurring of the margin of the disc, especially of the nasal side may be positive evidence of increased, or in-

creasing intra-cranial pressure. This information obtained from intra-ocular examinations should have been anticipated by the general symptoms of increased or increasing intra-cranial pressure and previous action should have been taken by the surgeon in order that he might stay hemorrhage, the increase in cerebro-spinal fluid, or prevent the progress of a serious cerebral oedema.

Repeated blood pressure examinations seem to be of more value in determining the time when operations can safely be attempted than as an aid in diagnosis. Whether or not cerebro-spinal pressure readings are to be of value in the future in diagnosis and management of head injuries, I cannot at present state. Cerebro-spinal fluid pressure readings often aid us when attempting to diagnose disease or new growths in the brain or cord. The normal is 7 to 11 mm's, above 12 to 15 mm. should be considered abnormal; while with very grave cerebral oedema or an increase in the cerebro-spinal fluid, pressure may rise as high as 40-45 mm. If one considers using a general anesthetic in operating upon severe head injuries, it would be well to carefully follow the blood pressure readings, however, local anesthesia offers a great advance. Local anesthesia does not add to the depression of the respiratory or circulatory centers, which are already greatly handicapped from the loss of blood from increased pressure or from cerebral oedema.

Sinus syndrome occurs following injury or hemorrhage about the superior longitudinal sinus it is a Bilateral interfering with the upper rolandic axes, clinically recognizable by the same symptoms as other of brain injuries—but the additional evidence of high rolandic involvement Bilateral.

Cerebral oedema follows injury, and as in other tissues is the reaction to injury and infection. In the brain, being enclosed in the skull, expansion cannot occur readily, there being no lymph channels and no vaso-motor mechanism, hence the grave consequences of brain oedema, medullary oedema and paralysis following in its wake.

Injuries and hemorrhages in new-born from prolonged labor or forceps deliveries; or asphyxia of new-born from prolonged labor are often due to drugs given to mothers to stimulate or hasten delivery, and require special consideration. Many children's palsies may be relieved provided damage to the brain has not been severe enough to destroy the cortical centers.

Police court and jail reports show many dead of brain injuries; alcoholism having been suspected, when the real cause was brain injury. A recent case of death, eighty days after injury (State Liability Case) is a very interesting report from Dr. H. H. Shilling, Cincinnati, Ohio, in which the man was about after a minor head injury, but refused to work. He had a changed

disposition and many other evidences of severe disturbance of the brain. On the eightieth day after injury he was seized with a convulsion and died several hours thereafter. Post-mortem by Dr. Chas. Howard, Cincinnati, Ohio, revealed a fracture of the occipital bone with extra-dural clot and ruptured vessels. A detailed report of this case may be found in *The Transactions of The Cincinnati Academy of Medicine*, January, 1922.—*Cincinnati Medical Journal*, June, 1922.

Alcoholism, diabetic coma, uraemia and apoplexy, must ever be kept in mind, since many a fractured skull has come about from apoplectic or other convulsive seizures, the injury occurring when the patient falls or during the convulsions. An interesting case was once referred by the late Thos. Cogan, an eminent lawyer of Cincinnati. A man, off on a Sunday jaunt in the country, imbibing quite freely of beer, dived into a shallow stream, striking his head. He was knocked out temporarily. His companions, thinking he was drunk, carried him home in the evening. The next morning he was apparently all right, with the exception of a severe earache and pain in the temporal region. Thinking it was the effect of water in the ear, he consulted a doctor who shortly, two days later, trephined his mastoid for *mastoiditis*. At the operation nothing was found to account for his headache. Five days after the injury, he was taken with convulsions, developed some hemiplegic symptoms and died. No post-mortem was made at that time, the death certificate being signed *mastoid abscess*. The history of the injury had not been considered important by the doctor. The shrewd lawyer, having a \$10,000.00 accident policy at stake, exhumed the body some two weeks later. Post-mortem revealed a large hemorrhage over the cortex of the brain.

#### TEAM-WORK

The absence of early symptoms in dural penetration or rupture in injury by gunshot wounds was especially noted during the handling of war wounded; this, provided the original injury had not been grave enough to cause paralysis and vital centers escaped the injury; later infection or oedema, causing symptoms depending upon whether condition remains a local or general one, and whether the irritation or infection progresses to a meningitis, encephalitis or abscess formation. The conditions of septic meningitis, meningo-encephalitis and brain abscess are complications.

The diagnosis is extremely difficult at times, especially in those instances that have not been previously explored. Repeated spinal punctures, even craniotomy and exploration of the brain, or verticular punctures may be justified whenever focalizing symptoms are indefinite. In making a diagnosis or in the management of cerebral injuries, a thorough surgical as well as neurologic training is essential. For the oc-

casional operator after head injuries, focalizing lesions can be best pointed out by a trained neurologist. I, therefore, recommend team-work on the part of the surgeon and neurologist in managing head injuries. Occasionally we may also accept the aid of the ophthalmologist or the neurologist for the conduct of special examinations upon the part of the eye or the ear. That the latter specialists can aid us very materially in the diagnosis of recent cerebral injuries, I am not as yet convinced, but they may occasionally help. Such aid as they offer will some times be valuable in arriving at the diagnosis of other intra-cranial lesions following diseases or new growths. The ophthalmologist's negative findings should not defer action if other leading symptoms are present, or the patient condition justifies surgical action.

Depressed fractures of the vault are usually easy of diagnosis when the scalp is laid open. When in doubt have recourse to the use of the X-ray or make incision in the scalp to allow free exposure and examination of the bone. The complications arising from gunshot wounds or other penetrating wounds deserve special consideration. Diagnosis is evident in most cases. The dangers

of gunshot wounds may be summarized as, *first*, those immediately due to hemorrhage, compression and destruction of the brain substance; *second*, those remotely arising from the presence of infection and bone fragments, later paralysis, traumatic epilepsy or traumatic insanity.

The record of the neurological examination should include both the positive and negative findings, for convenience of description, we can include the symptoms under:—

1. General Symptoms. Local Evidence of Injury.
2. Focalizing Symptoms.
3. Cranial Nerves, including those of the Special Sense.
4. Evidence from Direct and Special Methods of Examination.

The operative procedures and technique of operation belong exclusively in the domain of operative surgery, therefore, I shall not further try your patience by discussing either the indication for operation or the operative procedure. I feel certain that the paper and the discussion which is to follow will enlighten us in that particular.

## The Operability and Technique of Operation of Cerebral Traumatism\*

By T. S. JACKSON, M.D., Cleveland

*Editor's Note.*—Concussion is one of the most difficult forms of cerebral traumatism to evaluate. With signs of steady increasing intra-cranial pressure, even though no localizing signs are present, Dr. Jackson believes that the case becomes operable and that the surgeon is called upon to interfere by the method deemed most applicable. The handling of simple fractures depends a great deal on their character and the symptoms they produce. Patients and conditions met with are so variable that no hard and fast rules of operability can be laid down. Each patient must be handled as an individual case. Occasionally even bad compound fractures show insignificant cerebral symptoms and the surgeon must not permit himself to be deceived. Incisions depend on the nature and extent of the operation and due care must be exercised in handling fragments, controlling hemorrhage and getting rid of brain tissue that has been destroyed.

**I**N THE PRESENTATION of a paper of this kind, I am attempting to cover in outline, a subject about which volumes have been written, and concerning which great numbers of cases have been cited. I must content myself, therefore, with the briefest arguments possible and advance the ideas which I believe to be true in a more or less arbitrary manner. I trust that the discussion will establish the reasonableness of my statements.

### CONCUSSION

Cerebral trauma without fracture of the skull is frequently seen. Contusion of the brain or stunning might be defined as the inhibition of the molecular integrity of the brain. The severity of this condition varies within the widest

limits; from a dizziness of a few minutes to a state of profound coma, terminating in death. The more severe grades of concussion, from which recovery is slow or which terminate fatally, are those wherein oedema of the brain, hemorrhage, or laceration of the brain tissue is present. A case was admitted to the Cleveland City Hospital during the past year, which had no scalp or skull injury of note but the autopsy brought to light the presence of oedema of the brain with extensive lacerations, and hemorrhage of the right lobe. The injury had been received on the occiput and there were comparatively slight wounds. Every diagnostic precaution must be taken with this group of cases. With signs of steadily increasing intra-cranial pressure, even though no localizing signs are present, I believe that the case becomes operative and the surgeon is called upon to interfere by the method deemed most applicable.

\*Read before the Surgical Section of the Ohio State Medical Association, during the Seventy-Sixth Annual Meeting, at Cincinnati, May 2-4, 1922.



## SIMPLE FRACTURES

Simple fractures of the skull rather naturally fall into one of three groups; *first*, those without symptoms of intracranial injury or only such as are associated with slight concussion; *second* those with immediate symptoms; *third*, those in which the evidence of internal damage does not appear until days or weeks later.

Those of the first group need no treatment, but they do need to be kept under constant observation and preferably should be hospitalized for at least a week after injury, then observed for six weeks as ambulatory cases. It is from the ranks of this group that a so-called post-traumatic neurosis occasionally develops, or an epilepsy appears. We know very little of the pathology of these conditions but a close observation of such patients may give some clue to the cause, and ultimately we may learn some way to prevent these sequelae.

The victim of a simple fracture may immediately give evidence of cerebral irritation shown by abnormalities of the reflexes, disturbance of the motor centers, or of intracranial pressure. With this second group of cases, I believe that when the radiograph shows any depression or splintering of bone, craniotomy should be performed at once and the anatomical defect remedied. On the other hand, if the X-ray findings are negative, expectant treatment is justifiable. Hourly observations must be continued until it is proved that the individual is suffering either from concussion, and constant improvement is reasonably certain, or from cerebral oedema, or from steadily increasing hemorrhage.

Third, the simple fracture without symptoms or with only evidence of mild concussion, may in the course of a few days, present evidence of injury to the cranial contents. Headache is most frequently the earliest manifestation of something going wrong. The mentality may change a little. Dullness, restlessness, irritability, and a vague sense of apprehension may appear. Slight changes in the rate and character of the pulse and blood pressure are found. In cases of injury over silent areas, our examination can hardly elicit any proof, but when over motor areas, we may expect to find the abnormalities associated with cortical injuries. In this group of cases, the services of a trained neurologist are of greatest value.

Venous or capillary oozing, rarely of any great extent, accounts for the slow appearance of symptoms and stops when sufficient blood clot has been formed to thrombose the vessels producing it. Here in this clot is the nucleus for a cyst which may remain stationary for years or may gradually develop until a serious disturbance is evident. For this reason, I believe that these patients should be subjected to an exploratory craniotomy; the skull being opened in the region of the fracture. In most instances, I

feel that justifying pathology will be found, and if not, an exploratory operation properly performed will result in no harm to the patient.

*No rule or blood pressure pulse rate chart which has ever been invented, can tell us what to do with the skull fracture case. Attempts are frequently made to formulate a syndrome which definitely indicates or contradicts operation. Some syndrome might work out correctly if we were dealing with constant factors, but we are dealing with variables. No two human beings are alike; no two injuries are alike and certainly similar injuries do not provoke similar reactions. Therefore, each must be treated as an entity and judgment based solely upon the individual case.*

## VALUE OF DECOMPRESSION

With cases in which the only symptoms point to increased intra-cranial pressure and to oedema of the brain, it is often asked, "What good can a simple decompression operation do?" Probably the greatest amount of extra space given the brain by the most extensive safe decompression is not more than one hundred cubic centimeters. One observer points out that more decompressed cases died than died in the unoperated series. Another observer points out just the opposite results. Again we are dealing with variables. No two of these cases were alike and no two can ever be alike. It seems to me that with a constantly increasing pressure and with the organism fighting to overcome the pressure, that the help, small though it may be, of a decompression may be just enough to turn the tide in the right direction. If decompression by means of lumbar puncture influences the patient favorably, I can see no valid reason why it should not be repeatedly performed. If the case be one in which lumbar puncture does not help, due to the fact that the pressure is so great at the base that cerebrospinal fluid does not find its way into the subdural space, I believe that bitemporal decompression should be performed.

Decompression is ordinarily done as a last resort and the patient is beyond the point where human intervention can help before operation is permitted. Again, if decompression is done early and the patient recovers, the feeling seems to persist generally, that he would have recovered anyway. Thus argument upon this subject seems almost hopeless and we are thrown into the same maze as in the variables in mathematics, which admit of an infinite number of values in the same expression.

## COMPOUND FRACTURES

Compound fractures of the skull present all degrees of injury, from small punctures to tremendous wounds involving the entire head. The most extensive of these usually result in instant death or are hopeless from the beginning;

but one is occasionally seen where a large area is injured that goes on to satisfactory recovery.

The character of the external wound is no guide whatever to the extent that the underlying structures are damaged. A small insignificant scalp laceration may be the only external evidence; the patient may present no local or general symptoms of serious nature and still we may be confronted with a cranial injury of considerable magnitude, complicated by intracranial lesions. In a previous paper, I have mentioned a case of this type, to which I wish again to call attention.

*Illustrative Case.*—A British soldier was hit over the right frontal region with a rifle butt. A ragged, contused scalp wound was the only evidence of trauma. He was not rendered unconscious and came down the line as a sitting case. Other than the presence of the wound, his only complaint was headache. Upon exploration of the wound, the intention being to excise the contused edges and do a primary suture, a jagged decompressed fracture, one and one-half inches long and one-half inch wide, was discovered. The dura was uninjured but was tense and non-pulsatile. Upon incision, several drams of blood clot were evacuated.

Thus we may find a compound fracture of considerable extent which presents no immediate symptoms of intracranial injury.

Again, it happens that an injury of large proportions with movable fragments of bone, and extrusion of brain tissue, gradually clears up from the initial concussion and never presents symptoms of intracranial pressure. This group of cases decompress themselves and unless sepsis develops, the patient may go on to at least a temporary or partial recovery.

It is with the foregoing types of cases, presenting few symptoms of a dangerous character, or in which the symptoms are clearing up, that great differences of opinion exist as to whether immediate and extensive operative procedures should be undertaken or whether the case is to be treated expectantly and the motto, "let well enough alone", be applied.

There is a great tendency to keep the patient quiet, apply the usual treatment for shock and defer operative measures until the patient is in a condition to stand operation. When the state of shock is passed, the patient is in better condition and operation is again deferred because he is doing so well without it. The result frequently is that the injured patient dies from localized meningitis, which might have been prevented had drainage been instituted. He dies from oedema of the brain, which might have been relieved by decompression, or he dies from uncontrolled hemorrhage. If he recovers, he is left, certainly with headache often with mental derangements, epilepsies, and other sequelae, which make true the oft repeated statement,

"that the victim of a fractured skull is never the same afterward."

#### OPERATIVE INTERVENTION

I believe that patients with compound fractures of the skull should be operated upon immediately, regardless of their condition. Certainly a large percentage of them may not be helped; the very nature of their injury, the amount of vital tissue destroyed, and the shock sustained, preclude the possibility of preventing death or permanent disability.

However, I do contend that nothing is to be gained by waiting to see what nature intends to do, but on the contrary, to step in, rectify the anatomical defect produced and thereby give the patient a better chance to recover.

A carefully planned and rapidly performed operation will not increase their shock. General anesthesia is not necessary. The application of heat, infusions, and transfusion can be carried out while the operation is progressing and every factor favorable to the patient preserved.

The contention again arises that this or that one did well without operation, or that that one died. Again we are dealing with variables and we can never absolutely know what would have happened if the contrary course had been followed.

It is unfortunate indeed that in surgery we cannot all be permitted to visit the enchanted forest pictured in Barrie's "Dear Brutus" and know what might have been had we taken the other turning.

The literature contains much about the methods of preparing the field of operation. It is asked whether the entire head should be shaved or only a part, and if so, how far from the edges of the contemplated incision? It is best, I believe, to shave the entire head, then we certainly need not worry about a towel slipping. We can enlarge our incision in any direction. If it becomes necessary to attack the opposite side, the field is ready and no time is lost. The dressings stay where they are put and do not slip on the hair.

In regard to methods of skin sterilization it seems to be universally agreed upon, cleanse the skin with soap and water. After that, it makes no difference whether the follow-up is mercury, bichloride, biniodide or cyanide, alcohol, iodine or picric acid.

*Incision.*—The type of incision should not be set down and followed dogmatically. The general rule seems to be to use a horseshoe incision. If we wish to expose a large area by means of an osteoplastic flap, the horseshoe, square, or rectangular flap must necessarily be made. If we wish to explore a linear fracture, the horseshoe incision is an unnecessary elongation.

The straight incision will give as great an ex-

posure as we can desire. A straight incision two inches long can, by proper retraction, be made to give as large a field as a horseshoe incision of twice the length. If the single straight incision is not sufficient, additional exposure may be obtained by converting it into a T or a crucial.

For example, we have the classical omega snapped incision for the Gasserian ganglion operation: it is carried through the skin and through the temporal muscle, dividing its fibres transversely. A nearly perpendicular incision extending upward from the zygoma a centimeter in front of the tragus, and splitting the temporal muscle gives every bit the exposure desired with a minimum amount of damage.

I have seen the scalp wound of a compound fracture carefully trimmed, cleansed and sutured, then the operator surrounded it with a horseshoe incision through which to attack the fracture. The lacerated and dirty wound edges should be excised, the wound cleansed as far as possible, and then the initial wound extended by incision as much as is necessary to expose the damaged bone.

*Fragments.*—Gentleness must be the one thought uppermost when attacking bone fragments; there must be no pulling or twisting. If a fragment is not freely movable, it is held by something, either dura or other fragments.

This something must be attacked first and it is far better to trephine a new opening at the edge of the fracture and then elevate the depressed piece, than to force an instrument into the fracture line. A depressed fragment may not have done great damage until a rough hand has forcibly removed it and thus has torn the dura, or a free border lacerates the brain, or a portion of sinus wall is torn out.

A little time and patience will usually solve the puzzle.

As to the removal of bone fragments, let us consider first, whether we have reason to believe that the bony wound is infected or not. In the simple fractures, bone fragments may be removed, underlying fragments discovered and the dura inspected, the larger fragments then be replaced in such a manner that the future integrity of the skull is practically assured.

On the other hand, in compound fractures which are presumably infected, it does not appear wise to leave the same type of fragments that may be safely left in the noncomplicated fractures.

The results of such observations as I have had opportunity to make are that practically all fragments that can be elevated and held in place may be safely left in simple fractures; that in compound fractures, detached fragments should be removed, leaving only those that have a dural or scalp attachment.

*Hemorrhage.*—The control of hemorrhage is of great importance. Hemorrhage from the vessels of the scalp may be controlled by tourniquet,

encircling suture or by grasping the vessels separately. Small metal clamps have been devised which can be rapidly applied and provide efficient hemostasis.

The tourniquet is hard to apply with the right amount of pressure. It tends to slip and is not applicable when wounds extend low down.

The encircling suture is satisfactory when we know the exact extent of the bony damage. It is easily and rapidly applied. The best needle is the Kelly oblique No. 3. It is carried to the bone, along the skull for one and one-half to two centimeters, then out. By back stitching practically all of the blood vessels are occluded.

Catching the individual vessels with hemostats as rapidly as the scalp is incised, is not difficult. If none are caught until the entire incision is made, time is given for the vessels to retract, and greater difficulty is experienced. The larger vessels are under run with catgut and tied. Torsion takes ample care of the small arteries and veins. Grasping the aponeurosis and pulling it up over the edge of the scalp will effectually check all oozing.

Hemorrhage from the bone usually is controlled with ease. Very large diploic veins are sometimes encountered. The middle meningeal artery sometimes lies in a canal. Occluding the larger bleeding points with a plug of bone or with wax is quickly done. I save the bone dust from my drill or trephine and force it into the oozing diploe with a periosteal elevator.

Hemorrhage from the meningeal vessels is always troublesome. In the first place, great care must be exercised not to increase the damage already done by the fracture. The most satisfactory control can be obtained by under-running with fine silk and tying. The control of the bleeding from a torn sinus taxes the resources of an operator more than anything else. If the bony wound permits the sinus may be encircled and tied. The edges of a rent may be approximated with fine sutures. The sinus and skull may be grasped with large hemostatic forceps and the forceps left in place. Packing is efficient but I believe should be used as a last resort, inasmuch as it introduces a foreign body into a region that is not calculated to withstand it.

Hemorrhage from the cortical vessels seems almost hopeless at times. The tissues are so soft and friable that the finest ligature tears out. Light pressure with cotton wrung out of very hot salt solution often helps. Pressure with cotton soaked in thromboplastein has seemed to help in two cases in which I have tried it. The utmost patience must be exercised. The bleeding obscures the field of operation and if the wound is closed without complete hemostasis, the same condition will prevail for which the operation was done.

When contused and lacerated brain tissue is encountered, the tendency is to clean it up. It is

absolutely impossible to replace it or handle it in any way. Sponging can only increase the damage. Gentle irrigation with warm saline solution will remove loose particles of brain tissue, bone, hair or whatever debris may have been driven in. Irrigation was used almost exclusively in war surgery after Cushing pointed out that less damage and more good was accomplished by it than by any other means.

*Closure.*—Closure, following craniotomy for simple fracture, should always be complete, unless some oozing persists, then a thin, soft rubber drain may be left.

Closure following compound fracture may not be easy inasmuch as considerable tissue may have been destroyed.

If at all possible, areas devoid of bone should be covered with scalp, particularly if the dura is open and there has been laceration or extrusion of brain tissue.

If closure is impossible, the defect should be covered by a layer of gauze soaked in alboline or vaseline and packed lightly.

In the cases, in which closure is possible, drainage by soft thin rubber is sufficient to establish a track in case suppuration occurs.

## Some New Occupation Dermatoses\*

By RUDOLPH RUEDEMANN, Jr., M.D., Cincinnati

*Editor's Note.*—The trade eczemas, as caused by chemical or mechanical irritants, in the experience of Dr. Ruedemann, produce a clinical picture varying with individual susceptibility and the exciting cause. Preventive measures are more important than treatment and the earnest co-operation of the dermatologist and industrial physician is most desirable. The hydrocarbons, benzols and anilines are very deleterious to the health of the worker as shown by general symptoms and cutaneous manifestations. In trade processes where their use is necessary the close supervision of the work is highly essential.

**T**HE DERMATOLOGIST finds a fertile field for research in industrial medicine.

What better opportunities are offered in the dermatological realm for studying individual reaction to external irritants, epidemics of skin infections, relation of general physical condition to cutaneous manifestations, immunity and susceptibility? In no other class of dermatoses may one get the satisfaction which comes with elimination of a definite, exciting cause.

### CLASSIFICATION

An excellent paper by Dr. Pusey on *industrial dermatoses* classifies the factors in their production under two main heads: *first*, the individual or predisposing factors; *second*, the specific exciting causes.

The *predisposing factors* include the various types of skins, the individual variation as dry, oily, blonde, brunette, the skin of youth and old age, sex variation, the skin which perspires freely, circulatory disturbances and previous trauma or irritation. There seems to be a marked racial variation—the skin of the negro, the Mexican and Indian is oily and resistant to external irritation.

The most puzzling of all these predisposing factors is the variable personal susceptibility and the acquired immunity due to repeated irritation. Some workers will, at times, show a breakdown of this so-called immunity, or perhaps an increased susceptibility, or is it a lowered physical condition? An unexplainable dermatosis will arise after having worked for years under the same conditions.

The *exciting causes* are numerous and diversified. The following classes include all: (1) heat; (2) cold; (3) weather; (4) posture, friction, pressure; (5) parasites; (6) infections; (7) mechanical and chemical irritants.

Skin diseases appearing among workers are not always the result of specific occupations. A recent experience with an outbreak of furunculosis due entirely to improper washing facilities and careless personal hygiene, accentuated the fact that the close association of the workers with one another and their daily habits are factors to be considered.

### WOOD DERMATITIS

The progress made in occupation dermatosis in recent years has been encouraging. There are several exciting causes which, because of their general distribution, are of more interest to us.

A large number of woods are known to cause a dermatitis. The poison oak and sumac are common examples of an industrial nature among out-door workers. A California lumber company describes a dark staining of the palms in those who handle red wood. The skin is dry and fissured. A small abrasion becomes easily infected from small splinters.

A shipyard at Philadelphia reports a dermatitis involving the face and hands due to the dust from teak wood.

One of the most extensively used woods at present in making tool and cutlery handles, chessmen, brush backs and numerous other articles is cocobolo wood. A recent communication from a large gun factory described an epidemic, which was found to be due to the use of cocobolo wood for gun stocks.

\*Read before the Section on Dermatology, Proctology and Genito-Urinary Surgery of the Ohio State Medical Association, during the Seventy-Sixth Annual Meeting, at Cincinnati, May 2-4, 1922.

The properties of this wood adapt it to these uses admirably. It has a beautiful color and grain, is durable but easily worked, has a fine texture and withstands changes of temperature.

Cocobolo is not a new wood, but modern methods of logging instituted in Costa Rica and Nicaragua have made it more accessible. Panama was the first and principal source but the natives were not progressive. The other countries provide a larger and better grade of log.

The whole wood is not irritating. The dust is the trouble maker. The log, if rotten, will disseminate an irritating dust. The exciting factor is not definitely known. Some authorities attribute the irritation to a volatile oil, while others blame an alkaloid, which is dust borne to the pores. Some factories report that the irritation varies with wood from different countries. This fact is not generally agreed upon.

The dermatosis may manifest itself as a mild erythema about the exposed surfaces. A more common form is that which resembles poison ivy, a vesicular dermatitis, dermatitis venenata, of the face and hands. It may involve the neck, forearms, trunk, legs and genitalia. Cases may arise in winter, but the incidence is greater in summer. Perspiration causes the dust to cling and perhaps acts as a solvent. Some cases go on to a persistent chronic eczematoid dermatosis.

Individual susceptibility is a factor which influences the objective as well as subjective symptoms. A number of workers under similar working conditions will show a polymorphous clinical picture.

The *treatment* depends upon the severity of the condition and the chronicity. Soothing lotions and washes, mildly astringent are indicated in the early cases. Some workers will show an immediate response while an occasional patient will require change of occupation.

#### ANILINE AND BENZOL DERMATOSIS

The manufacture of rubber products requires the use of a large number of chemicals. Rubber washing, trucking, compounding, mixing, cementing, curing, milling and vulcanizing are all processes which are a source of trouble.

The use of aniline and benzol leads to general symptoms of a serious nature.

A large rubber manufacturing concern reports a chronic eczematoid condition of arms and hands, due to use of zinc oxide powder in the compounding room. About 50 per cent. of the men in the room have thickened, fissured and scaly skin on the hands and arms. This can be partially prevented by frequent washing and the application of a bland ointment. The same company reports a benzene dermatitis and a hexamethylene-tetramine eruption which is to be discussed later on.

Dr. Wile investigated an epidemic of so-called rubber poisoning in Akron. The cutaneous

manifestations were of an acute or chronic eczematoid type. He was of the opinion that benzene, benzol or the hydrocarbons were the exciting factors.

The accelerators of vulcanization have been the source of a great deal of research work. The more important chemicals used are aniline, paraphenylene diamine, theo-carbonilide, p-nitroso-dimethyl aniline and hexamethylene tetramine.

The average dermatologist is familiar with the paraphenylene-diamine eruption so frequently seen about the neck and shoulders of the proud possessor of a new dyed fur piece.

Hexamethylene tetramine is extensively used and because of its association with a dermatosis has been thoroughly investigated. Hexamethylene is a hexahydrobenzene  $C^6H^{12}$ . Hexamethylene tetramine is made by adding  $NH'OH$  to  $CHOH$  (formalin) giving  $(CH^2) N^4$  and water. Urotropin or Formin is the trade name and as such is used as a genito-urinary antiseptic, acting only in an acid medium. Hexamethylene tetramine is decomposed by heat or an acid to produce formaldehyde. This can be further oxidized to formic acid which is definitely irritating to the skin. A point of controversy is whether the dermatitis is caused by the formaldehyde or formic acid. The perspiration offers a good acid medium to decompose the chemical. The formaldehyde and formic acid can each produce an erythematous or an acute vesicular dermatitis. That produced by formic acid is severer in that it tends to be more vesicular, confluent and deeper.

The eruption may be seen in winter as in summer, but as observed in a large number of chemical irritants, the incidence is greater in summer, being accentuated by perspiration.

The individual susceptibility factor is ever present.

Reports agree that the handling of cured stock does not lead to a dermatitis.

The application of alkaline washes as sodium bicarbonate or as aqueous solution of borax in gum arabic acts as a preventative and palliative agent. It is a question of cleanliness, protection and neutralization.

#### A BRIEF DISCUSSION OF THE SO-CALLED "INK POISONING" AMONG PRINTERS

This has been known for years and numerous theories expressed as to the causative factors. European investigators have attributed the eruption to benzenes, impure hydrocarbons, turpentine, printers' ink and oils or greases.

A recent work by McConnell showed a careful investigation in the printing methods, chemical composition and adulterants of different colored inks and the habits of the workers.

There were no irritants in the inks, which on chemical investigation proved to be the exciting causes. The vigorous and careless washing

habits of the men were contributing factors. The use of benzol in cleaning the plates led to a drying out of the skin. The ink delayed the healing of an abraded area. All these are contributing factors which sum up to cause the dermatoses.

Preventive measures get a ready response. The application of a bland ointment or oil protects and oils the skin. The vigorous scrubbing with brushes, pumice and sands are replaced by liquid soap and sawdust.

#### CONCLUSIONS

In conclusion it may be stated that:

(1) The trade eczemas, as caused by chemical or mechanical irritants, produce a clinical picture varying with individual susceptibility and exciting cause.

(2) Preventive measures are of more importance than treatment.

(3) The earnest cooperation of the dermatologist and industrial physician is desirable.

(4) The hydrocarbons, benzol (benzenes) and amido benzenes (aniline) are very deleterious to the health of the worker as shown by general symptoms and cutaneous manifestations. In trades processes where their use is necessary the close supervision of the worker is highly essential.

#### BIBLIOGRAPHY

1. Industrial Dermatoses, Their Sources, Types and Control. William Allen Pusey.
2. Reports to National Safety Council Committee on Industrial Dermatoses.
3. Cocabolo. The Truth About the Cutlery. Samuel J. Record.
4. Aniline Poisoning in the Rubber Industry. Jour. Ind. Hyg., June, 1921, Paul A. Davis.
5. The Growing Menace of Benzene (Benzol) Poisoning in American Industry. Jour. A. M. A., March 4, 1922. Alice Hamilton.
6. Poisons in the Rubber Industry. (Research Lab. of The Firestone Tire & Rubber Co.) Norman A. Shepherd and Stanley Krall.
7. Industrial Dermatoses Among Printers, Reprint No. 656, Pub. Health Records, William J. McConnell.

## Practical Points in the Treatment of Drug Habits\*

By E. E. GAVER, M.D., Columbus

*Editor's Note.*—It is a pity that the handling of the drug addict has been taken from the family physician by legal terrorism under the baneful influence of panic created for commercial purposes by drug addiction institutions. It is quite possible for the average doctor to treat drug habitues not only with success but in so doing to continue them at their daily work. This is being done by Dr. Butler at Shreveport, La., and he holds that unless the addict has the morale to remain at work he is not worth saving. Dr. Gaver prefers the rapid withdrawal method, combined with elimination and mydriasis by means of duboisine sulphate with his patient in the hospital under the care of a nurse especially trained in drug addiction nursing. The solution of the narcotic situation depends on a large number of the profession learning how to treat addicts and then doing it.

**T**HE most common habit forming drugs are opium and its derivatives, and cocaine. Chloral, veronal, chloroform, ether, and others produce habit, but their addicts are much more limited in number and require no special consideration or treatment. The morphine habit demands our most serious attention.

#### METHODS OF TREATMENT

There are practically three methods of treatment in the withdrawal of morphine from an habitue: viz., immediate withdrawal; rapid withdrawal; gradual withdrawal.

It is concerning the merits of these three methods that chief discussion arises and all three have their earnest advocates.

*Immediate withdrawal* is just what the term indicates. The drug is taken away at once, the patient confined and even restrained.

*Rapid withdrawal* is that method in which three to seven days are used in relieving the patient of the drug.

*Gradual withdrawal* means that from two weeks to two months time is taken to effect relief.

The rapid withdrawal method appears to me as having the most commendable features. This plan with many modifications here and there is the most popular practice in America.

#### PRECAUTIONS

There are certain facts that should be known and appreciated by any physician attempting to treat a morphine habitue.

Most of all patients, whether taking it by mouth or needle, use more drug than is necessary. The excess amount usually is about one-third. The chief reason for this is explained in this way: It represents an effort on the part of the patient to obtain that relief and comfort and feeling of well-being that was afforded them early in the formation of the habit.

Careful consideration must always be given as to the truthfulness of the statements made by an addict, especially with reference to the amount taken and duration of and the cause for the formation of the habit.

Before undertaking the treatment, definite arrangements should be made for the complete control of the case covering a period of at least four weeks. Said control to mean that the patient should be placed in a hospital under the constant care of a specially trained nurse, excluding all

\*Read before the Section on Nervous and Mental Diseases of the Ohio State Medical Association, during the Seventy-Sixth Annual Meeting, at Cincinnati, May 2-4, 1922.

visitors except only those who are vitally interested in the restoration of the patient. Above all things do not attempt treatment when access to the drug is possible through several channels. Treatment is not to be considered in the home as the sympathy of the friends militate against success.

In many instances the patient secludes (anticipating an emergency) a certain reserve amount of drug. The more experience I gain in the management of these cases, the greater is my surprise over the cleverness of these individuals in making this so-called *plant*. It is important therefore that your treatment be so arranged that the use of this reserve amount cannot do the patient any particular harm. The preliminary period of three or four days preparation is largely advisable on this account as well as for the other reasons. After having made a careful search of the patient, you cannot be positive that he has not this same reserve amount somewhere accessible. Body cavities, clothing, toilet articles, pens, pencils and other belongings are often used for the seclusion of the drug. Chewing gum that has been previously chewed and prepared has been found to encase a nice supply of tablets. Many other ingenious *plants* are made.

During the period allotted to the preparation of the patient, it is a good practice to let the patient run short of the drug on two or three occasions, at the same time giving the patient an opportunity to use from this reserve supply. In most instances you will find if this is done, the way is usually clear after that. The practice of giving the patients a bath and after so doing not to return them to the same room, is a good one, especially if you are not quite confident that your patient has no drug secreted.

Some physical conditions make it inadvisable to treat patients for the withdrawal of morphine. These are well advanced pulmonary tuberculosis, incurable cancer, Bright's Disease, diabetes, paraplegia and other conditions rendering the patient a chronic invalid. I have always refused to treat patients with these diseases.

We are sometimes asked the question, "Can an aged person be treated safely?" We have successfully treated patients as old as 85 years. However, we usually consider it inadvisable and even silly to undertake treatment at such an extreme age. Not that it becomes dangerous, but largely because there is so little to gain. The main object in life of an individual 80 years old or more, is to keep comfortable. They cannot be very useful individuals beyond this age and I am certain they will see more comfortable days with the habit than they would with it broken.

The question may arise as to what the limit of age is when treatment is advisable. I would say approximately 65 years. Of course in these statements I am not including an individual who is 65 in vitality and 85 in years, or 85 in vitality and 65 in years. In considering the age we are

bound to give some thought to the general physical condition. This is an important feature at all times, but becomes of graver consideration in the old.

An individual in the involution period of life, with the natural recuperative powers reduced, with an organic defect, should prompt some hesitation before giving treatment. Of course this is a subject when an opinion cannot be absolute, and the procedure must be governed by the judgment of the physician in the given case.

#### PRELIMINARY TREATMENT

After having taken the above preliminary observations and finding that your case is a fit subject for treatment, the first step to be taken is to place your patient in a hospital under the care of a vigilant nurse. At this time you set about to reduce the volume of drug to that which will keep the patient merely comfortable. If the patient has been using the drug by mouth, it is advisable to stop so administering it and use the hypodermic needle. This is done to obviate as much as possible gastric disturbances which may develop in the course of treatment. Most cases get along with three administrations daily and a number of them will do well on two.

During this preliminary treatment, special attention is given to elimination. This process is worked through the bowels, kidneys and skin. To secure active catharsis, compound cathartic pills are given, usually three as a dose. This dose may be repeated daily for three days. Or sometimes we use calomel and salts with good results. Plenty of water should be given during this time. For opening the pores of the skin, the electric cabinet is not to be excelled. During this preliminary period, it is not necessary to place the patient in bed unless of course it is used as a measure to facilitate the control of the patient. However, after the three or four days preparation period has ended, it is then advisable to place the patient in bed, giving him enough morphine to make him comfortable.

#### METHOD OF WITHDRAWALS

It is at this time that the real withdrawal of the drug begins. About one-half hour after the administration of the last morphine, the administration of *duboisine sulphate* is started, using one-sixtieth grain per hypodermic, and from this time on given at such intervals as seems necessary in the judgment of the physician or perhaps the nurse, provided she has had experience enough to realize the proper indications. The action of *duboisine* is in nearly all respects similar to that of its congener, *belladonna*, except that *duboisine* is less irritant to mucous membranes, more prompt in its mydriatic action. It is less of a cerebral excitant and more of a calmative and hypnotic.

It is in the administration of the *duboisine sulphate* that considerable latitude obtains, depen-

ing upon the reaction of the patient. Some cases will require one-sixtieth grain as often as every two hours while other cases will go through the treatment nicely by having it not oftener than every four hours. The effect of the duboisine is to produce either a mild sleeping condition or a very mild delirium. In most instances delirium develops. The pulse slows down to 55 or 60, but is full in volume. The pupils are dilated. When the delirium begins to disappear and the pulse becomes more rapid, and a couple of hours have elapsed since the last administration, it is advisable to repeat the duboisine sulphate. This condition is maintained not less than 48 hours at which time duboisine sulphate is discontinued. If, however, after a few hours there is much complaint on the part of the patient, he is again placed under the duboisine sulphate for a short period. During this 48 hour period should your patient become extremely restless and difficult to control, or should your patient fall into a collapsed condition, which is a very rare occurrence, it is advisable to give from one-eighth to one-fourth grain of morphine promptly. If your patient is in fairly good state of nutrition, give the subject of sleep and diet but little concern, although it is advisable to offer them milk and eggs which they usually take without difficulty. In case your patient should manifest hunger, limit them to liquid diet. Also exercise caution in diet after the duboisine treatment has been discontinued.

#### AFTER TREATMENT

After the delirium has subsided, the period of after treatment begins, and this consists of tonic treatment largely, although sedative treatment is necessary for the nervous system. As a tonic, I invariably give my patients from the following prescription.

Hydrastis, f. e.—oz. ss

Cannibis indica, f. e.—gtts. xv

Prickly ash—oz. 1

Avena sativa—p. s. oz. iv

M. Sig.—One teaspoonful every two hours.

Should the patient not sleep well, it may be advisable for three or four nights to give a hypnotic. We usually employ the elixir veronal compound, dial ciba, or chloratone. Or sometimes we give 15 grains of trional with good results. As a rule the nerve sedative treatment can be discontinued in the third week.

#### OTHER TREATMENTS

We desire to have it understood that the above outlined treatment is not applicable to all cases, but that it only answers the requirement in the greatest number of cases. Some cases can get along very well without being tided over the withdrawal period, and when they are being relieved of the drug they are usually more nervous than a patient who has been treated with the mydriatic.

There are other mydriatic treatments for the morphine habit, the most notable of which is the Towns-Lambert, and most generally known as the Lambert treatment. The mydriatic constituents of

this treatment are hyoseyamus and belladonna. These are in a special mixture consisting of a 2 part of 15 per cent tincture of belladonna and 1 part each of fluid extract of hyoseyamus and prickly ash. This mixture is pushed to the point of tolerance in hourly doses. The range of the dose being from 2 to 20 drops.

The Lambert treatment also calls for extremely active catharsis by means of the compound cathartic pills; and while I believe in pushing the elimination, I have failed to see any special advantage in giving 5 compound cathartic pills together with 5 grains of blue mass. In my judgment, 3 compound cathartic pills are sufficient, if properly repeated. It will only take a glance, however, to see that the main points of this treatment are through elimination and mydriasis. You will also observe that the objects of the treatment as I have outlined more in detail above, are the same. The duboisine producing the mydriasis, and the compound cathartic pills coupled with sweating, securing the elimination.

In my judgment the duboisine is just as effective and milder, and possess the advantage of carrying less danger with it in its administration.

Hyoscine is another drug that is often employed to tide over that period of withdrawal pains and discomfort. The objection to this drug is that it produces a delirium so active as to make it difficult to keep the patient in bed and also to prevent exhaustion.

#### CONCLUSION

Personally I do not approve the general employment of either the immediate withdrawal treatment or the gradual withdrawal. To withdraw the morphine from a patient with a well established habit suddenly by restraining them and confining them, which is nearly always necessary under the circumstances, is equivalent to doing a major operation upon that patient without an anesthetic. On the other hand, I believe the gradual withdrawal method is at fault, because it is an example of the other extreme and the patient is teased along most of the time suffering greatly for many weeks.

I do not express this opinion of the gradual withdrawal treatment unguardedly, for I have tested it out with the rapid withdrawal treatment on different occasions and have found in nearly every instance that the patient treated by the rapid method had considerable advantage over that one of the gradual withdrawal. In the rapid method, there is not only conservation of time and expense but also of strength and nerves.

In the minds of many it is the belief that treatment of drug addiction consists in administering some antidote which produces not only a condition of comfort without the drug but also a distaste for it and its action. This is an erroneous idea. Treatment of drug habit should mean only that method by which a patient is relieved from the use of any drug and placed in such physical and mental condition as to remain comfortable without its use.



# Methods of Determining Astigmatism of the Crystalline Lens\*

By R. C. HEFLEBOWER, M.D., F.A.C.S., Cincinnati

*Editor's Note.*—It is quite important for the ophthalmologist in some cases to be able to very accurately determine lenticular astigmatism. The mechanism of this delicate procedure has intrigued the interests of many renowned clinicians. Recently Dr. Souter has perfected an apparatus for determining lenticular astigmatism and Dr. Heflebower, after using it, has found it to be a very useful form of ophthalmometer, although its use requires patience and exactness. Dr. Heflebower in his consideration of this highly technical subject describes in detail the method and formulas by means of which lenticular astigmatism may be determined.

**A**MONG the names of those, who, over a long period of time, have endeavored to devise means for determining the length of the radii of the various refracting surfaces of the eye may be mentioned Donders, Middelberg, Mauthner, Helmholtz, Cramer, Landolt, Knapp, Javal, Schiötz, Tscherning, George Bull, Gullstrand, Snellen and Souter. Doubtless there are many others, but these quite suffice to indicate the importance of a subject that is but too little understood or appreciated.

## KERATOMETRY

That portion of ophthalmometry known as keratometry has long been practiced in both laboratory and clinic, and its advantages utilized in daily routine. At first, it was only in laboratory experimentation that it held place; but now, with the present refinements of mechanical perfection and excellence of illumination, its usefulness can hardly be overestimated. All ophthalmologists employ some form or other of keratometer with a success depending upon their acquaintance with instrumentation and their ability to make the needed deductions. It is therefore conceded that measurement of the external refracting surface of the eye is an important element in routine work.

What, then, is the bearing of the ratios of the various radii of the internal refracting surfaces to the refraction of the eye? Tscherning (*Physiologic Optics*, p. 71) says, "It might be asked, therefore, whether the measurements of the internal surfaces could not find clinical application. Indeed there often exists between the astigmatism indicated by the ophthalmometer and subjective astigmatism, differences the cause of which it is very natural to look for in the internal surfaces, and which we might hope to disclose by these methods. I have made some measurements of this character, but I do not think they have a great future. They are always very complicated; it would be necessary, in fact, to measure the radius of each surface at least in two meridians, and as each radius calls for two measurements (of the surface and the center) this would involve already 12 measurements; it would then be necessary for us to cal-

culate the real values in order to deduct the astigmatism of each surface and lastly to combine these astigmatisms with that of the anterior surface of the cornea."

This is indeed a formidable array of measurements and computations. It would require time, patience and mathematics in order to determine the amount of lenticular astigmatism existing in a single eye. Tscherning, at the time he wrote the above, was entirely in the right; but now we have a means at hand whereby one may measure lenticular astigmatism quite as readily and accurately as corneal astigmatism is measured.

In all methods of determining the lengths of the lens radii the images of Purkinje are employed in some manner or other. These are, as you know, reflections of an image from the refracting surfaces of the various media. In the determination of lenticular astigmatism we deal with but two of these surfaces, namely, the anterior and the posterior surface of the lens, and their corresponding Purkinje images; if one omits, for the moment, the influence of the cornea.

## PHAKOMETRY

As the anterior surface of the cornea is utilized in keratometry, so the lens surfaces are employed in phakometry. The image from the anterior lens surface is erect and real; that from the posterior surface, which is concave, is virtual and inverted. These facts must be borne in mind in computations.

Helmholtz, by means of an apparatus which he devised, was able to determine lenticular curvature with exactness; but his method was cumbersome and tedious in the extreme, with inadequate illumination, and required many measurements and much computation to determine the length of the various radii. It was essentially a laboratory method and had no part in the routine of daily clinical work. Tscherning employed, for the same purpose, what he designates an ophthalmophakometer, the principles of which are undoubtedly known to you. His method is unquestionably a distinct improvement over the Helmholtz procedure; but, besides being extremely laborious and entailing countless and cumbersome mathematical computations, it also belongs exclusively to the laboratory. For these reasons, if for no other, investigations of the

\*Read before the Eye, Ear, Nose and Throat Section of the Ohio State Medical Association, during the Seventy-Sixth Annual Meeting, at Cincinnati, May 2-4, 1922.

curvature of the crystalline lens have been more or less slighted if not entirely overlooked. In fact, until recently, with a few notable exceptions but little discussion of the subject has found entrance to ophthalmic literature.

#### LENTICULAR ASTIGMATISM

At this point it might be asked, "What is the object of measuring the various radii of curvature of the crystalline lens?" and the answer would read somewhat as follows: "The ultimate aim of such measurements is the determination of astigmatism due to differences in length of radii of curvature of the anterior or posterior lens surfaces." For instance, if the posterior surface (the one in which astigmatism is most frequently found) has one meridian with a radius of 6 mm.; and another meridian at right angles to the first, with a radius of 6.6 mm., there exists between the two radii a difference in length of 0.6 mm., equal, in this instance, to about 1 D. of astigmatism. This may or may not be compensated by the difference in length of the corneal radii of curvature. At least, it is present in the lens and must be taken into account if the examination is to be considered thorough.

As far back as 1864, Donders (*Accommodation and Refraction of the Eye*, p. 492), stated, "that with a high degree of asymmetry of the cornea asymmetry of the crystalline lens exists, acting in such a direction, that the astigmatism for the whole eye is nearly always less than that proceeding from the cornea."

Landolt (*The Refraction and Accommodation of the Eye*, 1886, p. 301) says, "The crystalline very often partakes of the astigmatism, sometimes in a passive, at other times in an active way. The former case is met with when the globe of the eye, or at least the anterior portion of it, is, as it were, flattened in one meridian. Then the crystalline, compressed, so to say, in a corresponding meridian, approaches the likewise compressed form of the cornea and the static crystalline astigmatism adds itself directly to that of the cornea. Sometimes the principal meridians of the astigmatic crystalline do not have the same direction as those of the cornea; at other times they are parallel but in such a way that the maximum curvature of the crystalline corresponds to the minimum curvature of the cornea, and the least convex meridian of the lens has the same direction as the most convex one of the cornea. Thus it is that crystalline astigmatism may partially or wholly compensate that of the cornea, indeed even exceed it."

Landolt further states, at the same place and in the same connection, that "This astigmatism of the crystalline, the inverse of that of the cornea, is oftenest what might be termed active, or *dynamic*, astigmatism. It is due to an unequal contraction of the ciliary muscle, which causes the lens to become more convex in one

direction than in another and for the very purpose of correcting a corneal astigmatism."

Landolt's assumption, based upon Dobrowolsky's "Ueber verschiedene Veränderungen des Astigmatismus unter dem Einflusse der Accommodation" (*Arch. f. Ophth.*, XIX, iii, p. 51, 1868), is interesting to the ophthalmologist, and would be more so if it were borne out by the facts afforded by more modern procedure. In all the cases of 45 years or less in which I have examined the existing lenticular astigmatism, the ciliary muscle has been rendered inactive by a cycloplegic; so that the astigmatic condition of the lens could not possibly be "due to an unequal contraction of the ciliary muscle", as Landolt compensatorially has it. I am not claiming, by any manner of means, that such a contraction of this muscle cannot take place, but am simply stating that lenticular astigmatism as observed by the ophthalmometer is not caused by it. Indeed, it is undoubtedly true that the accommodative strain in corneal astigmatism is largely due to exactly such action on the part of the ciliary muscle as Landolt indicates.

In devising an instrument that will readily give readings in either diopters or millimeters, or both, certain constants must be borne in mind, to be used as a basis for the necessary computations. These are, primarily, the refractive indices of the various media; the assumed corneal curvature; the distance from the anterior surface of the cornea to the anterior surface of the lens; and the assumed curvatures of the lens itself, as well as its thickness. For the first computations the averages of all these are taken; and subsequently the variations of the same.

In practice it is necessary to determine the radius of curvature of the cornea in the desired meridian; the exact distance between the anterior corneal and the anterior lens surface; the radius of curvature of the anterior lens surface in the desired meridian; the thickness of the lens; and the radius of curvature of the posterior lens surface in the meridian under observation. This may be done with the ophthalmophakometer of Tscherning, a process already described as laborious and tedious.

#### FORMULAS

It is much easier, however, to attain the same results, in a more satisfactory manner, by purely mathematical computations. This answers the purpose quite well upon theoretical grounds, but should be checked either upon eyes of known constants or by glass spherical surfaces of known and accurately calibrated radii.

In this part of the work it is necessary to resort to the aid afforded by certain well known formulae. These, so far as the refracting surfaces are concerned, are as follows:

##### I. Anterior Surface of the Cornea:

$$f = \frac{r}{n' - 1} = \frac{7.8}{1.337} = 23.14 \text{ mm.} = 45 \text{ D. approx.};$$

II. Anterior Surface of Lens:

$$f' = \frac{n'r'}{n'' - n'} = \frac{1.337 \times 10}{1.437 - 1.337} = 133.7 \text{ mm.} = 7 \text{ D. approx.}$$

III. Posterior Surface of Lens:

$$f'' = \frac{n'' \times r''}{n' - n''} = \frac{1.437 \times 6}{1.337 - 1.437} = 86.22 \text{ mm.} = 11.5 \text{ D. approx.}$$

After ascertaining the length of a given radius the focal distance for the curved surface corresponding to it is determined, and the conversion into diopters is readily made by taking its reciprocal. Table I. herewith appended gives the relations between radii, focal lengths and their

and the assumed distance between the anterior corneal and the anterior lens surface. The corneal radius may be assumed to be desired length, also. By reason of the apparent forward displacement of the anterior lens surface and the apparent displacement of its center of curvature, the length of this radius seems greater than it actually is, the surface appears nearer the cornea, and the image magnified. In order to reduce all these to their actual dimensions it is necessary to resort to computations, and there are several methods for this purpose. That of Souter is simple and satisfactory.

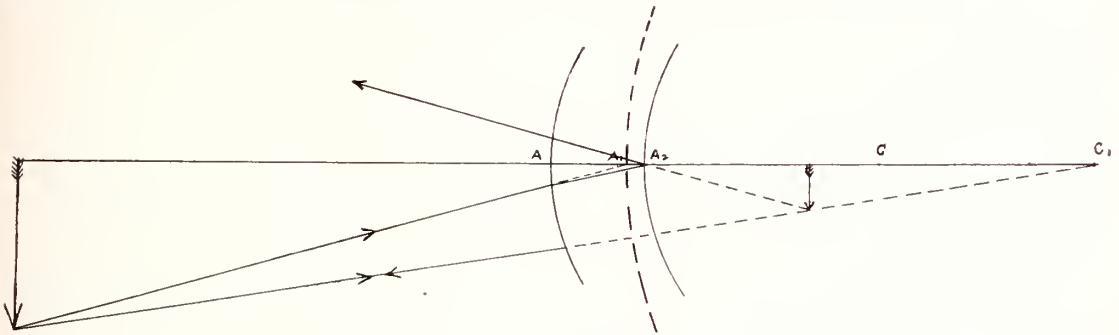


FIGURE I.

corresponding diopters of the posterior lens surface for variations from 8 D. to 14 D.

By means of the above formulas the length of the radii of curvature of the cornea, the anterior and the posterior lens surfaces; the focal length of these surfaces; and their corresponding dioptral may be readily determined. The conversion of focal length is, as above stated, made by using reciprocals.

For the determination of the position of the lens surfaces within the globe it is necessary to allow for refraction of both incident and reflected ray. In the case of the posterior surface two refractions occur, as the rays pass through the lens, itself, and the aqueous and the cornea. Inasmuch as the result of these refractions is to place the apparent positions of the posterior surface and its center in positions closely corresponding to their true positions, computations for this purpose may be dispensed with. In other words, the apparent position may be taken as the real.

The apparent center of curvature for the anterior lens surface does not, however, coincide with its real center; and consequently the apparent position differs from the real, as to the surface, also. It becomes, therefore, necessary to establish the actual position of both of these in calibrating an instrument for ascertaining the dioptral powers of the front lens surface.

These points may be readily established by certain formulas, assuming any desired set of constants. One constant, however, is always the same, namely, the refractive index of the cornea and aqueous. The others may be varied in conformity with the assumed apparent or real radius

In Figure 1, let:

$$\text{Radius of cornea} = \frac{1}{F} = 0.043 \text{ (43 D.)};$$

$$\text{*Distance from cornea to lens} = 3.5 \text{ mm.} = AA_2;$$

$$\text{Actual radius of lens} = A_2C;$$

$$\text{Apparent radius of lens} = A_1C_1.$$

$$A_1C_1 = A_1A_2 + A_2C_1$$

$$AA_1 = 3.$$

$$n = 1.337.$$

$$(1) \quad -\frac{1}{AC_1} + \frac{AC}{n} = \frac{1}{F}$$

$$(2) \quad -\frac{1}{AA_1} + \frac{AA_2}{AA_2} = \frac{1}{F}$$

$$AA_2 = 3.5$$

$$\frac{1}{F} = 0.043$$

$$\text{Equation (2)} \quad \frac{1}{AA_1} + \frac{1.337}{3.5} = 0.043$$

Therefore,  $AA_1 = 3.$  (approximately).

For the above corneal radius and depth of anterior chamber the anterior surface of the lens is displaced 0.5 mm. forward.

Take the apparent radius as 16 mm.:

$$A_1C_1 = 16 = AC_1 - 3; \quad AC_1 = 19 \text{ mm.}$$

$$\text{Equation (1)} \quad \frac{1}{19} + \frac{1.337}{AC} = 0.043;$$

From which,  $AC = 14$  (approximately).

$$\text{Radius } AC = 14 - 3.5 = 10.5 \text{ mm.}$$

The calculations for the posterior lens surface are similar but there are two refractions—the cornea and the aqueous, on the one hand, and the lens, on the other—to be considered. Inasmuch, however, as the positions of the real and the apparent center of the posterior lens surface curva-

ture coincide it is unnecessary to make a separate set of computations for this surface.

Undoubtedly, one of the greatest obstacles to be overcome in an instrument of this character is the extreme loss of light in the reflected images. Nearly all the incident light is transmitted directly through the various refracting media. In determining the amount of light reflected Fresnel's law,

$$I = \left| \frac{n-1}{n+1} \right|^2 = \left| \frac{0.5}{2.5} \right|^2 = \frac{1}{25} = 4 \text{ per cent.}$$

is utilized. In the case of a crown glass lens this loss will amount to about 4 per cent. According to Sheard, these figures hold for normal incidence only (*American Encyclopedia of Ophthalmology*, Vol. XIII, p. 9788). But in the doubly refracted and reflected ray the percentage, in the crown glass lens, would be represented by

$$96 \times \left| \frac{0.5}{2.5} \right|^2 \times \left| \frac{0.5}{2.5} \right|^2 = 0.16 \text{ of 1 per cent.}$$

As a matter of fact, with the average constants of the eye, the theoretical amount of light reflected from the anterior lens surface would be but 0.144 of 1 per cent.; and from the posterior surface only 0.0037 of 1 per cent.

These are a few of the problems involved in the construction of an apparatus for direct practical determination of lenticular astigmatism, the others being largely of a mechanical nature.

#### THE SOUTER APPARATUS

The only instrument of this character that has thus far been used, or, at least, within the knowledge of the writer, has been devised and extensively used by Dr. Wm. N. Souter, of Portsmouth, N. H. It has proved of great practical value in his hands. It is my good fortune to possess one of these, through the courtesy of Dr. Souter, and I find it all that he claims. There are certain features in it that might be improved, notably the lighting; but, aside from this point, it is excellent.

The use of such an ophthalmometer is not readily acquired. So far as the corneal workings are concerned, it is quite as easily used as any of the others. In lens work it, like all other instruments of much precision, requires patience and exactness in usage. The personal equation enters here just as it does with the use of a telescope or a micrometer. When properly employed, however, its results may be read to the tenth of a diopter of refraction or the hundredth of a millimeter of the radius length.

It is to be hoped that the attention of ophthalmologists may be directed to this much neglected portion of refraction work, for it will explain many vexatious points and certainly increase the exactness of results.

TABLE I

Dioptral Power, Focal Length and Radius of The Posterior Surface of the Crystalline Lens

$f'' = \frac{n''}{n' - n''} = \frac{1.437 \times 6}{1.337 - 1.437}$	$r''$	$r''$
D	f''	r''
8.00	= 125.0 mm.	= 8.70 mm.
8.50	= 117.7 "	= 8.20 "
9.00	= 111.0 "	= 7.70 "
9.50	= 105.0 "	= 7.30 "
10.00	= 100.0 "	= 6.96 "
10.50	= 95.0 "	= 6.60 "
11.00	= 90.9 "	= 6.30 "
11.50	= 87.0 "	= 6.00 "
12.00	= 83.3 "	= 5.80 "
12.50	= 80.0 "	= 5.56 "
13.00	= 76.9 "	= 5.35 "
13.50	= 74.0 "	= 5.15 "
14.00	= 71.4 "	= 4.90 "

TABLE II

Ratio Between Real Radius and Apparent Radius of Anterior Surface of Lens

Radius of Cornea = 7.8 mm.;  
Distance between anterior corneal surface and anterior lens surface = 3.5 mm.

Real Radius	Apparent Radius
7.8 mm.	10.33 mm.
8.0 "	10.60 "
8.5 "	11.60 "
9.0 "	12.60 "
9.5 "	13.70 "
10.0 "	14.80 "
10.5 "	16.00 "
11.0 "	17.30 "
11.5 "	18.60 "
12.0 "	20.10 "
12.5 "	21.60 "

#### NEW AND NONOFFICIAL REMEDIES

During July the following articles were accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies: The Abbott Laboratories: Neocinchophen-Abbott Tablets 5 grains. Louis Hoos: Hoos Albumin Milk. Mallinckrodt Chemical Works: Benzyl Benzoate—M. C. W.

Anti-Anthrax Serum—P. D. and Co.—An anti-anthrax serum (see New and Nonofficial Remedies, 1922, p. 284), marketed in syringes containing 50 cc. Parks, Davis and Co., Detroit.

Antimeningococccic Serum—P. D. and Co.—An antimeningococcus serum (see New and Nonofficial Remedies, 1922, p. 286) marketed in packages of two syringes, each containing 15 cc.; also in packages of one syringe containing 50 cc. Parke, Davis and Co., Detroit.

Diphtheria Toxin-Antitoxin Mixture—P. D. and Co.—A diphtheria antitoxin-toxin mixture (see New and Nonofficial Remedies, 1922, p. 282). Each cubic centimeter represents a single human dose. It is marketed in packages of three bulbs representing one immunizing treatment; also in vials containing 20 cc. Parke, Davis and Co., Detroit.

## Medical Defense Plan, An Important Association Activity, Has Thoroughly Proved Its Value to the Membership

The Committee on Medical Defense of the State Association has just received from the general counsel in charge of defense in civil malpractice suits filed against members of the Association, the semi-annual report covering the first half of 1922. It is a very gratifying report, showing the complete effectiveness of the medical defense plan.

The most pleasing feature is the fact that the number of suits and threats of suit referred to the Association during the six-month period, is considerably lower than the number referred in any similar period since the beginning of the war, when the general upset caused actions of this nature to take a sharp increase.

It is doubtful if the members of the Association fully realize the valuable service of the defense plan. Occasionally we find a member who considers the plan of only slight or casual importance. For example, there is the member, who, believing that a large portion of his annual membership fee is devoted to medical defense work, considers that he has received no personal benefit since he, individually, has not been the object of a suit.

Such an impression is all wrong. Malpractice actions are universally distasteful. They are attacks not only upon the professional reputation of the defendant physician but upon the entire profession. No one is immune—any physician may be the target of one of these attacks. The matters under supervision this year in Ohio represent physicians in Fairfield, Trumbull, Franklin, Lucas, Muskingum, Cuyahoga, Tuscarawas, Lorain, Montgomery, Stark, Columbiana and Lawrence Counties, in some of which there were several actions.

Whether or not a member is ever sued, or personally defended by the Association, he is receiving a definite service through the defense plan because it is reducing the number of such actions. It is lessening the annoyance, financial loss and injustice that these suits bring to medical men, by proving to those members of the legal profession and others who seek something for nothing, through threats and unwarranted suits, that it is unprofitable business to attack a physician who has the moral support of an organization of 5,000 reputable physicians behind him.

As a matter of fact, while ample appropriations have been made from the Association's funds for medical defense work in order that defense may be entirely adequate in every instance, the actual cost in any year has not exceeded one dollar per member.

Here and there is a member who says that his private indemnity policy precludes the possibility of his needing the Association's assistance. The answer to this is found in the fact that in-

demnity companies which are directing the defense of some members, are constantly consulting with the Committee on Medical Defense and with the Association's general counsel and are receiving every assistance possible to facilitate defense.

The defense plan was instituted in May, 1916. Since that time a total of 133 suits and threats of suit have been referred to the Association. Analytical study has been given to these matters and the reports from other states.

It is interesting to note the numerous causes which may give rise to alleged malpractice actions. The principal cause is recognized in the "shyster lawyer" who instigates suits to make business for himself; and in the desire of some of the people, especially during perilous times such as the war period, to acquire "easy money."

Looking within the doors of the medical profession for probable contributing causes, the Committee on Medical Defense has at times considered the following: (a) ungenerous statements made by other physicians; (b) the attempts of physicians to collect bills which patients though excessive, or in which they did not get the services they expected, or harsh measures employed in collecting a bill; (c) lack of exercise of proper skill, or negligent care on the part of the physician.

Anent (a), Mr. LeRoy Eastman, a member of the Association's legal counsel, speaking before the seventy-fifth annual meeting of the Association, said:

"... A lot of malpractice cases are the fault of you men sitting here because you are not charitable enough to your competitor. Suits have been brought or threatened, where the thing has been deliberately worked up by some doctor who has a grudge against another. Some times, whether induced by a desire to create an impression, or by an endeavor to make a show of superior knowledge, someone permits himself to criticize the other man's work and a suit is the result. This situation has actually arisen a number of times. I do not mean to advocate the shielding of anyone guilty of wrong-doing or unwarranted carelessness, but it is much easier to tear down than to build up, much easier to criticize than to create. Conditions may have materially changed before the patient comes to you, and perhaps your course of procedure would have been no different than that of your predecessor on the case, had you been placed in the same position and under all the identical circumstances. . . . If you will be charitable and bear in mind that the other man's shortcomings are perhaps no greater than your own, that everyone makes mistakes, and be careful how

you criticize to the patient, I feel sure that the work of your Defense Committee can be very materially reduced."

In consideration of (b), it is recognized that fees vary in different communities and that the physician is competent to gauge the value of his services as well as the amount and kind of service required for proper treatment.

The use of harse measures to collect a bill is, however, quite a different matter. Such measures might easily incense a disgruntled patient to "manufacture" grounds for an action, and ludicrous and impossible as such claims may appear to the trained, scientific mind, they frequently make plausible appeal to a lay jury.

(c) Lack of exercise of proper skill, or negligent care on the part of the physician—the grounds on which the majority of alleged malpractice actions are based, have seldom been proved in the trial of these cases. The committee believes that the physician's delinquency in this connection lies rather in his not infrequent failure to keep accurate records of each case, showing the exact conditions found, treatment rendered, instructions given, progress made, etc.

Among the specific causes alleged, the committee finds that fractures maintain a constant lead. They occasioned more than half of the suits filed in this state, and this experience accords with that of medical defense committees in other states. This fact does not impute any particular culpability on the part of the profession in the handling of these cases; but it does make it important for physicians to remember that any case of fracture may become the occasion for suit.

Too much stress cannot be laid on the necessity of adequate and detailed records of all fracture cases, progress in treatment, X-ray verification and functional restoration. The justice and efficacy of Rule No. 7, of the defense plan, providing that "the Association will not contribute to the defense of a suit in any case of fracture or like injury where X-ray plate was not taken and kept on file, unless it can be shown that at the time and place it was impossible to secure an X-ray plate", are constantly demonstrated.

Only recently a rural member of the Association wrote that a patient in a fracture case had refused to have a radiograph, and requested the committee to furnish him a form of release which he might have the patient sign to release him from further responsibility. The committee advised him that legal authority is to the effect that there is no form of release that will stand in court, as the claim will always be made that the release was obtained under duress. Two weeks later this member advised the committee that he had a permanent record for future reference in the form of a radiograph showing the bones in good position and condition.

The committee on medical defense has frequently emphasized that the patient who de-

clines a radiograph because of the trifling additional trouble or who urges that he is unable to afford a radiograph, is the very patient whose fracture the physician can ill afford not to have radiographed. The X-ray plate is not infallible, but its value as an aid in diagnosis and as a record of the progress of the case is such that the physician should have the information and protection it affords. The committee advocates the taking of a radiograph both before and after setting, even where there is no uncertainty as to the nature of the fracture.

Among other alleged causes of action that have come to the committee's attention, one of the most unusual was found in a recent threat in a mental case. The complainant in this case alleges that the defendant physician and his assistant forcibly removed her, against her wishes, from her home to a sanitarium for treatment. Although technically not a claim for malpractice, the Association's legal counsel after carefully considering the facts in the case—that a physician specializing in nervous and mental diseases must necessarily run considerable risk of being exposed to claims such as this—decided that the Association must assume responsibility for this defense if it would fulfill its implied obligation to its members.

The defense committee urges members of the Association to acquaint themselves through *The Journal*, or the Columbus headquarters of the Association, with the details of the defense plan and the many ways in which it is prepared to serve them.

Throughout the six years in which the defense plan has been in operation the personnel of the Committee on Medical Defense has remained the same, with the exception of the replacing of one member who moved from the state. The members of the committee are Drs. J. E. Tuckerman, Cleveland, chairman; Charles T. Souther, Cincinnati, and Walter H. Snyder, Toledo. The committee passes on all applications for defense before referring them to Messrs. Smith, Baker, Effler, Allen and Eastman, of Toledo, the legal counsel retained by the Association.

In lining up local details of defense the county medical defense committeemen and the individual members of the county societies have given splendid cooperation, in fact the state committee insists that the greatest share of credit for the success of the defense plan should go to the county workers. However this may be, the defense plan has been preeminently successful and the conscientious cooperation of every committeeman, officer and member is essential to its continued success.

## Child Health Demonstration Conducted in Mansfield by National Child Health Council and Cooperating Agencies

By WALTER H. BROWN, M.D., Director

*The Journal is fortunate in its ability to present to its readers a first-hand explanation of the methods and objectives of the Child Health Demonstration, by the Director of the undertaking. By reason of their proximity to the field of experimentation, the physicians of Ohio are doubly interested in this Demonstration, the progress and results of which are being carefully watched by health and welfare workers throughout the country.*

A greater demand for the application of medical science is one of the pressing needs of the day. Notwithstanding, all of the knowledge, skill and efforts of the medical profession, there still remains a large amount of unnecessary, untreated disease and defects. To create this demand and to solve the problem will require the combined efforts of every agency interested in the welfare of our country.

The time has undoubtedly arrived when the medical profession should carefully study these questions and assume its rightful place of leadership, in matters pertaining to medical science. Medical ethics has too long prevented our profession from active participation in influencing public opinion on medical matters. The result of this non-participation has been the rapid growth of quacks and charlatans. The answer is that the medical profession must emerge from its isolation, and actively guide and co-operate with those agencies, that are earnestly seeking to create an increased demand for modern practice of medicine. It is the writer's belief that the work which he is about to describe offers a definite opportunity to prove the correctness of his statements.

The Child Health Demonstration is a co-operative effort to show what a typical American community can do to increase the health and strength of its next generation. It is being conducted by the National Child Health Council, which is the pioneer organization for the co-ordination of the national voluntary organizations interested in the health of children.

This Council is composed of representatives from the following organizations:

American Child Hygiene Association, American Red Cross, Child Health Organization, National Child Labor Committee, National Organization for Public Health Nursing, National Tuberculosis Association.

These organizations felt the need, after long individual work in their own special fields, of seeing their problems as a whole. For instance, the tuberculosis worker soon found that his problem was not one of tuberculosis, alone, but

was inter-related with problems of the worker interested in child labor. Or again, the American Child Hygiene Association found that if it wanted to be of real service it must take into consideration the family as a whole, not only the baby. In other words, these organizations had come to the realization that their work was not only inter-related but also, inseparable. Out of this realization grew the National Child Health Council.

Very early in the life of the Council it became apparent that something more than conferences and committees were necessary to successfully co-ordinate their work. It was believed that a well planned co-operative demonstration in a typical American community would do more than any one thing to bring about the desired result. A sum of \$200,000 supplemented by funds from the local community, has been set aside to carry on this Demonstration for a period of five years.

The Council made a long and careful study of the relative merits of approximately eighty communities which applied for the Demonstration. Mansfield and Richland County won its vote because they most nearly met the requirements. The chief purpose was to select a city and county which would be fairly typical of the average of American life, the city to have a population of between 20,000 and 30,000 and the rural area surrounding it an equal number. Some of the specific conditions laid down were that a normal percentage of the population should be engaged in manufacturing; there should not be any striking predominant racial stocks; there should be a variety of industries; the surrounding area should be an agricultural territory; the community should be located in the birth registration area and vital statistics should be fairly complete; the mortality of infants and children should not be strikingly abnormal.

Finally, and most important of all, the medical, dental and social organizations of Richland County would welcome the opportunity of co-operating in such a Demonstration.

The Child Health Council is convinced that the final success of the Demonstration will hinge upon it being properly related to these professional groups. Consequently, a wide latitude of local administration has been provided for. The Council stands only in an advisory capacity and functions in Richland County solely through the Director. This has made possible the establishment of the machinery for local approval of and participation in the projects of the Demonstration.

One of the first steps was the organization of a local Advisory Council. This Council is com-

posed of a representative from each of the official health and educational departments, the social and welfare agencies, medical and dental societies, industrial and labor organizations, religious and civic bodies and the agricultural groups. This Council has elected its own officers and a small Executive Committee which acts constantly with the Director in working out the details of local administration. Through this Council, the community has begun to assume its share of the responsibility for the Demonstration. It has secured and is equipping a physical headquarters which will be used for the administration offices and for the main Health Center.

Any well rounded program for the promotion of child health requires the support and cooperation of the following recognized groups:

- (a) Health authorities (City, County and State),
- (b) Educational authorities,
- (c) Medical profession,
- (d) Dental profession,
- (e) Related social and health agencies.

This is being accomplished for the Demonstration through the local Advisory Council and its committees. The staff of the Demonstration consists of a small corps of trained workers. It includes a director for each one of the special services, medical, nursing, health education, nutrition and social service. Each one of these individuals will strive to develop additional personnel out of local resources. Our energies so far have been directed along three fundamental lines which it is believed are a necessary foundation for further work, namely:—

- (a) Study of the health needs and resources of the community.
- (b) Methods for securing adequate medical and nursing care for children.
- (c) Methods for providing for proper health education.

A careful and systematic study has been made of the vital records of Mansfield and Richland County. To add to our accurate knowledge of sickness among children, we have just completed a Health Census. At the same time, we are recording the social and sanitary facts that will furnish an accurate picture of the health conditions of the community. From a study of these materials, we will be able to gauge the health needs and estimate the health resources available for children.

The plans of the Demonstration include a primary Health Center at Mansfield with secondary centers in various parts of the county. From these centers as headquarters, it is hoped to work out methods for continuous health supervision from pre-natal through the adolescent period.

In working out these methods, we are striving to co-operate, not to compete, with the medical profession. We recognize fully the services,

rights and privileges of the physician in the field of child health. Therefore, it is to be the aim of the Child Health Demonstration to strengthen the position of the regular medical practitioner with the public; to conserve his rights and privileges in the field of private practice; and to assist in working out a plan whereby the organized medical profession can meet the demand for the extension of medical practice into the field of prevention. Such a plan would offer a constructive solution of the problem which it is claimed can be solved by means of such questionable devices as "Health Insurance" or "State Medicine."

In order to accomplish the aims set forth above, the following services will be established, namely,

- (1) Medical,
- (2) Dental,
- (3) Nursing,
- (4) Educational.

The medical service has been placed in charge of a well trained pediatricist, who will spend his entire time with the Demonstration. He will assist the local physicians in the development of ways and means for the supervision of well children. In addition, he will be available for consultation with physicians in private cases. There will be no fee for this service.

The dental service is now being worked out with the County Dental Society. It is planned to establish a dental clinic and to make provision for prophylactic as well as reparative services.

One of the prime needs for successful child health work is a unified economical and practical public health nursing service. We are attempting to secure this by a real co-ordination of the existing nursing organizations. It is not planned to establish a separate nursing corps for the Demonstration. The intensive work for children will be carried on by adding personnel to the local nursing groups. To the end that the program shall be unified, these groups have elected the Director of Nursing of the Demonstration as their head. In addition, the main Health Center will become the headquarters for all of the nurses. This will make it possible for the individual association to maintain its identity while we are developing the kind of nursing program which will best serve the whole county.

The educational service is to be one of the major projects of the Demonstration. It may be roughly divided into two sections. The one, dealing with the teaching of health habits in the schools; the other, creating a demand for better health service.

A large percentage of the ill-health among our population is due to faulty habits. The best way to attack this problem is by means of health education. The best place to start this attack is by introducing proper courses of training in health habits into our schools. Fortunately we have been able to secure the hearty support of the local educational authorities. They have ap-



pointed the Director of Health Education of the Demonstration to the same official position in the schools. This will enable us to provide the content of health courses, to assist in training the present teacher to teach these courses and to stimulate the normal schools to include such training in their courses for future teachers. In other words, we have set up the machinery which will make it possible to deliver the accumulated experience of our health educators to the local community. In addition to the work in the schools, it is planned to create a demand for increased health service by means of newspaper articles, lectures, exhibits, and conferences.

Every one of the projects of the Demonstration are being conducted with the support and

active participation of the medical and dental professions.

The above description covers the origin, policies and preliminary steps which have been taken to place the Demonstration on a sound working basis. It is planned to gradually add to the program the contributions of the mental and social hygiene groups. At the same time we are endeavoring to play our part in the development of the co-related social agencies of the community. While it is too early to speak of definite results, we have every reason to be hopeful that through our Demonstration will come ways whereby the general practitioner can furnish health service as well as sickness service for his community.

### "As Goes Maine, Etc.?"

(Continued from page 595)

New York, Massachusetts and Rhode Island because it is "apparent that the present bill is but an entering wedge for more radical legislation."

After directing attention to the opinion held by the Attorney General of Massachusetts concerning the legality of the act, Maine's Governor says: "The people of Maine are willing and able to care for their own mothers and children and I have faith to believe that Maine men and women will do this rather than accept the so-called gratuities from a federal bureau."

"The existing provisions of the Sheppard-Towner bill are reasonably moderate." The proclamation states, "but it properly may be assumed that attempts will be made to broaden its scope so as to further restrict the state's control over its own affairs. It is apparent that the present bill is but an entering wedge for more radical legislation, and Maine's delegation in Congress, our senators and representatives, should be urged to resist all further encroachments upon the states by the federal government. Maine will loyally support the Union in all matters that come under the provisions of the federal constitution but the time has arrived when the people of this state will jealously guard the rights inherent in them as a sovereign people, and will accept the responsibilities the possession of such rights impose.

"In years gone by the state of Maine has not hesitated to stand for great principles, and it is well for the 44 states that have accepted the Sheppard-Towner bill to know that Maine neither asks for, nor for the time being accepts federal aid for its mothers and children."

### Bills Paid in Corn and Beans

Lights and shadows were not infrequent in the career of the pioneer physician in Ohio, as revealed by the fragment of an ancient volume recently recovered from the ruins of an old

Canton structure, which was razed to make way for a modern skyscraper.

Some eight decades ago, this volume was opened and the first entry made by Dr. L. M. Whiting, who but a short time previous was graduated from Williams college.

Mary Alwoode was his first patient, and for numerous visits and professional advice, including prescriptions filled by himself, varying sums, ranging from a quarter to one dollar were charged. One visit cost 37 cents and an office call 12½ cents.

The first patient was probably one of his best, for bills were generally promptly settled. Once she was credited with 50 cents for two bushels of peaches; another time with 35 cents for two-and-a-half pounds of butter.

A load of hay, seven bushels of corn, thirty bushels of barley, one hundred pounds of flour, six pounds of butter and a cash payment settled a bill for service rendered in the family of Oliver T. Stidges, which aggregated \$36.75.

Collection troubles were numerous, as shown by the notation over an account of some magnitude: "Judgment and transcript in hands of old Mr. Slabaugh of Osnaburg, 1843." The bill had been contracted in 1837 and left with Slabaugh for collection.

After the name of one patient was written: "Miserably poor and has gone to parts unknown—I hope he won't come back." Of another account, he said: "I don't expect to get it."

One man paid him by whitewashing a fence; another by furnishing board; and even his landlord settled a bill for \$204.81 by crediting the rent.

Trips of eight and ten miles over mere trails were numerous, and it does not require a vivid imagination to picture this pioneer member of the profession urging his horse through the bleak blackness of a January gale, in a race with death to the bedside of some sufferer. His was a career of long hours, hard work and uncertain wages.



## HOSPITAL NOTES

### DEVELOPMENTS FOLLOWING ABOLISHMENT OF HOMEOPATHIC COLLEGE

Final steps toward the abolishment of the Homeopathic College at Ohio State University, were taken by the trustees recently, through the announcement of the appointment of Dr. S. A. Hatfield, as superintendent of the University hospital; Mrs. Ida Webb, superintendent of nurses; Dr. V. A. Dodd, chief of staff, and Dr. Paul H. Charlton, resident physician. Through this action, the trustees have completed the necessary steps toward carrying out the provisions of the recommendations made on July 11th, an account of which may be found on page 563 of the August *Journal*.

The hospital, formerly a Homeopathic institution, has now passed under the complete control of the College of Medicine of the University and Dr. E. F. McCampbell, dean, has in charge the staff plans for the new arrangements.

Before assuming new responsibilities at the University hospital, Dr. Hatfield served as assistant professor of the College of Medicine during the past four years, and Mrs. Webb was superintendent of the St. Clair hospital.

Dr. C. A. Burrett, dean of the former Homeopathic college and president of the American Institute of Homeopathy, has been in Washington conferring with officials of that organization in connection with the action taken by the trustees.

—Purchase of two farms aggregating 1215 acres for approximately \$190,000 has been proposed by Director H. S. MacAyeal, of the state department of public welfare, for the purpose of providing additional facilities for the insane. One tract of 115 acres in Summit County will be utilized immediately after the purchase for care of insane patients. The other tract of 1,100 acres, located in Lorain County, has been proposed as a site for a new hospital for insane, accommodating about 2,000 patients. Titles for the land have been approved by the Attorney General and the remaining necessary steps toward acquiring this land are to be taken shortly, it is said.

—A preliminary discussion of plans to enlarge the facilities of Protestant Hospital, Columbus, include an addition which will furnish approximately 150 additional beds, at a cost between \$200,000 and \$300,000.

—Work is progressing on the new Hale Surgical Hospital, Wilmington, being erected by Dr. Kelley Hale. The building will be a three-story, fire-proof structure. On the first floor will be situated the offices, dining room and kitchen, laboratories and X-ray equipment, and an emergency operating room; the second floor will be devoted to patients exclusively, and the third floor to major and minor operating rooms and an obstetrical department.

—Ground has been broken for the new half-

million dollar addition to the Jewish hospital, of Cincinnati, which when completed will increase the capacity by 250 beds. Three floors of the new addition are to be used for the maternity department, and the other four floors are to be devoted to medical and surgical cases and other departments of the hospital. It is expected that the new quarters will be ready for occupancy by April 1, 1923.

—More extensive use of state hospitals for the mentally afflicted who are able to pay maintenance costs is planned by the State Department of Public Welfare. Toward this end Dr. E. A. Baber, superintendent of Dayton State Hospital, recently spent two weeks studying improved methods of treatment introduced at the New Jersey State Hospital, Trenton, by Dr. H. A. Cotton. The plan is to set aside one building at each institution, where private patients, who have previously shunned the publicity of state hospitals because no arrangement has been provided for private wards or buildings where they could be housed and cared for during treatment and observation, may be treated by the staffs employed by the state. First trial of the plan will be made at Dayton.

—Stark County commissioners have refused to approve the plans of architects for the new tuberculosis hospital on the ground that the cost is excessive. Several revisions have already been made in the plans, cutting from the original figure of \$195,000, between \$15,000 and \$18,000, but even this would require an expenditure of more than twice the sum (\$80,000) which is available for the project.

—A building commission has been appointed to work with the Trumbull County commissioners in the erection of the \$100,000 tuberculosis hospital, for which a bond issue was passed a year ago. Official approval of a site for the hospital, four miles east of Warren, has been given by the State Department of Health.

### Small Advertisements

*For Sale*—Property and practice in a town of 900, with first-class high school, parochial school, three churches, in well-to-do farming community in northwestern Ohio. Price right, with liberal terms to a good man. Write M. F. D., care *The Journal*.

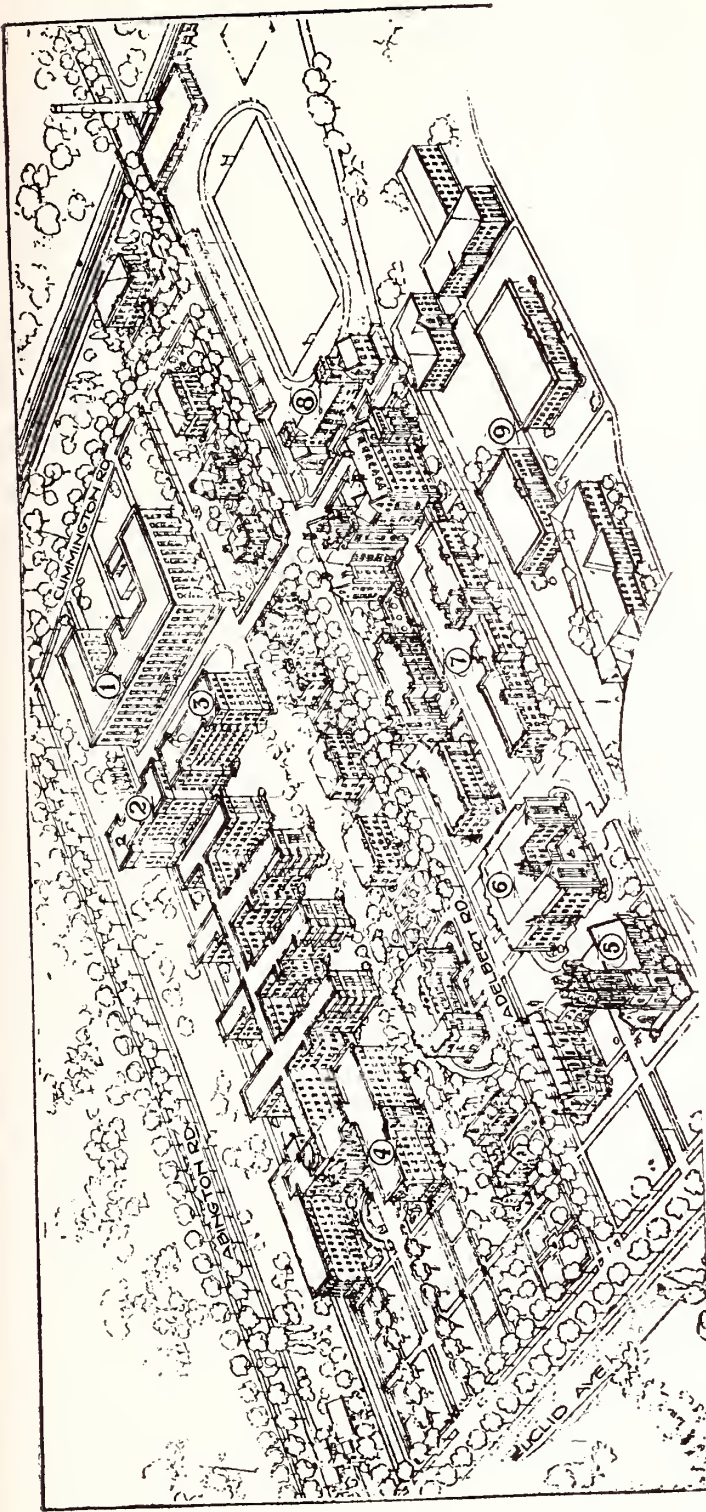
*For Sale*—Unopposed practice of the late Dr. N. C. Satterlee of Williamsfield, Ohio; also drugs, instruments, books, home and office. For information address Mrs. N. C. Satterlee, Williamsfield, Ohio.

*For Sale*—My residence with office in house. Large lot, fruit and garage. Established practice of 18 years. Reason for selling: I expect to leave state. Correspondence solicited. R. R. Barrett, M. D., 394 Bowman Street, Mansfield, Ohio.

*For Sale*—Cheap. X-ray outfit, coil with 8 inch spark gap. Rectifier, Interrupter, Reostat, X-ray tube and holder. Fluoroscope and High Frequency Applicator. D. H. Bowman, M. D., Kenton.

*Wanted*—To correspond with a young married physician, recent graduate with hospital experience and looking for permanent location. Must give best of reference as to ability and character. I wish to gradually retire. I have nothing to sell. Address Box 54, Rittman, Ohio.

*Position Wanted*—Young woman undergraduate nurse wishes physician's office work in Youngstown. Good reference as to character and ability furnished. Will reply to answers immediately. Address H. C., care *The Journal*.



PROPOSED MEDICAL GROUP, WESTERN RESERVE UNIVERSITY

Work was started, August 7, on the new \$2,500,000 School of Medicine building at Western Reserve University, the gift of Samuel Mather. At the same time work was begun on the animal hospital and university heating plant, also included in the Mather gift.

Other units in the contemplated medical school group, which will be one of the largest of its kind in the country, will be built later. Numericals in the above group indicate: (1) medical building; (2) maternity hospital wing; (3) babies' dispensary wing; (4) Lakeside Hospital building; (5) Amasa Stone Mather chapel; (6) main recitation building; (7) quadrangle of college buildings, Adelbert Campus; (8) gymnasium and athletic field; (9) Case school buildings.

Although eminently a practical building, the new School of Medicine will be an imposing structure. It will house the executive offices, main laboratories and class rooms and amphitheaters of the medical school. Three wings running southward will make

it an E-shaped structure, capable of future enlargements.

Its exterior design has been shaped frankly by the utilitarian purposes it is intended to serve, there being an arrangement of small piers and large windows to admit ample light, and yet a monumental effect has been achieved by a cornice with decorative cresting over the body of the building, which will be in light brick and limestone.

The main building will be four stories in height, with a basement and sub-basement, covering an area of approximately three-quarters of an acre on each floor. The five floors used by the school, taken together, will comprise an area of over three and one-half acres.

The principal entrance will be approached by a flight of steps leading up to the first floor, which will be raised several feet above the ground to provide a well-lighted basement. Administrative offices will be on the first floor, near the main entrance.

A feature will be the students' smoking rooms, reading rooms and book store in the basement.

The remainder of the basement will be used by the departments of anatomy and pathology. These two departments, with the department of clinical microscopy, will occupy the first floor. On the second floor it is planned to have the departments of hygiene and bacteriology on one side and histology and embryology on the other. On the third floor will be quarters for experimental medicine, surgery and pharmacology. Psychology and biochemistry will be on the fourth floor.

The requirements for each department for amphitheaters, museums and libraries will be suitably met. All the utilities, the heating and ventilating, the equipment of laboratories and other work rooms have been studied and provided with every convenience.

At the rear of the medical school, in the center of the "E," will be the animal hospital and the heating plant.

## "Nurse Education" Report by Committee of Rockefeller Foundation Raises Interesting Questions in Connection with Problems in Ohio

Following a three-and-a-half-years study of the problem of "the proper training of public health nurses and the general nurse education", the special committee appointed by the Rockefeller Foundation has completed a report, which embodies ten general "conclusions," the practicability of which are yet to be demonstrated, but which are of general interest in view of the study being made in Ohio of definite conditions by the special committee of the State Association on this subject.

"It is obvious", the reports declares, "that the public health movement has passed far beyond its earlier objectives of community sanitation and the control of the contact-born diseases by isolation and the use of sera and vaccines. Many major health problems of the present day, such as control of infant mortality and tuberculosis, can be solved only through personal hygiene—an alteration in the daily habits of the individual—and through the establishment of new contacts with the public—contacts which shall permit the application of the resources of medical science at the stage in disease when they can produce a maximum effect. Such changes in the daily habits of the people and in their relation to their medical advisors, can be accomplished but by one means—education."

The summary of conclusions reached by the committee follows:

1. "That, since constructive health work and health teaching in families is best done by persons: (a) capable of giving general health instructions, as distinguished from instruction in any one specialty, and (b) capable of rendering beside care at need, the agent responsible for such constructive health work and health teaching in families should have completed the nurses' training. There will, of course, be need for employment in addition to the public health nurse, of other types of experts such as nutrition workers, social workers, occupational therapists and the like.

"That as soon as may be practicable all agencies, public and private, employing public health nurses should require as a prerequisite for employment, the basic hospital training, followed by a post-graduate course, including both class work and field work, in public health nursing.

2. "That the career open to young women of high capacity in public health nursing or in hospital supervision and nursing education is one of the most attractive fields now open, in its promise of professional success and of rewarding pub-

lic service; and that every effort should be made to attract such young women into this field.

3. "That for the care of persons suffering from serious and acute disease the safety of the patient and the responsibility of the medical and nursing professions demand the maintenance of the standards of educational attainment now generally accepted by the best sentiment of both professions and embodied in the legislation of the more progressive states and that any attempt to lower these standards would be fraught with real danger to the public.

4. "That steps should be taken through state legislation for the definition and licensure of a subsidiary grade of nursing service, the subsidiary type of worker to serve under practicing physicians in the care of mild and chronic illness and convalescence and possibly to assist under the direction of the trained nurse in certain phases of hospital and visiting nurses.

5. "That, while training schools for nurses have made remarkable progress, and while the best schools of today in many respects reach a high level of educational attainment, the average hospital training school is not organized on such a basis as to conform to the standards accepted in other educational fields; and that the instruction in such schools is frequently casual and uncorrelated; that the educational needs and the health and strength of student are frequently sacrificed to practical hospital exigencies; that such shortcomings are primarily due to the lack of independent endowments for nursing education; that existing educational facilities are on the whole in the majority of schools inadequate for the preparation of the high grade nurses required for the care of serious illness, and for service in the fields of public health nursing and nursing education, and that one of the chief reasons for the lack of sufficient recruits of a high type, to meet such needs lies precisely in the fact that the average hospital training school does not offer a sufficiently attractive avenue of entrance to this field.

6. "That, with the necessary financial support, and under a separate board or training-school committee, organized primarily for educational purposes, it is possible with completion of a high school course or its equivalent as a prerequisite, to reduce the fundamental period of hospital training to 28 months and at the same time, by eliminating unessential, non-educational routine, and adopting the principles laid down in Miss Goldmark's report to organize the course along intensive and coordinated lines with such modi-

fication as may be necessary for practical application; and that course of this standard would be reasonably certain to attract students of high quality in increasing numbers.

7. "Superintendents, supervisors, instructors, and public health nurses should, in all cases, receive special additional training beyond the basic nursing course.

8. "That the development and strengthening of university schools of nursing of a high grade for training of leaders is of fundamental importance in the furtherance of nursing education.

9. "That when the licensure of a subsidiary grade of nursing service is provided for, the establishment of training courses in preparation for such service is highly desirable; that such courses should be conducted in special hospitals, in small unaffiliated general hospitals, or in separate sections of hospitals where nurses are also trained; provided the standards of such schools be approved by the same educational board which governs nursing training schools; and that the course should be of eight or nine months duration.

10. "That the development of nursing service adequate for the care of the sick and for the conduct of the modern health campaign demands as an absolute prerequisite the securing of funds for the endowment of nursing education of all types; and that it is of primary importance, in this connection to provide reasonably generous endowment for University Schools of Nursing."

### New Course for Nurses Planned

An "Ohio Health Course for Nurses" as a means of acquaintaining public health field nurses with state and local public health codes and limitations of legal authority, is planned through a series of bulletins and pamphlets to be issued by the State Department of Health.

This announcement was made recently by Dr. H. H. Snively, state director of health, following a meeting with representatives from various nurses institutions and organizations.

A committee comprising: Miss Laura R. Logan, Miss Eleanor Loomis, Miss Jane L. Tuttle, Miss Grace E. Allison, Mrs. Norma Selbert, and ex-officio, Miss Florence Farmer and Miss Caroline V. McKee, was named to draft a plan for the course and a method of administrative procedure. This committee will submit a formal report to a group of nurses at a meeting to be held in Columbus, September 8th in connection with the annual meeting of the Ohio health commissioners.

"The nature of the course decided upon", an official statement points out, "will in no way interfere with, or take the place of the courses in public health nursing already being conducted by the established schools in public health nursing."

Those attending the initial conference at the offices of the state director of health were: Miss

Cecilia E. Evans, director public nursing, Western Reserve university, Cleveland; Mrs. Norma Selbert, assistant professor, Ohio State university, College of Medicine, Columbus; Miss Elizabeth N. Holt, superintendent of the Dayton Visiting Nurses Association; Miss Grace E. Allison, principal, Lakeside hospital, Cleveland; Miss Louise Ruck, supervisor of nurses, Cincinnati health department; Miss Laura R. Logan, director of the school for nurses and health, University of Cincinnati; Miss Cora M. Templeton, director, nurses division, Cleveland department of health; Miss Jane L. Tuttle, superintendent of the Columbus District Nurses association; Miss Elizabeth J. Yost, director, division of public health nursing, Akron department of health; Miss Eleanor Loomis, health commissioner, Painesville; Miss Caroline V. McKee, chief examiner, state medical board; Miss Anne L. Gallagher, state trachoma nurse; and Miss Florence Farmer, chief, bureau of public health nurses, state department of health.

### New Chief of Nurse Examining Committee

Miss Caroline Vincent McKee, of Cleveland, has succeeded Miss Augusta Condit as chief of the examination committee for nurses' registration of the state medical board. Miss Condit resigned to become associate superintendent of the Instructive Nursing Association, Columbus.

For the past five years Miss McKee has been teaching anatomy and physiology at Mt. Sinai and Lakeside hospitals. She is a graduate of the nurses' training school, Pennsylvania hospital, Philadelphia, of which, she at one time served as assistant superintendent. She has also been a member of the nurses' examining committee of Ohio for the past two years.

### Dr. Morgan to Leave Galion

Dr. C. D. Morgan, for 27 years a practitioner in Galion, has disposed of his property in that city with the expectation of locating in Mansfield at the beginning of the year. Dr. W. A. Smith, of Mansfield, has recently become associated in practice with Dr. Morgan and will assume complete charge of his practice when the latter leaves Galion in September for four months' service at Roosevelt Hospital, New York, prior to taking up residence in Mansfield.

Dr. Morgan has been resident surgeon in Galion for the Erie and Big Four railroads and for several manufacturing establishments. He is also interested financially in a number of industrial and fiduciary institutions of the city, and has evinced great interest in civic welfare, being at the present time a member of the board of education. For a number of years prior to the entrance of United States into the World War, Dr. Morgan was a valued member of the Publication Committee of the Ohio State Medical Association.

## ACADEMIES AND COUNTY SOCIETIES

### FIRST DISTRICT

*Warren County* Medical Society held its regular meeting at Lebanon, July 11. Dr. William Gillespie, Cincinnati, the speaker of the occasion, presented the subject "Resuscitation of the New Born", in a thoroughly scientific and practical manner, bringing out a wide discussion by those present. The meeting of August 2, at Lebanon, was addressed by Dr. David Bundy, Middletown, and Dr. Ralph Carothers, Cincinnati.—T. E. Keelor, President.

### SECOND DISTRICT

*Darke County* Medical Society's annual outing at the Greenville Country Club, August 10, was a big success, with 60 in attendance. The day was given to quoits, bathing, golf, music in the morning; good eats at noon, and a short program in the afternoon, in which Dr. R. C. Austin, Dayton, spoke on "Some Basic Physiological and Clinical Facts in Goitre;" and Hon. Orel Myers, Greenville, spoke on "The Physician as a Witness."—B. F. Metcalf, Correspondent.

### THIRD DISTRICT

*Auglaize County* Medical Society met in Minster, July 20, with a large attendance. Dr. A. B. Brower, Dayton, read an instructive paper on "Aortitis", illustrating the same with lantern slides. Dr. P. I. Tussing, Lima, spoke interestingly of his observations and experiences during a post-graduate course at Harvard University. Dr. C. A. Coleman, Dayton, demonstrated a large number of lantern slides in connection with a lecture on "Pathology and Therapy of the Ureters". After the meeting a banquet was served at the City Hotel and a few hours spent in pleasant social intercourse.—C. L. Mueller, Secretary.

*Logan County* Medical Society's July meeting was held on the 12th at the cottage of Dr. J. C. Longfellow at Lakeridge. The society was honored by the presence of Dr. J. H. J. Upham, Columbus, who gave a talk on "The Future of Medicine". Every word of his address was pregnant with truth and the society is better for his coming. A six o'clock dinner was served to the doctors and their families.—M. L. Pratt, Secretary.

### FOURTH DISTRICT

*Sandusky County* Medical Society had as its guests, at a meeting at the Fremont Lake Club, July 26, Drs. E. J. McCormick and M. W. Diethelm, of Toledo. The former read an interesting and well prepared paper on "Some Considerations of Abdominal Drainage". The essay-

ist attempted to steer a middle course and emphasized the importance of conservatism in adopting any procedure until its value has been proved. He favored the use of suction apparatus to clean out divers corners of the abdominal cavity, and condemned the use of gauze drains. In his opinion a great many cases will heal promptly without drainage when an observer might think such a procedure homicidal, but the most careful judgment should always be exercised when drainage is in question.

Speaking on "The Uses of Pituitrin", Dr. Diethelm declared that not only the patient as a whole must be considered, but also the different stages of labor, when there is recourse to this drug. He finds absolutely no use for it in the first stage and recounted its dangers to mother and babe. Even in the second stage he feels its use is fraught with danger. He favored low forceps or version when head is too high. In the third stage Dr. Diethelm has found pituitrin useful for hemorrhage, but there it sometimes causes trouble by closing the cervix, thus interfering with expulsion of the placenta. It was found effective for relief of after-pains.

A lively general discussion, participated in by the Ottawa County Medical Society, followed the presentation of both papers. In the minds of some, Dr. Diethelm's views on the use of pituitrin were considered too conservative, as some members claim to have used it freely without any untoward results. It was emphasized, however, that all users are more cautious in its use in primipara.—C. I. Kuntz, Secretary.

### FIFTH DISTRICT

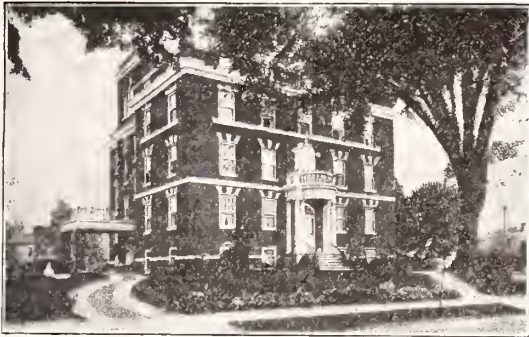
*Trumbull County* Medical Society members and their families held their annual outing at Glenn Crest, Stafford Lake, August 2. Care was left behind and a fine program of boating, bathing, contests and races enjoyed to the fullest extent. Features of the sports program were a fat men's race and a lean men's tug of war, in both of which the doctors of Niles and Warren vied for honors.—News Clipping.

### SIXTH DISTRICT

*Richland County* Medical Society enjoyed one of the most interesting and instructive meetings it has yet had, at the Ohio State Reformatory, Mansfield, July 20. Dr. Charles Clark, superintendent of the Lima State Hospital, conducted a clinic and gave a paper covering the field of the criminally insane. The judge of the Court of Appeals, probate judge and the mayor of Mansfield were present as guests of the society. Mental diseases at best are very difficult to understand and diagnose as to class. Dr. Clark outlined the various types and illustrated them in a manner which was clear and satisfactory to all who heard him. The society feels that this institution has a great future in the solving of the present problems faced by all communities.—J. S. Hattery, Secretary.

*X-Ray,  
Radium,  
Removal of  
Foreign Bodies*

CHAS. F. BOWEN, M. D.  
344 East State Street  
Columbus, Ohio



**The  
Holzer Hospital**  
Gallipolis, Ohio

*Radium for all  
therapeutic  
uses*

**Radium  
Laboratory**

350 East State St., Cor. Grant Ave.  
Columbus, Ohio



Edward Reinert, Ph. G., M. D.  
R. R. Kahle, Ph. B., M. D.

Citz. 9215

Bell, M. 7417

## Splendid Series of Lectures Arranged for Second District Meeting in September

The program for the meeting of the Second Councilor District Medical Society in Dayton, September 25, 26, 27, 28 and 29, is now complete and promises to be one of the most interesting and instructive since the post-graduate lecture series idea was adopted by the society several years ago. It has been the effort of the program committee to determine as nearly as possible the ideas of the majority of the members of the District, both as to the arrangements for the meeting and the personnel of the speakers, and with this purpose in view several radical changes in the arrangements have been made. The meetings will open at ten o'clock each morning and after three periods of one hour each, at one o'clock a luncheon will be furnished free to all. The afternoon session will begin at two o'clock and continue until five P. M. There will be no banquet—the luncheon at noon will replace this. The meetings will be run on Central Standard time. This change was made in order that those coming from a distance could easily be present at the opening session.

In regard to the speakers, five of them, Dr. Dean Lewis, of Chicago; Dr. George Eusterman, Rochester, Minn.; Dr. Chas. P. Emerson, Indianapolis; Dr. Henry J. Gerstenberger, Cleveland; and Dr. Martin H. Fischer of Cincinnati, have addressed the society before. Their return was requested by the majority of the District. Three new speakers, Dr. Douglas Vanderhoof, Richmond, Va., Dr. Stewart R. Roberts, Atlanta, Ga., and Dr. Irvin W. Potter, Buffalo, N. Y., are men of national reputation in their respective lines and all are splendid speakers. The subjects assigned at this writing are as follows:

### SEPTEMBER 25

Dr. Douglas Vanderhoof.....Richmond, Va.  
Professor of Internal Medicine, University of Va.  
3 periods—Discussing Gastro Intestinal Diseases  
Dr. Stewart R. Roberts.....Atlanta, Ga.  
Professor of Internal Medicine, University of Ga.  
3 periods—Blood Pressure. (Other subjects to be announced).

### SEPTEMBER 26

Dr. Dean Lewis.....Chicago, Ill.  
6 periods—  
1. Intestinal Obstruction.  
2. Treatment of Fractures and Nerve Complications Associated with Them.  
3. Diagnosis of Intestinal Lesions.  
4. Surgical Lesions of the Breast.  
5. Surgery of the Vascular System.  
6. Surgical Diseases of the Joints.

### SEPTEMBER 27

Dr. Geo. Eusterman.....Rochester, Minn.  
Mayo Clinic—Clinical Section.  
3 periods—  
1. Chronic Gastric and Duodenal Ulcer with Differential Diagnosis.  
2. Gastric Cancer and Syphilis.  
3. Benign Tumors and Other Rare Lesions of the Stomach. (Lantern Slides).  
Dr. Chas. P. Emerson.....Indianapolis, Ind.  
Dean Indiana University School of Medicine  
3 periods—(Subjects to be announced).

### SEPTEMBER 28

Dr. Irvin W. Potter.....Buffalo, N. Y.  
3 periods—Obstetrics.  
1. Version.  
2. Different Methods of Version. (With Lantern Slides).  
3. Objections to These Methods.  
Dr. Henry J. Gerstenberger.....Cleveland, Ohio  
Professor of Diseases of Children.  
3 periods—Pediatrics. (Subjects to be announced).

### SEPTEMBER 29

Dr. Martin H. Fischer.....Cincinnati, Ohio  
Professor Physiology, University of Cincinnati.  
6 periods—The Heart, Internal Secretion. (Subject to be announced).

Dr. H. C. Haning, 605 Reibold Bldg., Dayton, Ohio, treasurer of the Second District Society, will mail admittance to lectures, luncheons, etc., to members of the Society and others who desire to attend on receipt of check for \$10.00.

## Court Decision Regarding Personal Attendance on Patients by Practitioners Under Harrison Anti-Narcotic Act

In a prosecution for violation of the Harrison Antinarcotic Act, the evidence showed that the defendant, a physician, dispensed at his office some morphine to a certain person. The defendant claimed that what he did he had a right to do as a practicing physician. The law provides for the dispensing, without an order form, of drugs to a patient by a physician in the course of his professional practice, and no record is required to be kept of drugs dispensed to a patient upon whom a physician shall personally attend. Under the authority conferred by the law, the Commissioner of Internal Revenue promulgated a rule regarding dispensing of drugs by practitioners which provided in part that "A practitioner is not regarded as in personal attendance upon a patient within the intent of the statute unless he is in personal attendance upon such patient away from his office." In reversing the judgment of conviction and granting a new trial, the United States Circuit Court of Appeals, Eighth Circuit, said: "The power of the Commissioner of Internal Revenue, with the approval of the Secretary of the Treasury, to make all needful rules and regulations for carrying the provisions of the Narcotic Act into effect, did not confer the power to say that a physician could not personally attend a patient at his office. The enforcement of the act did not require any such rule, and it is contrary to the language of the act itself, which is plain and unambiguous and says nothing about where the patient shall be when personally attended. \* \* \* If Congress had intended to exclude personal attendance at office, it would have said so. \* \* \* The fact of omission is strong evidence that it did not intend to say so. \* \* \* Congress can not delegate legislative power to an executive officer."—*U. S. Public Health Reports*, July 28, 1922.



Patients requiring hospitalization are treated at Mt. Carmel, Grant, Protestant, St. Francis, or McKinley Hospitals at the option of the physician or surgeon referring the patient.

**RADIUM  
TREATMENTS**

**BEN R. KIRKENDALL, M. D.**  
137 EAST STATE STREET,  
COLUMBUS, OHIO.

### THIRD ANNUAL CONFERENCE OF HEALTH COMMISSIONERS WITH THE STATE DEPARTMENT OF HEALTH

The third annual conference of health commissioners with the State Department of Health is scheduled for September 5, 6, 7, 8, at the New Southern Hotel, Columbus. It is an institute for Correspondence-Study Course students who have completed the first seven assignments, and a conference for all health commissioners.

The first session on Tuesday, September 5, begins with an address by Dr. C. O. Probst, for many years secretary and executive officer of the State Department of Health. Dr. Probst will recount the experiences he met with throughout his long years as head of the health movement in the state and will contrast conditions as they were in his time with the present situation. Dr. Probst has been reappointed recently as a member of the Ohio Public Health Council. Governor Davis and Director of Health Snively are on the program for addresses during the morning session.

The session Tuesday afternoon will be taken up with public health administrative features of the Correspondence-Study Course. Dr. E. R. Hayhurst and Mr. James E. Bauman will have charge of this part of the program.

The most important address of the afternoon session will be made by Dr. W. S. Rankin, state

health officer and secretary-treasurer of the North Carolina Board of Health. His address is entitled "The Relationship between the Medical Profession and the Health Commissioner". Dr. Robert Carothers, president of the Ohio State Medical Association, and Dr. M. F. Hussey, councilor of the second district of the Association, have been invited to open the discussion of Dr. Rankin's address.

The Wednesday morning session will be devoted to reports of committees on general and milk regulations for adoption by local boards of health, and a symposium on "Distribution of Time and Money Spent on Various Phases of Health Work" by a number of health commissioners.

In the afternoon, Dr. W. H. Park, of New York, will give a lecture and demonstration of modern methods used in the prevention of diphtheria with especial emphasis on the use of the Schick test and immunization with toxin-antitoxin mixture. Mr. E. F. Van Buskirk of the Social Hygiene Board of Cincinnati will speak on "Social Hygiene Education" during the same session.

On Wednesday evening, Dr. G. E. Vincent, chairman of the International Health Board,

## Radium Rental Service

Radium loaned to physicians at moderate rental fees, or patients may be referred to us for treatment if preferred.

Careful consideration will be given inquiries concerning cases in which the use of Radium is indicated.

#### BOARD OF DIRECTORS

William L. Baum, M. D.    N. Sproat Heaney, M. D.    Frederick Menge, M. D.  
Louis E. Schmidt, M. D.    Thomas J. Watkins, M. D.

## The Physicians Radium Association

1110 Tower Building, 6 N. Michigan Ave.  
CHICAGO, ILL.

Telephones: Randolph 6897-6898

William L. Brown, Manager

# Founded 1876

**T**HE house of E. H. Rollins & Sons, Investment Securities, was founded in 1876 and its first offices were at Concord, New Hampshire, and Denver, Colorado. It was not very many years later that the main office was transferred from Concord to Boston, where the central force of the institution still remains.

Branches, known as major offices, have since been established in New York, Chicago, San Francisco and Los Angeles, with smaller offices in many cities, giving the institution a broad scope and enabling it to come in close touch with investors and the investment situation in practically every section of the United States.

*If our experience in so long a period of years will be helpful to you in your selection of desirable bonds for investment or if we can serve you by opinion or suggestion we trust you will not hesitate to call upon us.*

## E. H. Rollins & Sons

BOSTON  
200 Devonshire St.

NEW YORK  
43 Exchange Pl.

PHILADELPHIA  
1421 Chestnut St.

CHICAGO  
111 W. Jackson St.

SAN FRANCISCO  
300 Montgomery St.

DENVER  
315 International Tr. Bldg.

LOS ANGELES  
203 Security Bldg.

chairman of the Rockefeller Foundation, and formerly president of the University of Minnesota, will speak.

The morning session on Thursday, September 7, will be given over to a symposium on "Work of the State Department of Health and Its Relationship to the Work of the Health Commissioner", in which various members of the staff of the department will take part.

On Thursday afternoon, there will be a symposium on "Essentials of Successful Health Administration" by a number of health commissioners, and a "Question Box" presided over by Mr. James E. Bauman.

On Thursday evening, there will be readings by Dr. James Ball Naylor, and a paper analyzing the activities of general health districts by Dr. Frank G. Boudreau.

The concluding session on Friday morning will be devoted to a discussion of "Rabies and Its Prevention" by Dr. James McI. Phillips; "Nutrition Work from the Physician's Standpoint" by Drs. H. J. Gerstenberger and William M. Champion, of Cleveland; and "The Proposed Correspondence-Study Course for Public Health Nurses" by Dr. E. R. Hayhurst.

The conference will adjourn after the distribution of certificates of attendance.

#### Lost or Stolen Narcotic Forms

Methods for reporting stolen or lost order forms for narcotics have been altered by a recent regulation issued from the office of the Commissioner of Internal Revenue.

If used or unused forms are stolen from or lost by persons registered under the provisions of the narcotic act, a report of the same, stating the serial numbers, is to be forwarded to the Commissioner of Internal Revenue, Washington, D. C. If the theft, or loss, however, includes an entire book and the serial number is unknown, then the report is to be submitted to the Collector of Internal Revenue, from whom the purchase was made.

**D**o you believe that the fitting of trusses is a part of the Practice of Medicine? If so, send your patients needing trusses to

### The Columbus Truss & Optical Co.

PARKER W. PHENEGER, M. D., Mgr.

We Specialize in  
Elastic Stockings Made to Measure

Office and Fitting Rooms

Suite 303-309 Rowlands Bldg., Broad and Third Sts.  
COLUMBUS, OHIO

# In a Battle of Wits---

The Medical Protective Co.,  
Fort Wayne, Ind.  
Gentlemen:

We began the trial of the case last Monday and finished at 10 o'clock Thursday morning. It was a hotly contested case. There was a bitter feeling but we managed to win.

Respectfully.

The Medical Protective Co.,  
Fort Wayne, Ind.  
Gentlemen:

The trial of the case lasted ten days. The indications are that the case will never be tried again, as the disagreement amounts to a verdict for the defendant.

Yours truly.

Professional Protection is not merely an insurance policy; it is essentially skill and experience in the defense of the suit.

Why wouldn't specialized service win in a battle of wits lasting a week or ten days or any other time.

Originators of Malpractice Insurance;  
Over 23 years in doing one thing right;  
Successfully handled over 14,000 claims  
and suits.

*For Medical Protective Service  
Have a Medical Protective Contract*

**The Medical Protective Co.**  
of  
**Fort Wayne, Indiana**

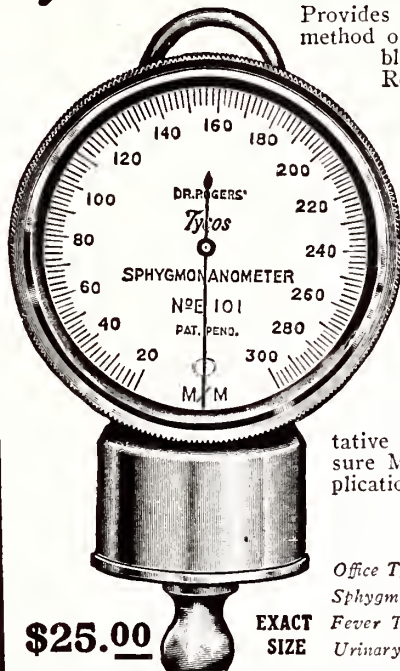
# Artificial Pneumothorax

in  
Pulmonary Tuberculosis



**LOUIS MARK, M. D.**  
327 East State Street  
Columbus, Ohio

## Tycos SPHYGMOMANOMETER



Provides a simple method of determining blood pressure. Recognized as embodying every essential possible in a portable manometer. Made of non-corrosive materials. No friction. Stationary dial. Self-verifying.

*Tycos* authoritative Blood Pressure Manual on application.

Office Type  
Sphygmomanometer  
Fever Thermometers  
Urinary Glassware

**\$25.00** EXACT SIZE

*Taylor Instrument Companies*, Rochester, N. Y.  
#1-M

# Cincinnati Radium Laboratory

22 West Seventh Street

Needle, Tube and Plaque  
Applicators



CHARLES GOOSMANN, M. D.  
X-Ray Treatment When Indicated.

# To Prevent Hydrophobia

Use

## Pasteur Treatment

With a

Potent Product and Prompt Service  
PRICE \$25.00

Order from

**James McIlvaine Phillips, M. D.**  
2057 N. High St.  
Columbus, Ohio

## PUBLIC HEALTH NOTES

In connection with health instruction for students recently established in Ohio schools by the state departments of health and education, a speaker on health subjects is appearing at each of the eighty teacher's institutes, which began July 31 and will terminate September 7. Dr. W. E. Howell, health commissioner of Gallia county; Dr. H. H. Snively, state director of health; and Dr. Walter Brown, director of the child health demonstration being conducted at Mansfield under the auspices of the Child Health Council, are the three speakers.

—The July report of the Hardin County public health nurse states follow-up work subsequent to school inspection, shows that out of 64 cases of defective eyes discovered, only 13 had received treatment. Six parents had refused treatment while 45 parents promised the matter attention before opening of the fall term of school. Eight children, out of 73 affected with throat trouble, had received treatment.

—At a meeting of civic organizations with the Xenia city manager, July 18, an unofficial committee consisting of Drs. Ben R. McClellan, A. C. Messenger and R. Kent Finley was designated to advise with Health Commissioner R. H. Grube on measures for controlling the second typhoid outbreak Xenia has suffered this summer. Pending a solution of the cause of the epidemic, the boiling of water and milk, daily or even more often bacterial count of Xenia milk, and the cleaning of vaults, cess pools, garbage dumps and other fly-breeding places were urged. Forty-three cases were reported in Xenia during July, 14 of which were reported during the last half of the month.

—With the cooperation of the Babies' Milk Fund Association, the Association for the Welfare of the Blind, the Milk Commission of the Cincinnati Academy of Medicine, the Milk Exchange of the Chamber of Commerce, the Boy and Girl Scouts and the Anti-tuberculosis League, a pure food and health exposition was held in Cincinnati, July 18-30. Dr. William J. Graf, chairman of the Milk Commission of the Academy of Medicine, was in charge of the clinic for malnourished children, with a staff of physicians and nurses. The U. S. Pure Food and Drug Laboratory, the state health department, the street cleaning department, the tenement house inspection bureau and the fire department, among others, took part in the exposition. A life-saving demonstration by Commodore W. E. Longfellow, Washington, official Red Cross life-saver, was one of the features.



## Immunization against Diphtheria

**D**IPHThERIA is a definitely preventable disease. Accumulated evidence shows that practically all children can be protected by immunization with a *properly prepared* Toxin-Antitoxin mixture.

Such immunity lasts for years.

General immunization in the pre-school period with Toxin-Antitoxin would practically wipe out diphtheria.

The production of the highest degree of immunity depends on the use of an accurately balanced mixture. Over-neutralization lowers its potency. Under-neutralization undermines its safety.

Toxin-Antitoxin, P. D. & Co., is properly balanced to insure the highest immunizing effect consistent with safety.

"DIPHThERIA IMMUNIZATION," a reprint, sent on request. Write nearest branch: Detroit, New York, Chicago, Kansas City, Baltimore, New Orleans, St. Louis, Minneapolis, or Seattle.

### Parke, Davis & Company

URINE  
BLOOD  
SPUTUM  
EFFUSIONS  
STOMACH  
CONTENTS  
WASSERMANN &  
NOGUCHI  
REACTIONS  
GONORRHEAL  
COMPLEMENT  
FIXATION TEST  
BLOOD CHEMISTRY  
PROTEIN  
SENSITIZATION  
TESTS

BASAL METABOLISM  
AUTOGENOUS  
VACCINES  
FAECES  
GENITO-URINARY  
SURGICAL and  
GYNECOLOGICAL  
PATHOLOGY  
DARK FIELD  
ILLUMINATING  
FOR  
SPIROCHETA  
PALLIDA  
MEDICO-LEGAL  
POST MORTEM  
X-RAY

# LABORATORY

Clinical and Pathological

COLUMBUS, OHIO 370 East Town Street

J. J. Coons, B. S., M. D., D. Sc.  
H. M. Brundage, M. D.  
Dorris Coss, B. S., M. S.  
Ruth Miller, B. S.

**PROMPT SERVICE**

Immediate Report on Frozen Sections of all Tumors.

WASSERMANS (daily)  
GONOCOCCUS  
FIXATION  
AUTOGENOUS  
VACCINES  
TISSUES  
SPINAL FLUID  
DARK FIELD FOR  
SPIROCHETES  
BASAL METABOLISM  
BLOOD CHEMISTRY  
PROTEIN SENSITIZATION  
BLOOD TYPING FOR  
TRANSFUSION  
MEDICO-LEGAL

URINE  
BLOOD  
SPUTUM  
STOMACH EXAM'S.  
FAECES  
BACTERIOLOGY  
EXUDATES  
MILK  
WATER  
SEEDS  
FEEDS  
FERTILIZERS  
IRON  
STEEL  
COAL

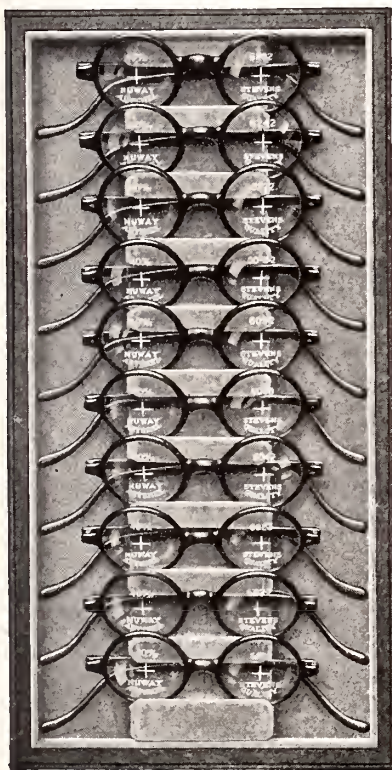
## Ft. Wayne Medical Laboratory

Radium, X-Ray, Pathology,  
Serology and Chemistry

Ft. Wayne, Indiana, 327 W. Berry St.  
(One block south of Interurban station)

Pathology and Serology by Dr. B. W. Rhamy  
Radium and X-Ray by  
Dr. E. M. Van Buskirk  
Medical and Industrial Chemistry by  
P. H. Adams, B. S., Ch. E.

*Special Delivery Postage insures prompt delivery*



## The Nuway Artshel Fitting Set

Invaluable to the examiner who wishes to give perfect satisfaction to his patients.

One of the strongest objections to the general use of all-shell frames has been the almost total absence of uniform and standard dimensions. Nothing will tend so much to revolutionize their use as a comprehensive variety of dimensions.

A Fitting Set must be a guarantee of uniformity of size; otherwise it would prove useless. The fact that Nuway Artshels are supplied in Fitting Sets speaks volumes.

## The White-Haines Optical Co.

Columbus, Ohio

Indianapolis, Ind.  
Springfield, Ill.  
Pittsburgh, Pa.

Huntington, W. Va.  
Lima, Ohio  
Wheeling, W. Va.

## DEATHS IN OHIO

*James William Birmingham, M. D.*, Columbus Medical College, 1890; aged 64; died in a Columbus hospital, July 18, from neuritis and complications. He was former Franklin County coroner for two terms.

*Samuel A. Conklin, M. D.*, Western Reserve University; aged 81; died at his home in Canton, July 19. Dr. Conklin practiced in Canton, more than a half century, retiring about ten years ago. He leaves one daughter.

*Elmer Elsworth Cowdrick, M. D.*, Chicago Medical College, 1886; aged 60; died at his home in Cleveland, June 22.

*Charles William Cullen, M.D.*, Medical College of Ohio, Cincinnati, 1900; aged 46; died recently in Denver. Dr. Cullen lived in Cincinnati. He had served in the Medical Corps of the Army, as superintendent of the Ohio Budget Commission, and as a member of the board of education. He was also a civil engineer.

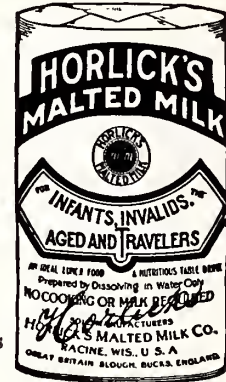
*Abner B. Everitt, M. D.*, Western Reserve University Medical Department, 1883; aged 75; former member of the Ohio State Medical Association; died at his home in Toledo, July 3. Prior to his removal to Toledo several years ago Dr. Everitt lived at Oberlin, where he practiced medicine and served the village as health officer for a number of years.

*Enos Hahn, M.D.*, Bellevue Hospital Medical College, 1867; aged 81; member of the Ohio State Medical Society and Fellow of the American Medical Association; died, July 8, while visiting in Honolulu. Dr. Hahn's home was at Leetonia, Ohio, where interment was made, July 31. He located in Leetonia immediately after securing his diploma 55 years ago and except during periods of post-graduate study has since been in continuous practice there. Dr. Hahn came from a family of physicians, his father, uncle and two brothers having followed the same profession. He was unmarried.

*Donald E. MacPhail, M.D.*, University of Michigan Medical School, Ann Arbor, 1914; aged 31; member of the Ohio State Medical Association; died at his home in Dayton, July 4, from pneumonia. Following an interne year at St. Elizabeth's Hospital, Dayton, and a year and a half at Wakefield, Michigan, mining hospital, Dr. MacPhail offered his services to the government in the World War and was commissioned a first lieutenant. Assigned to the 12th Field hospital of the First Division, he served through the Montdidier-Noyon, Aisne-Marne, St. Mihiel,

## Safe and reliable for the summer feeding of infants

A  
Complete  
Food



Used  
1/3  
Century

Avoid  
Imitations

Samples  
Prepaid

Hermetically sealed in sterilized glass  
containers

*Send for Literature*

**HORLICK'S - Racine, Wis.**

## Dares Haemoglobinometer

Candle lighted, or Electric lighted.  
We are accepting orders for prompt delivery.  
Write for booklet and prices.

## Tycos Office Sphygmomanometer

With 6 inch silvered dial.  
A distinct advance over the pocket type.  
Immediate delivery. Price \$37.50.

Surgical Instruments—Dressings,  
Pharmaceuticals, Biologicals

Your orders will receive prompt attention—  
"You will do better in Toledo."

**The Rupp and Bowman Co.**

319 Superior St.  
TOLEDO, OHIO





Rheumatism  
Gout  
Neuralgia  
Neuritis  
Sciatica  
Lumbago  
Migraine

The best of patients may become the worst of impatients

if kept suffering while a "painful" search is made for the "why's and wherefore's."

First relieve promptly and safely with ATOPHAN, then make it part of whatever is your favorite scheme of treatment.

Genuine ATOPHAN is manufactured at our Bloomfield, N. J. plant by a special process, precluding the possibility of even traces of irritating empyreumatic admixtures.

Complimentary Trial Package and Information from

**SCHERING & GLATZ, Inc.**

150 Maiden Lane

NEW YORK

**SAVE MONEY ON YOUR X-RAY SUPPLIES**

Get Our Price List and Discounts on Quantities Before You Purchase

HUNDREDS OF DOCTORS FIND WE SAVE THEM FROM 10% TO 25% ON X-RAY LABORATORY COSTS

**Among the Many Articles Sold Are**

- X-RAY PLATES.** These brands in stock for quick shipment. PARAGON Brand, for finest work; UNIVERSAL Brand, where price is important.
- X-RAY FILMS.** Duplitzed or Dental—all standard sizes. Eastman, Ilford or X-ograph metal backed. Fast or slow emulsion.
- BARIUM SULPHATE.** For stomach work. Finest grade. Low price.
- COOLIDGE X-RAY TUBES.** 5 Styles. 10 or 30 milliamp.—Radiator (small bulb), or broad, medium or fine focus, large bulb. Lead Glass Shields for Radiator type.
- DEVELOPING TANKS.** 4 or 6 compartment stone, will end your dark room troubles. 5 sizes of Enameled Steel Tanks.
- DENTAL FILM MOUNTS.** Black or gray cardboard with celluloid window or all celluloid type, one to eleven film openings. Special list and samples on request. Price includes your name and address.
- DEVELOPER CHEMICALS.** Metol, Hydroquinone, Hypt, etc.
- INTENSIFYING SCREENS.** Patterson TE, or celloloid-backed screens. Reduce exposure to one-fourth or less. Double screens for film. All-metal Cassettes.
- LEADED GLOVES AND APRONS.** (New type glove, lower priced).
- FILING ENVELOPES** with printed X-Ray form. (For used plates). Order direct or through your dealer.

If You Have a Machine Get Your Name on Our Mailing List



**GEO. W. BRADY & CO**

771 So. Western Ave.,  
Chicago

**BETZCO SMOOTH TEX Wood Tongue Depressors**



Clear, close grained, firm and of standard size. Free from splinters and knots, remarkably pliable. Put up in handy packages of 8 dozen.

Just fill out the Coupon—

**Frank S. Betz Co.  
Hammond, Ind.**

Send me sample package of 8 dozen Smoothtex tongue blades, 3CJ1137, for which I enclose 35 cents.

Name .....  
Address .....  
City ..... State .....

Meuse-Argonne and the defensive sector battles. Dr. MacPhail returned to civilian practice in Dayton in 1919. A recent appointment gave him the rank of captain in the Medical Reserve Corps. Surviving are his wife and two small children.

*Clayton W. Russell, M.D.*, Eclectic Medical Institute, Cincinnati, 1890; aged 56; member of the Ohio State Medical Association; died at his home in Springfield City Hospital, July 13, from heart disease. Dr. Russell practiced in Springfield for 31 years. He was a former president of the Ohio Eclectic Medical Association, and was prominently identified with the National Medical Association of Railroad Surgeons, being at the time of his death surgeon for a number of roads. Besides his widow, he leaves three brothers and one sister.

*John E. Sylvester, M.D.*, Medical College of Ohio, Cincinnati, 1876; Bellevue Hospital Medical College, New York, 1884; aged 67; member of the Ohio State Medical Association and Fellow of the American Medical Association; died at Holzer Hospital, Gallipolis, July 25, from diabetes with which he had suffered for many years. Dr. Sylvester, whose home was at Wellston, was probably one of the oldest practicing physicians in southeastern Ohio. He began practice at Berlin Cross Roads with his father, Dr. William Sylvester, a pioneer physician in southern Ohio. Later he removed to McArthur and after 20 years there, following the death of his father, came to Wellston in 1897. In his profession Dr. Sylvester was always active in the interest of movements for the betterment of medical practice and the elimination of sickness. He was an enthusiastic worker in the county, state and national medical societies, and for a number of years served as councilor of the Ninth District of the Ohio State Medical Association. Dr. Sylvester was the owner and publisher of *The Wellston Telegram*. Surviving are his wife, one son and one daughter.

*William Dillon, M.D.*, Medical College of Ohio, Cincinnati, 1882; aged 72; died at his home in Urbana, Illinois, July 4, after a long illness.

*Albert H. King, M.D.*, Cincinnati College of Medicine and Surgery, 1901; aged 46; died in Ashville, North Carolina, June 28. Dr. King formerly practiced in Cincinnati, but for the past five years had been health officer at West Palm Beach, Florida. Interment was made at Cincinnati.

*Robert Lloyd Williams, M.D.*, Jefferson Medical College, Philadelphia, 1906; aged 41; was killed, June 25, at Cleveland, when struck by a street car. He was superintendent of the Wisconsin State Tuberculosis Sanatorium, and resided at Statesan, Wisconsin.

## Luer Hypodermic Syringes

2cc

45c

5cc

60c

10cc

1.00

All Glass



20cc

1.25

30cc

1.50

50cc

2.00

—To pay more is a waste of money—Quality and workmanship guaranteed second to none or money promptly refunded.

### Charles E. Findlay Co.

Physicians' and Hospital Supplies  
677 N. High Street Columbus, Ohio  
Bell Phone, Main 6518

## PUS INFECTIONS

are being readily sterilized without irritation or injury to the adjacent tissues with

### Mercurochrome --- 220 Soluble

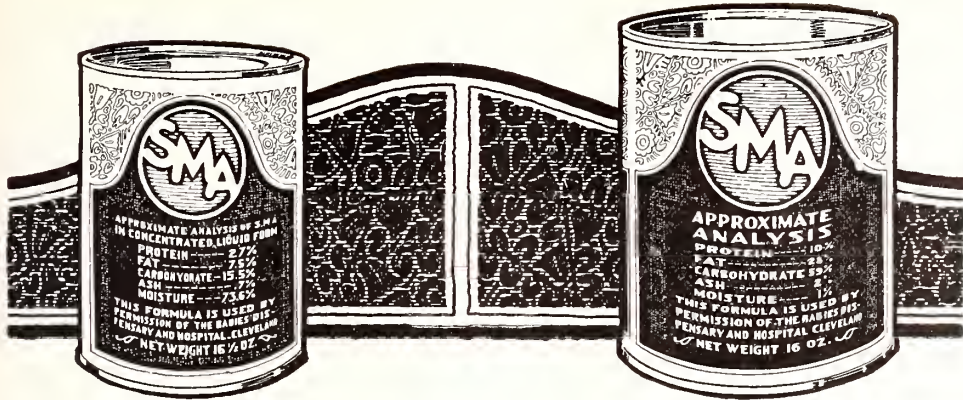
#### The Stain:

prevents the overlooking of septic surfaces,  
provides for more than a superficial penetration,  
fixes the germicide in the desired field.

H. W. & D. — Specify — H. W. & D.

## Hynson, Westcott & Dunning

BALTIMORE



S. M. A. in liquid form

S. M. A. in powder form

## A Food to Keep Babies Well Adapted to Mother's Milk

# S.M.A. offers the family physician

a simple and satisfying food for babies who are deprived of mother's milk, or who require food in addition to what the mother can supply.

A food which requires only the addition of boiled water to prepare it, whether for the month-old baby or the baby a year old.

A food which contains the required food elements; and whose clinical records of feeding show an absence of spasmophilia and rickets in any infant fed with it while it was still well.

A food which makes happy,

solid, breast-fed looking infants, and which insures normal development.

A food which is available both in powder form and in concentrated sterilized liquid form.

S. M. A. is furnished to parents on a physician's prescription. If your druggist does not have S. M. A., he will order it at your request.

Formula by permission of The Babies' Dispensary and Hospital of Cleveland

**THE LABORATORY PRODUCTS COMPANY**  
3829 Cedar Avenue  
Cleveland, Ohio

### Legal Opinions of Interest

A synopsis of recent opinions of the Attorney General, of interest to the medical profession include:

1. Where the juvenile court commits a dependent or delinquent child to the care and custody of the department of welfare, and said department assigns said child to the bureau of juvenile research for the purpose of mental or physical examination, the director of public welfare may then assign and transfer such child from the said bureau of juvenile research to the division in the department of welfare known as the division of charities, and no consent on the part of said division of charities, as such, is necessary for such assignment or transfer. Likewise, it is held that the consent of the juvenile court to such assignment or transfer is also unnecessary.

2. Section 1653, G. C., while authorizing commitments by the juvenile court of dependent and neglected children, to the care of suitable private individuals of good moral character, makes no provision in such cases for payment by the county commissioners of the board of such committed children.

3. Section 3092 G. C., as amended in 109-O. L.—533, confers no authority upon county commissioners to pay the board of neglected and dependent children committed by the juvenile court to the care of private families or individuals in counties where a county children's home is provided.

4. County commissioners in counties having a population of less than 100,000 are unauthorized under the provisions of Section 6602-1 G. C. to employ a consulting engineer to assist the sanitary engineer specified by the section in the discharge of his duties.

5. Section 6602-1 G. C. authorizes the employment by the county commissioners in counties having a population of less than 100,000 of a competent sanitary engineer and such employe under the terms of the statute may only be an individual. A partnership or corporation may not act in such capacity.

6. Section 3467, G. C. provides bodies may be disinterred at any season of the year in the discretion of the board of health having jurisdiction. In the past this section has been construed to mean that no body may be disinterred during April, May, June, July, August and September, although there was no reason in law or preventive medicine to support this supposed prohibition.

Officers of the Medical Reserve Corps who have been assigned, or attached, to posts in the 83rd Division include Captain Joseph R. Montgomery, Steubenville, 330th Infantry; Captain Peter T. Gillie, Columbus, 308th Medical regiment, and First Lieutenant Cleve L. Welch, Cleveland, 308th Medical regiment.

## Every Physician

Is Interested In

## Physician's Supplies

In dispensing, he requires a great variety in his office—in prescribing he uses the **PRESCRIPTION DEPARTMENT** that is **UP-TO-DATE**.

If you are unacquainted with our plan of handling the physician's requirements, you may profit by giving us an opportunity to show you what we can do.

## The Wendt Bristol Co.

47 South High St., Columbus, Ohio

**FINE PHARMACEUTICAL SPECIALTIES**

## Our Business

is confined exclusively to the manufacture of Strictly High Grade Medicines and Pharmaceuticals for Physicians, Dispensing and Prescribing.



Our Offices and Laboratories are now located in our New Building, 330-336 Oak Street, one square north of Grant Hospital.

NO GOODS SOLD AT RETAIL

**The COLUMBUS PHARMACAL Co.**

COLUMBUS, OHIO

“REFINED PHARMACEUTICALS” IMPLIES PURITY OF MATERIALS AND ACCURACY OF MANUFACTURE.

THESE QUALITIES ARE POSSIBLE TO ATTAIN ONLY UNDER CONDITIONS OF RIGID INSPECTION AND ANALYSIS OF ALL MATERIALS USED AS A BASIS OF MANUFACTURE.

PAINSTAKING CAREFULNESS OF DETAIL IN THE MANUFACTURE OF ONE STANDARD OF CHEMICAL PURITY ASSURES A SINGLE STANDARD OF EXCELLENCY.

THESE DESIRABLE QUALITIES ARE VOUCHERED FOR AS BEING PRESENT IN ALL PRODUCTS OF



Columbus,

Ohio

*Manufacturers of Refined Pharmaceuticals.*

The Management of an Infant's Diet

A  
Rational Procedure  
in  
Summer Diarrhea

For Infants  
of any age

Mellin's Food

*4 level tablespoonfuls*

Water (boiled, then cooled)

*16 fluidounces*

Give one to three ounces every hour or two, according to the age of the baby, continuing until stools lessen in number and improve in character.

Milk, preferably skimmed, may then be substituted for water—one ounce each day—until regular proportions of milk and water, adapted to the age of the baby, are reached.

Mellin's Food Company, Boston, Mass.



## NEWS NOTES of OHIO

*Cleveland*—The building committee of the Cleveland Academy of Medicine which has under advisement the establishment of a large medical library, visited Washington in the latter part of July to study the medical libraries of that city. The proposed library will be second in size only to that of the surgeon general's office.

*Springfield*—After post-graduate study at the Brady Clinics, Johns Hopkins University, and more recently in Vienna, Dr. N. L. Burrell has returned to this city and will specialize in genito-urinary diseases.

*Zanesville*—Dr. H. T. Sutton is convalescent after a serious illness from pneumonia.

*Dover*—Dr. J. F. Douthitt and family have gone to Bernice, California, where they will reside until next spring while Dr. Douthitt engages in post-graduate study in Los Angeles. His local practice is in charge of Dr. D. H. Downey of Kansas City.

*Newark*—Dr. Ralph W. Harris, former local physician, is reported to have recently received \$125,000 for his invention of a light for automobiles. Dr. Harris has previously been known as an inventor, having patents on a number of ideas.

*Springfield*—Dr. Howard Austin has been made surgeon for the I. C. & E. Traction Company, succeeding the late Dr. C. W. Russell.

*Coshocton*—Dr. F. M. Marshall was painfully injured, August 1, when the automobile in which he and Dr. J. D. Lower were making a call near Wills Creek turned over a deep embankment. The latter escaped injury.

*Huntsville*—This village and community turned out in force, July 1, to honor Dr. F. A. Richardson, who that day celebrated his 64th birthday. Floral tributes and other gifts were presented in appreciation of the doctor's services during 40 years' practice in Huntsville.

*Dayton*—Following three years' service with the medical department of the United States Navy, Dr. Russell D. Bussdicker returned to his home in this city in July. In August he left for Kermanshah, Persia, where he will have charge of a hospital in connection with the foreign mission of the Presbyterian church.

### DR. HAYHURST INJURED IN AUTOMOBILE WRECK

Dr. E. R. Hayhurst, of the State Department of Health, suffered a serious injury to the right knee in an automobile accident, August 2. The machine in which he was driving was hit by another auto and overturned, in the vicinity of Mt. Gilead. Dr. Hayhurst was brought to Mt. Carmel Hospital, Columbus, where he was operated on the next day. No infection developed, and it is hoped that no permanent disability will result.

### WILLIAM SCHEPPEGRELL, A. M., M. D.

President American Hayfever Prevention Association.  
Chief of Hayfever Clinic, Charity Hospital, New Orleans,

Says:—

“IF the patient applies for treatment during an attack of hayfever, the pollen extracts are usually ineffective, and a vaccine should be used, these being injected at intervals of one or two days until the severity of the attack subsides.”\*

\*From Dr. William Scheppegrell's new book on  
Hayfever and Asthma,  
Lea & Febiger, Publishers

Bacteriological Laboratories of

G. H. SHERMAN, M. D.  
DETROIT, MICH.



THE BETZCO LINE

Supplies and Equipment for Physicians and Hospitals

Frank S. Betz Co.  
HANDLERS, INC.  
Chicago

Let this Catalog Help You Save Your Dollars

Not only does this Catalogue contain a complete line of standard instruments, dressings, rubber goods, bags, glassware, steel furniture, etc., but it includes as well, many new specialties that will be particularly interesting to you.

The general mailing has been completed and if you have not received your copy just fill out the coupon and it will be sent to you at once. This catalogue may be accepted as establishing a standard of fair price and honest value.

**Frank S. Betz Co.**  
Hammond, Ind.  
New York  
Chicago.

**FILL IN THE COUPON**

FRANK S. BETZ CO., Hammond, Ind.

Dear Sirs: Send me at once a copy of your complete catalogue No. 22.

Name ..... Address .....

### Valuable Data on Dispensary Service

Following an extensive study of the dispensary service in the United States, the Council on Medical Education and Hospitals of the American Medical Association has prepared an interesting report, in which, eight general observations are made.

These observations are:

1. There is a steady increase in the number of patients seeking treatment in general dispensaries.
2. There has been an unprecedented increase since the war in the number of special clinics and dispensaries, such as those for tuberculosis, venereal disease, mental hygiene and child hygiene.
3. There is great need for individualized study and treatment of dispensary patients to counteract what seems to be a prevailing tendency to routinization.
4. There is need of a closer bond between the out-patient service and the other service of hospitals, and this will best be met by having the hospital and the out-patient staffs identical and by having unified records.
5. In the matter of finances, there is an increasing tendency to charge nominal fees, thereby placing part of the cost of an institution on the patient.
6. A general increase is noted in the use of social service workers to see that patients continue their treatment, and to investigate their social and financial status so as to prevent pauperizing.
7. The difficulty of securing satisfactory data is increased by the inadequacy of clinical and office record systems in a large number of institutions.
8. There is a great and increasing amount of educational work, especially the teaching of interns, medical students, graduates and pupil nurses.

There were 946 general dispensaries in the United States during the last fiscal year. Patients accredited to these numbered 3,872,345 and the number of visits made by these 11,798,887.

Ohio had 40 dispensaries, which served 140,805. These patients made 461,613 visits to the dispensaries.

### Military Medical Units Organized

In an effort to revive and perpetuate, in a general way, the medical units that served in the World War, originally organized by the Red Cross, Surgeon-General Ireland of the United States Army has authorized the organization of a general hospital to be known as General Hospital No. 21, Organized Reserves at Washington University, St. Louis. This unit originally served with the British Expeditionary Forces. Other organizations are soon to be announced.

During the World War, these units served as mobile and base hospitals. Under present plans, the same numbers will be retained but the personnel will serve as surgical and general hospitals. The Medical Officers Reserve corps now

numbers approximately 12,000 officers with application from former veterans pouring in daily.

This renewed interest in the reserve corps by former officers is considered due to the change in regulations in regard to promotion and the provisions of the Pay Act of the Army, which gives a reserve officer one-half time credit for all inactive service in the reserve corps when called to active duty, in addition to the base pay of his grade.

Pursuant to instructions of the Secretary of War, the following medical units are to be organized: one general medical headquarters; 2 section medical headquarters; one specialist group; 36 surgical hospitals; 45 evacuation hospitals; 3 army medical headquarters; 165 general hospitals; 24 station hospitals; 3 convalescent hospitals; 12 hospital center headquarters; 12 convalescent camps; 37 hospital trains; 3 air service physical examining units; 5 general dispensaries; 3 army medical laboratories; 12 hospital center laboratories; 2 communication zone medical laboratories; one general medical laboratory; 9 medical supply depots; 2 intermediate medical supply depots; and 2 base medical supply depots.

### Examination of Food Handlers

A plan to require all persons who handle, for pay or profit, articles of foodstuffs intended for public consumption, to submit to a physical examination, has been proposed by the Columbus Board of Health, as a preventive measure against the menace of communicable diseases.

Under the proposed regulations, all employees of restaurants, market stalls, meat shops and groceries would be subject to physical examinations before being eligible to work. In addition to the preliminary examination, it is possible that a schedule of periodic examinations will be arranged so as to insure the continued health of these employees.

Such a system of examination has been effective in New York for several years; where it is estimated that no less than three-quarters-of-a-million persons are subject to the provisions of this law.

At present, the Columbus Board of Health statutes provide a penalty for persons engaging anyone for this kind of work who is inflicted with a communicable disease, but it does not provide the organization or personnel necessary for periodic or preliminary physical examinations.

### DOCTOR'S "YOUNGUNS" WERE THERE

Out of the 8,000 students enrolled at Ohio State university last year, 226 were sons and daughters of physicians and surgeons. The Ohio farms headed the list for furnishing the largest number of students, with 1,224; and students whose fathers are engaged in the mercantile business came next, with a total of 449.

## Cincinnati University Honors Donors of Large Gifts to Medical Science

In honor of John D. Rockefeller and Andrew Carnegie, the board of directors of the University of Cincinnati has established two chairs to bear their names in the College of Medicine.

The obstetrics department will be known as the John D. Rockefeller Chair of Obstetrics, and the professorship in biochemistry will be the Andrew Carnegie Chair of Biochemistry.

The University of Cincinnati is said to be the first large university or college in the country to thus honor the names of Rockefeller and Carnegie for efforts made to advance science and education. It was declared that both the Rockefeller Foundation and the Carnegie Foundation, which are endowed heavily, had shown great interest in the scientific attainments of the university.

### SEVERAL ENDOWMENTS RECEIVED

Through the generosity of Mr. Rockefeller and Mr. Carnegie the College of Medicine has received several large endowments from the foundations that bear their names. The Carnegie Foundation gave \$250,000 to establish a Chair of Surgery in memory of Dr. Christian R. Holmes, former dean, and \$200,000 for general purposes of the Medical College.

The Rockefeller Foundation gave \$700,000 to the Medical College for general purposes, pro-

vided that \$1,300,000 be raised under the supervision of the board of directors. The Foundation permitted several large gifts that had been made previous to this time to the College of Medicine to count toward the \$1,300,000.

Among those whose endowments were allowed toward the \$1,300,000 were Mrs. Betty Fleischmann Holmes, \$250,000 to endow the deanship; Mrs. Mary M. Emery, \$250,000 to establish the B. K. Rachford chair of pediatrics; the two gifts of the Carnegie Foundation of \$250,000 and \$200,000, and Mrs. Henriette Fleischmann, \$100,000 for the chair of preventive medicine.

To meet the required amount, a campaign was conducted last spring, to raise \$216,000 and a surplus of approximately \$10,000 was obtained.

The professorship of obstetrics is held by Dr. William Gillespie, and the professorship of biochemistry by Dr. Albert Prescott Mathews.

### MARRIAGES

The marriage of Dr. John W. Conwell and Miss Helen Bullock, both of Cleveland, took place at Cadiz, July 27.

Dr. John W. Means, Columbus, and Miss Madeline Butler, Plain City, were married, August 3.

Dr. Harold Schirman, Portsmouth, and Miss Agnes D. Doty, graduate nurse of Deaconess Hospital, Cincinnati, were married in the latter city, August 9.

## MEAD'S

### MEAD'S INFANT DIET MATERIALS

<p><b>MEAD'S DEXTRI-MALTOSE</b> combined with Cow's Milk and water, will give gratifying results in feeding the average baby.</p>	<p><b>MEAD'S CASEC</b> (Calcium Caseinate)</p> <p>As a corrective diet for babies with fermentative diarrhoeas.</p>
---	---

**THE MEAD JOHNSON POLICY**

Mead's Infant Diet Materials are advertised only to physicians. No feeding directions accompany trade packages. Information regarding their use reaches the mother only by written instructions from her doctor on his private prescription blank. Literature furnished only to physicians.

Full literature on Mead's Dextrin-Maltose and Mead's Casec sent immediately upon request.

MADE BY MEAD—MADE RIGHT

MEAD JOHNSON & COMPANY,                      Evansville, Indiana



# MEDICAL ECONOMICS

PUBLIC HEALTH ~ SOCIAL WELFARE *and* ORGANIZATION PROBLEMS  
WITH EDITORIAL COMMENT *by* D. K. M.

## Medical Profession and the Public

The mutuality of interest between the medical profession and the public with the function of health administration as a link and interpreter was emphasized and exemplified in the spirit of the annual conference of Ohio health commissioners held under the auspices of the State Department of Health at Columbus early in September.

The keynote of the conference was expressed by George E. Vincent, president of the Rockefeller Foundation, and chairman of the International Health Board who, together with Dr. W. S. Rankin, secretary of the North Carolina State Board of Health, and Dr. W. H. Park, director of Laboratories, New York City Health Department, comprised the scintillating triumvirate of inspirational speakers from outside the state.

That the function of the local health commissioner is to serve as a mediator and interpreter between medical service as a private function and public health as a community problem, was the text of Dr. Vincent's exposition. He emphasized the fact that the two fundamental activities of public health administration are, first, sanitation, and second, control of communicable diseases, and that in the important function of educational effort, greater stress must constantly be placed on the value and necessity of regular and frequent medical examinations, and that in the care of private cases, prevention as well as treatment must be emphasized.

The same thought was further illustrated by Dr. Rankin who through clear analysis reached the conclusion that only about twenty per cent. of the total public requiring some sort of medical service is receiving it at the time when the advice and service of the physician should be sought.

Both these speakers were agreed in their conclusion that the interests of the private practitioner, the public and the health commissioner are parallel, and that there is a common ground on which there should be no occasion for conflict.

Both indicated their objection to socialization or paternalism in public health efforts. Dr. Vincent declared that the medical profession itself is the fundamental as well as the most important part of health machinery; that it serves as the basis for preserving and securing public health,

and that those people, who claim that public health administration will do away in any measure with the need for individualism or private service by the members of the medical profession, are absurd in their contentions, and that any system, plan or propaganda which indicates that there will be any lessening in the importance of the medical profession is fallacious; that private practice and curative medicine are the fount from which springs the value of preventive medicine. He was emphatic in his declaration that as the public is educated to the measures of prevention, and to the value of public health that there will be even a multiplying need for doctors in private practice.

Dr. Vincent probed to the depths of the problem when he declared that the philosophy, ethics and economics of practice should be taught as well as the definite and exact sciences of medicine.

Outlining the primary problem of public health administration as one of education in increasing the demand for medical science and in intelligently enlarging the usefulness of medicine, Dr. Rankin elaborated on practical means of cooperation between public health administration and local medical organizations. In response to his address, Dr. Robert Carothers, president of the Ohio State Medical Association, expressed the sincere support of the profession for a sane, forward-looking program in health administration, which should secure for the public the highest degree of benefit.

Practically all speakers recognized the general state of neurotic activity among individual, detached, and often conflicting groups in the field of health and medical service. Sanity, practicality, service and cooperation were emphasized as watchwords.

The deliberations of the conference which lasted over a period of four days, and consisted of an elaborate program participated in by Dr. H. H. Snively, State Director of Health, the chiefs of all bureaus and sub-departments, and 124 out of the 166 health commissioners in the state, was arranged along practical, constructive lines. No sentiment was echoed during the session in conflict with the definite policies limiting and defining state medicine as already established and set forth through official action of the Ohio State Medical Association. Because of the

official nature of the conference and its direct bearing on medical practice in this state, a more detailed account is set forth on page 691 of this issue.

### The Future vs. The Past

That the past fifty years have been largely occupied in acquiring knowledge and that the next half century will probably be marked rather by application of this knowledge to practical conditions, is the contention of Dr. Frederick R. Green, editor of *Health*, and for the past 17 years connected with the staff of the American Medical Association, as secretary of the important Council on Health and Public Instruction.

In this process so he believes, the methods of practice and the personal relations of physicians both to their patients and to the community will be largely modified.

The changing attitude on public health, the duty of the public to accept its responsibilities as allies, not alone as unwilling followers, of the medical profession, are analyzed and clearly presented by Dr. Green in his paper entitled "Lessons of the Past" published on page 695 of this *Journal*.

Public health work to be effective and progressive cannot be based on the former theory of professional philanthropy; that the public must be brought to assume its responsibility; that the same study and care must be devoted by medical organization to the treatment of social conditions that has been given to the treatment of individuals, are among his general conclusions.

New subjects in medical instructions should be included, and a more practical solution than the many spasmodic, even conflicting voluntary health organizations, are among his recommendations.

Through a first hand knowledge of these problems gained through years of experience, Dr. Green's diagnosis of threatening conditions is of special interest at this time.

### The Abrams Hypothesis

Since Dr. Albert Abrams, of San Francisco, announced the discovery of his "great hypothesis" to the world, he has gathered about him some three hundred or more of the Credulous and amid a great blare of trumpets, beating tom-toms and crashing cymbals, sent them forth as Knights Errant to carry his "marvelous teachings" to the Unenlightened of America.

For a fee of two hundred dollars, these Disciples of Abrams will thoroughly initiate, saturate and anneal the unenlightened in the mysteries of the "hypothesis" so that they may fare forth to serve "the lame and the halt."

The essence of this theory lies in the belief "that all material things are radio-active and that if sufficiently delicate apparatus can be devised, the degree of radio-activity of all matter can be measured in such a way that when

its radio-activity characteristics are ascertained it would be possible from this data to determine the actual substance being examined, without ever seeing it."

Thus, a few hairs, several drops of blood, a paring from the finger-nail, or the handwriting of an individual when considered from the radio-active standpoint reveals the age, sex, approximate height, weight, condition of health and nationality of the person so examined. It goes even further. Radio activity will reveal the nationality of parents; determine the afflictions and ailments of those long since passed from this mortal coil. But radio activity, we are informed, which yields this information can be detected only by means of the reactions which it arouses in an individual. These reactions consist in an increase in vascularity of certain abdominal organs; this is manifested by increased dullness upon percussion over these organs or by increased friction when a glass or rubber wand is rubbed across the overlying areas.

The trappings and "precise statia" of location, of course, is important. The "patient" is conducted into the laboratory. The light is subdued. By means of a compass, geographical west is determined and the "patient" faced toward the Occident. Then the "Dynamizer", a specialized type of condenser, hooked to a "reflexophone", a special triple rheostat with capacity of measuring up to 61 Ohms, from which an insulated wire leads to a small aluminium electrode that is applied to the forehead of the person to be examined. And the radio-active reactions so secured afford the basis of diagnosis.

"But the outstanding fact is this", says *The Boston Medical and Surgical Journal* in considering the claims for the Abrams Hypothesis, "the Electronic Theory of Abrams in its fundamental conception, is directly opposed to many of the experimentally established laws of modern science; it cannot be accepted unless one is ready to cast aside all of the accumulated evidence of physics and mathematics in favor of a naked hypothesis unsupported by a single basic experiment."

### "Welcome" on the Mat for George

George V. Sheridan, former executive secretary of the Ohio State Medical Association, has returned to organization work as executive director of the recently formed Ohio State Council of Retail Merchants, with headquarters in Columbus. Nuf ced. The success of the organization is assured.

On receipt of the news a Columbus newspaper made the following facetious though affectionate comment editorially:

"All things come to him who waits and we surely are glad to see that our dear old friend George V. Sheridan has been elected executive director of the Ohio State Council of Retail Mer-

chants, and we feel confident that a man of George's businesslike methods and all-around efficiency will see to it that all overdue bribes to editors for what they have said about Mr. Fordney's scientific tariff bill are paid promptly and that the money comes in regularly in the future."

### Prompt Prohibition Applications Urged

Official regulations governing the purchase and prescribing of intoxicating liquors by physicians during 1923, an advance mention of which was made in the September *Journal*, have been issued by J. E. Russell, federal prohibition director.

Physicians holding permits to purchase intoxicating liquors for use in professional practice are urged to renew their permits on form 1404 before the end of the current year.

"The application," it is stated, "must be filled out in triplicate, the original copy sworn to before a Notary Public, or other officer having a seal, and all copies forwarded to the Columbus office. Careful attention should be given to all essential details, especially as to the correct street address or lot number.

The application should read as follows: "To purchase and use intoxicating liquor for other than beverage purposes to wit: for compounding such preparations as are necessary for use in professional practice. For administration to patients in accordance with Regulations 60, Article 12, Section 71."

Under this application, physicians are authorized to procure not to exceed six quarts of whiskey and five gallons of alcohol annually.

Physicians holding permits to prescribe intoxicating liquor are urged to make application for the 1923 permits at once, using form 1404 and making the application read: "To prescribe Pure Grain and Ethyl Alcohol or other Spirituous liquor, of one-half pint in any period of ten days, for the aged, infirm, and known sick, in accordance with Regulations 60 and the laws of Ohio."

Attention is also directed to neglect in making prompt application for the permits to prescribe. The prohibition director says that "some physicians neglected to renew their permit for the past year and continued writing prescriptions until the blanks furnished them were exhausted. This practice is illegal and should not be followed hereafter."

### In the Wake of the Vaccinators

"The statement made by the antivaccinationists that vaccination has proved a failure in the Philippines as a means of preventing smallpox is the exact opposite of the facts," declares *The Boston Evening Transcript* in an editorial analyzing the "authoritative statement of Dr. Victor G. Heiser, consultant in health to the Governor General of the Philippines and Dr. Charles N. Leach, of Manila."

"Previous to the American occupation of the

Philippines", it continues, "there were 40,000 deaths a year from smallpox in the inlands. When the Americans introduced compulsory vaccination the disease disappeared wherever vaccination was applied. The death rate from smallpox in the provinces surrounding Manila fell from 6,000 annually to not one. For seven years prior to 1914, there was not one death from smallpox in the city of Manila. Then laxity began to prevail, and it is proved that the local officials began to report vaccinations where none or very few had taken place.

"Vaccination is under any circumstances a difficult matter in Philippine country districts. The average temperature is from 90 to 100 degrees all the year around. Ordinarily vaccine remains potent only a few days without ice. This condition of things prevented the universal application of vaccination in the Philippine country districts, with the result that in these districts, the disease was kept alive.

"Finally it was discovered that while in one province the officials, with cheerful enthusiasm, reported 50,000 more vaccinations than there were inhabitants in the province, the vaccine virus was found to have been thrown into waste-paper baskets and other receptacles of rubbish. This condition of things was exposed; active vaccination was resumed, and the islands are again free from smallpox."

"What Dr. Heiser and Dr. Leach say about the matter", the editorial concludes, "appears perfectly true; namely, that those who have advocated the abolition of vaccination have been the cause of many of the deaths among the unvaccinated, and in view of the frightful loss of life that may occur in smallpox epidemics they are assuming a grave responsibility indeed if they continue their campaign."

In a summary of their special article, Dr. Heiser and Dr. Leach state that "the recent outbreak of smallpox in the Philippines in which more than 50,000 persons lost their lives, again confirmed the great value of vaccination as a protective agent against smallpox. The overwhelming evidence made up of some 7,000,000 vaccinations performed prior to 1914, which resulted in bringing smallpox under complete control, has been further supplemented by the outbreak of 1918. In this later outbreak, 93 per cent. of all deaths from smallpox occurred among those who were unprotected by vaccination."

"The deaths among the remaining 7 per cent. were largely due to a virulent strain of infection which probably developed among the unvaccinated.

"The records further show that 89 per cent. of the cases of smallpox occurred among unvaccinated children, the majority of whom were born after 1913.

"When effective systematic vaccination was resumed in 1918, smallpox again disappeared

in the wake of the vaccinators. The disease showed no signs of abating anywhere until vaccination in the stricken areas was again carried out."

#### In Re Narcotic Situation

Since the attention of Congress has been directed toward the narcotic drug addict problem, through the recent enactment of the Jones-Miller bill which forbids the importation of narcotic drugs except for medicinal purposes, advocates and supporters of House Resolution 258 are hopeful of early action upon this measure.

This resolution referred to in previous *Journals* provides for the appointment of a committee of fifteen, the personnel of which is to include all physicians who are now members of the house, to "inquire into the subject of narcotic addiction in the United States, the method of handling these unfortunates, the medical addenda available regarding methods of treatment by private physicians, institutions and sanatoriums, the effectiveness of the present laws, rules and regulations to control smuggling, trafficking and abuse of narcotic drugs, and for the purpose of drafting legislation for the control of narcotic drug addiction."

The resolution, details of which may be found on page 171 of the *March Journal*, not only conforms to the action taken and recommendations made by the House of Delegates of the American Medical Association last May but has been endorsed and urged by various State Medical Associations and Pharmaceutical Societies.

One of the provisions of this measure provides for an inquiry into the effectiveness of the present laws. In this connection, *The Boston Medical and Surgical Journal* says: "In a decision of the Supreme court \* \* \* denied a writ of error based on the charge that certain defendants sold inhibited drugs knowing them to be such, the court reversed the judgment of the lower court. The explanation is given that the statute does not make such knowledge an element of the defense. \* \* \* It is further stated, "The Narcotic Act has been held by this court to be a taxing act with the incidental purpose of minimizing the spread of addiction."

"This last exposition of the law sustains the interpretation which physicians have made. We are taxed for the right to use therapeutic agents. Because others make improper use of these agents is no valid reason why the Government, in all fairness, should impose a tax for revenue. All right minded physicians endorse all proper methods designed to do away with the evils of drug addiction but when the government taxes physicians engaged in ethical practice for the purpose of providing it with funds for protecting the people from harmful drugs it might go much further and levy a special tax on the surgeons' knives because some persons use knives in taking life. The registration of physicians

with the right conferred to use narcotic drugs is logical, but the revenue tax is abhorrent and should be repealed. \* \* \*"

#### Quacks and Frauds

"Quacks" and their "frauds" was the subject of a virile editorial in the *Youngstown Telegram* recently following the arrest of several persons upon a charge of illegal practice of medicine.

"If there are 20 or 25 fake doctors in Youngstown", the editorial points out, "who 'cure' by hocus-pocus, laying on of hands, crossing the palms with silver, shuffling the cards and other ancient methods and yet do a profitable business, then there must be a surplus of witless persons in Youngstown.

"Three of the four quacks arrested have pleaded guilty to illegal practice so that there is no reason to doubt that the city is overrun with leeches willing to take anything from a nickel to a widow's lifetime savings.

"Rounding them up and driving them out is a good thing. But there's still the sad knowledge that it takes state interference to prevent people giving their money away to frauds."

#### Wanna Play Golf?

Stark County physicians have been deeply bitten by the golf "bug" and they are urging the inculcation of the members of all county medical societies in the state. They challenge any society for an inter-county tournament.

Two years ago the Stark Countians organized a physicians golfing association to meet and play annually at the time of the picnic of the Stark County Medical Society. This year they reorganized on the plan of the Ohio Medical Golfing Association, with Drs. J. P. DeWitt and E. M. Feiman as president and secretary, respectively. They now have a membership of about 30.

An undeniable social and physical benefit results from such an organization, as well as a stimulation of interest in medical society activities. The Stark County golfers believe that the formation of golfing societies throughout the state would mean larger attendance at the annual tournament of the Ohio Medical Golfing Association and the state meeting of the Ohio State Medical Association which convenes on the day following.

#### 1923 Annual Meeting Program

Members of the State Association who anticipate taking part in the program of the next annual meeting, to be held in Dayton in May, 1923, should take the matter up at an early date with the section officers who are now at work on the programs for their respective sections. A list of the section officers appears on the inside front cover of this issue.

# Infections of the Gall Bladder and Biliary Apparatus\*

By FRED FLETCHER, M.D., F. A. C. S., Columbus

*Editor's Note.*—Dr. Fletcher is in agreement with Babcock, who considers "inflammations of the gall bladder as bacterial infections of childhood or early adult life, and as progressing for years through the stages usually associated with gall bladder disease. There is a wide need for earlier intervention, so that the patient, who starts at the age of 12 or 15 years with cholecystitis and dyspepsia, may not at 35 have gall stone colic, and may not at 65 succumb to cholecyctic gangrene or pancreatitis."

**A**S THE TIME allotted permits of only a brief summary of the complicated subject of *biliary disease*, it will suffice to say that the fundamentals expressed in this paper have been verified by my associate, Dr. Robert B. Drury, and myself in reviewing the surgical records of 386 patients operated upon for biliary disease since January, 1919.

## BACTERIAL INFECTIONS

Bacterial infections cause gall bladder disease in one of four ways; namely, in order of frequency, (1) through the general blood stream (by metastasis); (2) infection through the portal circulation; (3) ascending biliary infection by way of the common duct, and (4) continuity infections from adjacent organs. The typhoid, influenza and colon bacilli, the pneumococcus and pus organisms are the chief offenders.

The infected gall bladder is an exceedingly common intra-abdominal lesion. Babcock<sup>1</sup> has said, "It is not to the credit of the profession that we recognize and operate a majority of gall bladder cases after the fourth or fifth decades of life, when, in reality, the victims contracted their trouble in the first, second and third decades of life." In a diagnostic way, "it is misleading to look upon the infected or diseased gall bladder as an infirmity of middle or advanced life. In the early years of the infection, the symptoms are subacute, mild and unobtrusive—they escape recognition, but, after middle life, when the local symptoms attract the patient's attention and send him to a physician, the diagnosis of gall bladder disease is easily made." The innocent infected gall bladder, like the innocent gall stone, is a myth<sup>2</sup>.

Two things are prominent in the history of a gall bladder infection; *namely*, the chronicity of the trouble, and the reflex gastric disturbances which are nearly constant, but of varying severity.

## CHRONIC CHOLECYSTITIS

Babcock divides chronic cholecystitis into three symptomatic stages:

"A stage marked by reflex and toxic symptoms—the stage of cholecystitic indigestion and systemic toxæmia. This represents a period of

ten to twenty years. The evidence of gall bladder infection in this stage is not found in the physical examination of the right, upper quadrant of the abdomen, but is to be determined by deductive reasoning. The history which the patient gives usually reveals the source of the infection, and it has a relationship to the development of certain secondary infective processes that experience has shown invariably express cholecystitis<sup>1</sup>."

The symptoms of the first stage of cholecystitis are grouped as—

- (1) Digestive and intestinal.
- (2) Arthritic and muscular.
- (3) Cardio-vascular, respiratory, cerebrospinal and eye symptoms.

We are all familiar with the reflex stomach disturbances of chronic cholecystitis—the gastric syndrome that causes the patient to report periodically to the physician for relief from attacks of so-called biliousness and indigestion. "The dyspepsia is of the qualitative rather than the quantitative type of duodenal ulcer. The inability of the patient to handle certain stable articles of diet should suggest biliary disease<sup>1</sup>."

Mayo says, "The stomach is held responsible for more complaints than any other organ in the body, yet it is not often the real source of symptoms, but rather a mouth piece speaking for a host of other organs". Crile has likened it to a fire alarm box.

The derivatives of the midgut are primitive and closely related embryologically, physiologically and anatomically. The control of the primitive intestine, which includes the accessory organs of digestion, is dependent upon the hormones of the endocrine system, through their co-relation with the blood stream and sympathetic nervous system. The explanation of stomach symptoms is obvious when we understand that the control of the pylorus is vested in the duodenum rather than the stomach. Irritative lesions of the intestinal tract, from the pyloric antrum to the splenic flexure of the colon, or the accessory organs of digestion, cause pylorospasm and retention of food, which ferments and causes gastric distress.

The operative mortality in the first stage of cholecystitis is not in excess of one per cent. The infection is still confined to the gall bladder and the metastatic processes are not marked. It is the ideal time to operate.

"The second stage of gall bladder disease

\*Read before the Surgical Section of the Ohio State Medical Association, during the Seventy-Sixth Annual Meeting, at Cincinnati, May 2-4, 1922.

comes after ten to twenty years of subacute infection, during which time gall stones form. This stage is characterized by movements of the calculi and recurrent attacks of colic and acute inflammation. The stage of acute biliary colic is usually observed between the age of thirty-five and fifty-five."<sup>1</sup>

*Gall stone formation* is a late stage of cholecystitis. Gall stone colic is not common. Gall stones may persist after the infection has disappeared and cause little trouble, except in a mechanical way. After gall stones have formed they may cause trouble in the gall bladder, cystic, hepatic or common ducts, or in the intestinal tract.

*Jaundice* is a symptom upon which much stress has been placed in the diagnosis of gall stones, yet it is often absent. Jaundice is a late manifestation of biliary disease, and when due to gall stone impaction, it is always preceded by colic, and the yellow tinge comes on gradually and continues until the obstruction is removed. It is rare to meet with the deep greenish-yellow type of skin pigmentation except in malignant disease. The rule is to find a shrunken or atrophied gall bladder when the common duct is obstructed by stone, and a dilated or greatly distended gall bladder when the obstruction is due to a lesion of the ampulla, pancreas or other structures prone to cancer invasion (Courvoisier law).

The infected non-calculous gall bladder (the so-called subacute type of infection), which shows lymphocytic infiltration and fibrosis, does not change the gross exterior of the gall bladder, nor does it alter the appearance of the mucosa. This type of gall bladder does not cause jaundice, yet we recognize the muddy skin and stained conjunctiva so constantly present in the long standing toxæmias.

The operative mortality of the second stage of cholecystitis is three to five per cent.

A patient with gall stones is constantly in danger of one or more of the serious complications, which we recognize as the third or final stage of biliary disease; *namely*, impaction of the cystic duct, with empyema or gangrene; obstruction of the common duct with deep jaundice and the Charcot syndrome; acute pancreatitis, rupture of the gall bladder, with general peritonitis, intestinal obstruction (obturation type), or carcinoma from long continued calculous irritation.

Complications marking the third stage of chronic biliary disease are frequently observed between the ages of forty-five and seventy-five. The operative mortality of the final stage of biliary disease, with its attending complications, is in excess of twenty per cent.

Incidentally, an infection confined strictly to the gall bladder rarely causes alarming local symptoms. The gall bladder is sparsely supplied with lymphatics and contains few sensory

nerves. If the walls of the gall bladder become infiltrated, the lymphatics are blocked and absorption does not occur. A chronic cholecystitis may exist, but if drainage is not interfered with, the gall bladder may be normal in size and appearance. A gall bladder of this character is not sensitive to local palpation or percussion. Conversely, in a case in which the infection has extended to the neck of the gall bladder, producing oedema and obstruction of the cystic duct, the symptoms are acute. The patient complains of an acute, colicky pain, which radiates to the chest or abdomen and causes rigidity of the recti. The constitution reaction is marked, and the patient is sick because of sepsis. These cases are frequently mistaken for acute appendicitis. In short, stone impaction in the cystic or common ducts, when accompanied by infection, always produces acute symptoms, because the infected tissues are rich in lymphatics. The gall bladder may be full of stones, pus and inflammatory debris, yet the temperature never reaches 100, proving that chills and fever are not the manifestation of the presence of pus, but the degree of absorption of the infective material.

#### DIFFERENTIAL DIAGNOSIS

The right, upper quadrant of the abdomen is a compact space containing certain organs, consequently, the confusion in recognizing biliary disease, involvements of the kidney and ureter, inflammation of the appendix, lesions of the pancreas, or ulcers of the stomach and duodenum.

*The all important thing is the clinical history.* The careful examination of the patient, recourse to the X-ray, cystoscope and laboratory refinements usually enables one to reach an intelligent conclusion as to the primary seat of the trouble.

It is not to the diagnostic skill of the physician to say that a patient has cholecystitis or gall stones, when there is a history of pain, colic and collapse, followed later by a chill, temperature and the *yellow flag of jaundice*. These cases should be recognized early, and treated while the infection is confined to the gall bladder.

Of course, aside from the history and physical examination of the patient, studies of the blood, stomach and duodenal contents and feces are supplemental aids in the making of a correct diagnosis. The value of the stomach analysis has been very much over-rated. Personally, the use of the X-ray has been disappointing.

It requires time for a general diagnostic survey of the patient who presents himself with the history of *chronic stomach trouble*. He had best be hospitalized for a period of observation. Barker has said, "The patients who expect a complete diagnosis of an obscure condition in a single day, or between trains, or in an hour intervening between shopping expeditions in a large city, are growing fewer."

#### MEDICAL TREATMENT

Einhorn's diagnostic methods—the X-ray, duo-

denal bucket and string test, and his therapy of fasting, absolute rest and colonic flushings, have never appealed to me as curatively rational—in lieu of the pathology of cholecystitis. The periodic quiescent period of the infected gall bladder will manifest itself, with or without treatment.

Lyons<sup>3</sup> and others<sup>8</sup> have offered methods of utilizing the duodenal contents for the study of infections within the biliary passages. Lyons' method is based upon Meltzer's<sup>9</sup> discovery that the introduction of magnesium sulphate into the duodenum is followed by a relaxation of the sphincter (Oddi) of the bile duct and by the outflow of bile into the duodenum. This method, viewed diagnostically or therapeutically, must have further clinical approbation before it justifies general adoption. We believe the accurately described and segregated specimens of A, B and C bile to be impossible.

As an aid to differential diagnosis, Mayo<sup>5</sup> says that, "ninety per cent. of the supposed diseases of the stomach are not entities, but rather groups of symptoms masquerading as diseases, and named accordingly". For example, if we analyze, say, one hundred gastric cases, the disturbances may be divided into four groups—

"Ten per cent. of the cases with gastric symptoms will have an actual disease of the stomach, of which ulcer and cancer are the most frequent."

"Thirty per cent. of the cases have reflex stomach symptoms due to irritative lesions which pervert the physiology of the derivatives of the midgut—so appendicitis, cholecystitis, ulcer of the duodenum, intestinal tumors, tuberculous peritonitis and hernia are the best examples."

"Thirty per cent. of the cases in which the stomach is disturbed are due to constitutional maladies, such as pernicious anemia, tuberculosis, syphilis of the central nervous system, as in tabes, or they result from valvular heart disease, nephritis or cirrhosis of the liver."

"This leaves thirty per cent. of the cases in which stomach symptoms occur to be accounted for. These result from an unstable nervous system and congenital physical defects. We are to eliminate atonic dilatation of the stomach, gastroptosis, Glenard's syndrome and the various neuroses, secretory and otherwise, of the gastrointestinal tract."

#### FUNCTIONS OF THE GALL BLADDER

The functions of the gall bladder were commented upon in a recent editorial, which said, "The<sup>5</sup> value of the gall bladder as a lucrative stone quarry for the artisan surgeon is admitted by all, but when the triumphant operator has removed it, life and gall seem to flow on as if the offending member had never had any function but that of lithogenesis."

It is fortunate that the body can adapt itself to the loss of the gall bladder, and, obviously, for this reason, we are led to believe that it has no

*strikingly useful purpose.* Let us concede that the gall bladder is a reservoir for concentrated bile; that its mucosa secretes a specific hormone, and the viscus plays an important role in maintaining intrahepatic pressure. Conversely, when the gall bladder is diseased, it loses its physiological attributes, and justifies the surgeon to engage in the *adventure of its ablation* to effect a cure.

#### THE TECHNIQUE OF CHOLECYSTETOMY

The importance of a good anesthesia is best appreciated by the surgeon. The secret of success in gall bladder surgery is vested in a good exposure of the operative field. We have never been greatly impressed with the advantage claimed for the various modifications of the long, right rectus incision, and in routine gall bladder work we infrequently attempt to dislocate the liver by the use of the table lift. The gall bladder can be readily freed from the liver margin (from without in) and dissected back to a point within reasonable safety of the common duct. If the dissection has been in a connective tissue plane, there will be very little bleeding. We make no attempt to isolate the cystic artery and ligate it independent of the cystic duct. We believe that time is saved and the operation expedited by transfixing the pedicle and ligating the duct and artery *en masse*. Chromic catgut No. 2 is used. The stump of the cystic duct is not cauterized.

We are closing the abdomen without drainage in an increasing number of our cholecystectomies. Incidentally, it seems strange that the surgeon will amputate an inflamed appendix, cauterize the stump, drop the cecum into the abdomen and close the wound without giving a thought to the idea of drainage. In gall bladder surgery, the structures dealt with are bacteriologically clean in comparison to the intestinal tract. In the presence of a dry operative field, there is no sane, surgical justification for gauze or tube drainage. The stump of the cystic duct should be let alone in its retracted position, and no attempt made to peritonealize the liver defect. The oozing which occurs after a careful plane dissection of the gall bladder (from the liver) is trivial, and can be controlled by the pressure of a hot pack. The bugaboo of the slipping ligature applied to the cystic artery, and dangers of bile leakage are over-emphasized in the cases carefully operated upon, and properly selected for closure without drainage. Convalescence is more prompt and smooth than when drainage is used.

We have had no cases of common duct obstruction which seemed to warrant an attempt at primary suture and the closure of the abdomen without drainage.

#### CHOLECYSTECTOMY VERSUS CHOLECYSTOSTOMY

Drainage of the gall bladder may be necessary as a life saving procedure in cases in which

there is an insurmountable obstruction of the common duct, in pancreatitis, acute empyema with extensive oedema; in certain cases of gangrene or intense jaundice with inaccessible stone impaction. If drainage is used for the purpose of curing the subacute or chronic types of cholecystitis, it should be persisted in for a long period of time, for the infection is deep seated in the walls of a chronically inflamed gall bladder.

It has been said<sup>6</sup> that excluding the conditions in which conservation for drainage is necessary, every gall bladder worthy of being operated upon may, with advantage, be removed.

The technique of cholecystectomy has been so perfected, that there is no argument against the procedure from the standpoint of mortality. Certainly, the lessened post-operative morbidity argues in its favor. However, the operative results in gall bladder surgery depend more upon the time when we operate than how we operate. The removal of the diseased gall bladder is prophylactic against the recurrence of calculi and cholecystitis. We practice the routine removal of the appendix, because of the frequency of coincident infection.

#### POST-OPERATIVE MORBIDITY

Our best clinical results have followed cholecystectomies in patients suffering from vesical calculi, with or without cystic duct impaction and infection. We have been disappointed in curing a certain percentage of patients subjected to cholecystectomy—the type of patient, who from the history, gastro-hepatic syndrome and chronic cholecystitis, demonstrated at operation, and from the pathological report, one might reasonably expect a prompt recovery. McCarty has emphasized the frequency of an associated hepatitis with periductal lymphocytic infiltration and fibrosis, and says that such a condition remaining in the liver after cholecystectomy or cholecystostomy might explain at least, in part, the fact that following these operations, some patients continue to have trouble similar to their pre-operative attacks. Incidentally, we have been impressed with the clinical manifestations in this type of patient, and have observed that there is a slow, yet progressing improvement, or, better, a post-operative convalescence stretching over a period of from twelve to eighteen months. We have been given to speculation as to whether the ultimate cure was due to a cessation of associated hepatitis or to the re-establishment of sphincteric control of the common duct after the normal extra-hepatic duct dilatation ensues.

Willis<sup>11</sup> believes that many normal gall bladders are sacrificed in the routine performance of cholecystectomy for the non-calculous types of cholecystitis. He cites his own experience of faulty diagnosis in forty per cent. of twenty-five non-calculous cases, and quotes Jacobson<sup>12</sup> to the

effect that, of 365 patients operated upon at the Peter Brent Brigham Hospital, in only fifty instances, (13.7 percent.) were stones absent. Of these fifty non-calculous cases, sixteen were found to have normal gall bladders when examined histologically—so that one patient out of every three subjected to cholecystectomy for *simple cholecystitis* parted with a normal gall bladder.

In our last series of 386 biliary cases, 230 showed calculi, and 156 were non-calculous. If we are to put faith in the pathological reports, our errors in faulty diagnosis do not coincide with the statements of Willis and Jacobson, since no specimen examined histologically failed to show *lymphocytic infiltration and fibrosis*.

We feel certain that a majority of the so-called surgical failures after cholecystectomy can be traced directly to neglect in the matter of eradicating septic foci (teeth, tonsils, sinuses) or failure to deal with complicating intra-abdominal lesions (appendicitis, pancreatitis, gastric or duodenal ulcer), at the time of the primary operation.

The therapeutic problem is one that can best be solved by coordination between the physician and surgeon.

Accidental injury to the bile ducts occasionally occurs, but usually in the presence of some marked, yet unrecognized anatomical defect.

Post-operative biliary fistula (after ectomy or ostomy) results from strictures of the cystic or common ducts, overlooked calculi or recurrent cholecystitis. The mortality following secondary operations is in excess of ten per cent. We have never been impressed with added surgical difficulties (hemorrhage and visceral perforation) in the removal of a gall bladder that had been previously drained.

#### OPERATION IN THE PRESENCE OF JAUNDICE

The patient with deep (persistent) jaundice is a poor surgical risk. Hemorrhage is the greatest danger. In cholemia, the bile pigments unite with the calcium of the blood, causing calcium exhaustion and lengthening coagulation time. There is marked dehydration, and the bile pigments effect all tissues of the body. Crile<sup>7</sup> has well indicated the plan of attack in dealing with biliary problems in the presence of jaundice. The cholemic patient tolerates the intravenous administration of calcium chloride—5 to 10 C. cm. of a ten per cent. solution given daily. Large quantities of water should be given per mouth; the diet should be rich in carbohydrates, and the liver cells should be supplied with food from which to make glycogen and reinforce the liver function, by the use of a fifteen per cent. solution of glucose, given by the Murphy drip. Blood transfusion before and after operation shortens the coagulation period.

#### MORTALITY

Few patients pass to an advanced stage of



gall bladder disease without some evidence of cardio-vascular impairment. Myocardial changes add to the dangers of operation in the long standing cases, and myocarditis is the greatest single cause of operative mortality. The post-operative syndrome of myocarditis is easily recognized, for within twenty-four hours after operation, there is evidence of a failing heart—a pulse rate in excess of 120 and a rather distressing type of restlessness. Later, mild confusional delirium alternates with periods of consciousness marked by acute mental anxiety; and, after several hours, is followed by imperceptible radials, a cold clammy skin, great restlessness and death, after the patient has been pulseless for hours. This is a myocardial picture for which therapeutic measures act as *nil*. True, it is not always possible to definitely say, in a pre-operative way, the exact extent of the myocardial impairment, yet with the routine practice of greater care in the physical examination of this type of patient, we can better classify our patients as good or bad risks. We can at least treat them preliminarily, remembering that only a small per cent. of the uncomplicated biliary cases are emergency affairs, and by so doing, we can materially reduce the operative mortality.

Chronic cholecystitis is often associated with a varying degree of hepatitis and pancreatitis, which are looked upon as extensions of the primary gall bladder infection by way of the lymph vessels and blood stream.

#### CONCLUSION

In conclusion, I wish to quote Babcock, who says, "We consider inflammations of the gall bladder as bacterial infections of childhood or early adult life, as progressing for years through the stage previously mentioned, and, that there is a wide need for earlier surgical intervention, so that the patient, who starts at the age of twelve or fifteen years with cholecystitis and dyspepsia, may not at thirty-five have gall stone colic, and may not at sixty-five succumb to cholecystic gangrene or pancreatitis."

283 E. STATE ST.

#### REFERENCES

1. Babcock, W. Wayne: Cholecystectomy and Cholecystic Toxaemia, *Jour. A. M. A.*, Oct. 23, 1915, Vol. lxx, pp. 1428-1432.
2. Mayo, W. J.: Innocent Gall Stones a Myth, *Jour. A. M. A.*, pp. 1021, (April 8), 1911.
3. Lyons, B. B. V.: Can the Gall Bladder, Biliary Ducts and Liver be Medically Drained? *Am. Jour. Med. Sc.*, October, 1921.
4. Mayo, W. J.: Collected Papers of the Mayo Clinic, 1916.
5. The Purpose of the Gall Bladder, *Jour. A. M. A.*, Editorial, pp. 584, (February 25), 1922.
6. Moynihan, B. G. A.: Gall Stones and Their Surgical Treatment.
7. Crile, George W.: The Technique of Gall Bladder Surgery in the Presence of Jaundice. *Surg. Gynec. and Obst.*, pp. 469, November, 1921.
8. Smithies, Karshner and Oleson: Non-Surgical Drainage of the Biliary Tract, *Jour. A. M. A.*, pp. 2036, (December 24), 1921.
9. Meltzer, S. J.: The Disturbances of the Laws of Contrary Innervation as a Pathogenic Factor in Diseases of the Bile Ducts and Gall Bladder, *Am. Jour. Sc.* 469, (April), 1917.
10. McCarty, N. C.: Relation of Hepatitis to Cholecystitis, *Minnesota Med.*, 1921, Vol. iv., p. 377.
11. Willis, A. M.: Ideal Cholecystotomy, *Jour. A. M. A.*, pp. 942, (April), 1922.
12. Jacobson, Conard: Gall Bladder Disease. A Statistical Study, *Arch. Surg.* 310 (September), 1920.

## The Present Status of Gall Bladder and Pancreatic Disease as It Pertains to Etiology, Diagnosis and Treatment\*

By KELLEY HALE, M.D., Wilmington

*Editor's Note.*—Dr. Hale feels that it is the duty of the abdominal surgeon to impress upon his medical friends the importance of early recognition of gall bladder disease and to stress the fact that a gall bladder once diseased is always diseased. Fortunately the operative mortality in gall bladder surgery is lower than it is in appendicitis, although the laity think the reverse. They should be better informed so that they would not dread surgical interference as they do.

### ETIOLOGY:

When we come to consider the predisposing causes of gall bladder disease, we are struck by the undeniable importance of two factors, namely, age and sex.

The maximum incidence of gallstones as shown by Courvoisier and others is from 60 to 70 years with females predominating. That means that many of these patients have had symptoms at least twenty years. The general tendency of women to adiposity and a sedentary life as they approach 40 brings about a general relaxation of tissues with stagnation of the bile stream and a greatly lowered resistance to infection.

Outside of congenital anomalies, the exciting

cause of gall bladder disease is infection. Rose now has shown beyond a question of doubt that focal infection plays a part and that germs may reach and attack the gall bladder through the blood stream or lymph channels. Since the colon bacillus is so frequently found in the gall bladder, either ascending infection from the duodenum through the bile ducts or descending infection by germs having run the gauntlet of liver cells, must be the methods of infection by it of this viscus.

We may possibly prevent a certain per cent. of gall bladder cases from developing by eradicating focal infection: but as long as the colon bacillus possesses the power to become a pathogenic germ, we will continue to have trouble in the upper right abdominal quadrant. In the tract as in the appendix, I believe that serious

\*Read before the Surgical Section of the Ohio State Medical Association, during the Seventy-Sixth Annual Meeting, at Cincinnati, May 2-4, 1922.

symptoms can be attributed to obstruction, either partial or complete.

#### DIAGNOSIS

The diagnosis of typical gallstone colic or colic due to cholecystitis is practically as simple as the diagnosis of appendicitis, but in 95 per cent. of cases, we do not have classical symptoms. In these cases as in all others, a painstaking history is essential to a correct diagnosis. Even though a careful examination does not reveal sufficient evidence, nevertheless the skilled clinician or surgeon will gain certain impressions from the case in hand, sufficient to give a direct or indirect tentative diagnosis.

Diagnosis of gall-tract disease in the *first stage* is of great importance as by instituting early treatment we may avoid some of the possible serious complications of the *second* and *third stages*. The *first stage* is characterized by a train of reflex symptoms, without pain, such as nervousness, dyspepsia, paroxysmal vomiting, sensation of weight in the stomach, sour eructation, constipation or diarrhea, perhaps loss of flesh, anorexia and general weakness. Freidman has made a careful study in gall bladder disease of tender points, elicited on pressure in the continuation of the right axillary, scapular and posterior median lines at the gall bladder level. He finds these tender points in nearly all cases of gall bladder disease.

In the *second and third stages*, where there is definite localized pain and tenderness over the gall bladder, I have found the pin test at times quite reliable. Fever may or may not be present. With a large palpable mass in the right upper abdominal quadrant and a rather classical train of acute symptoms preceding its formation, one would feel quite safe in making a diagnosis of cystic gall bladder with or without pus, due to cystic duct occlusion.

*Jaundice* is an indication of common duct obstruction usually, due to one of many causes, chief among them being impacted gall stone. I feel that the X-ray should play a part in the diagnosis of gallstones. However, it should be made without the patient's knowledge during the course of a stomach examination. I am quite anxious to know what the final verdict will be in the case of the duodenal tube as a diagnostic measure in detecting gall bladder and pancreatic disease as advocated by Lyons, Meltzer and others. I anticipate much good as a result of these studies because we will recognize our cases of gall bladder disease earlier and in greater numbers than formerly.

At present it is possible to make a rough estimate of the *functional capacity of the pancreas* by an examination of its ferments, also by examination of stools for fat.

Because of the intimate association of the common duct to the head of the pancreas, and since the duct of Wirsung is usually joined to

the common duct before entering the duodenum at the papillae of Vater, we, therefore, have a situation that is quite conducive to secondary involvement of the pancreas from an infected gall tract. Infection may also be carried through the lymphatics and possibly the blood stream. A gallstone impacted in the ampulla of Vater is certain to cause pancreatic disease. Gall bladder disease certainly is a causative factor in cases of pancreatic abscess and cysts of the pancreas. Judd has recently noted the association of cholecystitis and gallstone disease with pancreatic cysts. We may say that in many cases of gall bladder disease in the second and third stages, that the pancreas has cast its shadow into the clinical picture.

As we occasionally see glycosuria clear up after extraction of bad teeth, we also see it disappear after successful gall bladder surgery.

I have been more interested in how to diagnose pancreatitis at operation than before operation. There is a paucity of literature on this point. I presume that when an author reports the presence of pancreatitis, he thinks that the reader knows how to recognize it. W. J. Mayo recognizes pancreatitis by the enlarged lymph nodes along the common bile duct, while others detect it by the presence of induration and enlargement of the head of the pancreas. I believe that we would gain much more knowledge of the pancreas if we were to tear a small hole in the transverse meso-colon and make our palpation through it.

While an interne in the St. Louis City Hospital, I had a case of acute hemorrhagic pancreatitis due to a perforated gastric ulcer. It was diagnosed before death and the diagnosis confirmed post mortem. Terrific pain, with shock and board-like epigastric rigidity were the cardinal symptoms.

#### DIFFERENTIAL DIAGNOSIS

In the great majority of cases we can say that there is cholecystitis, and, from the history in others, add a provisional diagnosis of gallstones.

When jaundice, unaccompanied by pain gradually develops, malignancy should be suspected. Absence of pain in jaundice is not however an infallible index to malignancy. The X-ray has made it possible to differentiate between diseases of the stomach, duodenum, colon, right kidney, and gall bladder disease in a great many cases. To differentiate between perforation of the biliary and gastro-intestinal tract is often impossible. Appendicitis is so often associated with gall bladder disease that it is impossible to rule it out.

I have found that congenital bands can simulate gall bladder disease. There are numerous rare conditions affecting the gall tracts that are more important from the standpoint of treatment than of diagnosis.

## TREATMENT

Treatment, be it medical or surgical, is being advanced constantly toward the ideal and some wonderful approaches have been made in that direction. The ideal will however always be like the pot of gold at the end of the rainbow.

Practically, we must be content with the maximum results. The mortality rate in gall bladder surgery is constantly being lowered. Three factors enter into this result.

1. Cases are recognized earlier.

2. Patients are more carefully studied and prepared for operation.

3. Cholecystectomy, when properly performed, has been a great advance over cholecystotomy. But the law of compensation holds true here notwithstanding. To every advantage, one must reckon with a certain disadvantage.

Nature has been kind to the surgeon, by placing most of the organs that he loves to cut out, where they are readily accessible. However it may be that the surgeon has learned to cut out the easiest things first and the gall bladder and pancreas have been left to the last. Nature has very beautifully set the scenery for the surrender of the gall bladder, allowing the cystic duct to be readily isolated and for the surgeon's convenience, the cystic artery has been placed in front instead of behind the cystic duct. Nature has not kept to the straight and narrow path but has sown a whole handful of wild oats, and things in the region of the gall bladder are not always what they seem to be.

Even a casual study of the literature will show that surgeons are reaping a big harvest of anomalies in bile ducts. Efforts have been made to avoid these accidents by substituting for cholecystectomy, internal drainage of the gall bladder into the duodenum or stomach and a so-called *ideal cholecystotomy*. It has been my practice to follow the crowd, because it follows a composite idea that is generally much safer than any individual idea.

In performing cholecystectomy, most operators prefer to remove the viscus from below upward, but occasionally it is necessary to reverse the procedure because of the inaccessibility of the cystic duct and artery.

I have worked out a modified cholecystectomy that has relieved me of much anxiety in certain cases, in which I am not quite sure that the bile ducts are normal. Others may have used the same method but I have not seen it described. The cystic duct is partially isolated, the cystic artery is clamped, the gall bladder is dissected out from above down. It is best to clamp the cystic duct with a rubber protected forcep at first. There are several advantages to this method:

1. It shows whether the cystic artery has been clamped or not; also the presence of a second cystic artery.

2. If a duct is encountered entering the neck of the gall bladder or the cystic duct, one might avoid injuring it, or if severed it could be readily reunited.

3. By this method, the possibility of injuring the hepatic or common bile duct is greatly minimized. If the hepatic duct should be accidentally severed, you have the cystic duct intact so that it could be used in the repair.

For pancreatitis, Deaver and W. J. Mayo advocate drainage of the common bile duct. This can be accomplished by means of the T tube or through the stump of the cystic duct.

In cases of stone in the choledochus, Reid and Halstead advocate drainage by the latter method with closure of the choledostomy wound with fine sutures and the introduction of special cigarette drains having the gauze rolled on the outside.

One of the most perplexing problems in abdominal surgery is to know what to do in the case of *increasing or severe jaundice*. The patient after a time will either get better or grow worse. To operate on the wrong patient at the wrong time is a calamity, while if we operate on an intensely jaundiced patient that nature can not relieve, knowing the great danger from hemorrhage and shock, we may nevertheless save a life. In deciding to operate or not there are other factors to consider that are often of greater importance than jaundice.

A *ruptured gall bladder* is a grave condition and demands early surgical treatment. Unfortunately some of these cases are not seen in time by the surgeon to be saved. Cholecystectomy is the operation of choice.

After making a study of the gall ducts in 28 bodies at the College of Medicine, University of Cincinnati, this winter, I decided that I had better be up on the methods of gall duct repair. Where it is impossible to unite a severed duct over a rubber tube or about a T tube, the best and simplest way to execute it is by the method of W. J. Mayo, in which the duct is united to the duodenum. Many other methods have been employed but are not so practical.

In the space allotted to me, it is impossible to give to the pancreas the attention that it deserves, but in the discussion, I hope that Dr. Haines will dilate upon this phase of the subject. Outside of *pancreatitis*, the surgeon is called upon to treat *pancreatic abscess* and *pancreatic cysts* more often than any other affection of this organ. Tumefaction over the pancreas is the one cardinal objective symptom in either affection, but tumefaction in this region is not always pancreatic abscess or pancreatic cyst. A few years ago I had a case of sub-hepatic abscess from a perforated carcinomatous stomach that simulated somewhat pancreatic abscess.

Recently a patient entered the hospital with marked epigastric swelling that extended from the ensiform cartilage to the umbilicus. The

patient had been suffering for three or four weeks with a severe exacerbation of a chronic cholecystitis. Slight jaundice was present. The tumor had developed gradually and was quite tender. We thought that the swelling came from the pancreas, but in less than a week, it had completely subsided. At operation the foramen of Winslow was completely blocked by a marked pericholangitis and evidently the epigastric swelling was due to an accumulation of serum in the lesser peritoneal sac brought about by the inflammation, and blocking of the foramen.

Pancreatic abscess can be drained either through the anterior abdominal wall or as Ochsner has successfully done, through the lesser peritoneal sac posteriorly.

Judd has reported an interesting series of pancreatic cyst cases. The exposure can be made through the gastric-colic ligament or lesser omentum. If the cyst cannot be extirpated then drainage is indicated, with attachment of cyst to the parietal wall first when possible. One should be on the alert for areas of fat necrosis for many cases of serious pancreatic disease have been recognized in this way.

#### CONCLUSION

In conclusion I think it is the duty of the abdominal surgeon to impress upon his medical friends the importance of early recognition of gall bladder disease and that a gall bladder once diseased is always diseased. They should be impressed with the fact that the operative mortality is lower than it is in appendicitis; the laity think that it is the reverse. This is but a reflection from the medical man.

#### DISCUSSION

Dr. L. G. Bowers (Dayton):—The subject of gall bladder disease is always a live topic. I desire first to discuss some of the factors in diagnosis. I think that one of the essayists did not give proper credit to the value of X-ray examination. It is not the positive findings in the radiograph that we should be so much interested in as the negative; for instance, when we have a history of upper abdominal lesion, which might be some gall bladder or stomach disease or disease of the pancreas, X-ray examination might be quite valuable in showing if the stomach or duodenum has no incisures or deformity, or in other words is normal.

Again we might have a normal stomach or duodenum but the X-ray would show it pulled over to the right and fixed by adhesions, which would be an indication that the adhesions were caused by an inflammation of the gall bladder; and quite frequently in these adhesions of gall bladder to duodenum, the duodenum will not only be fixed, and possibly deformed, but may be dilated.

Again the X-ray may tell us, in some instances, if we have a large pancreas as shown by the

barium in the duodenum, all of which findings are good negative evidence in the diagnosis of gall bladder disease.

The essayist neglected to mention one other point, that we should always have a blood Wassermann test made in all these chronic abdominal conditions.

I wish to speak about one condition of the gall bladder which requires as early an active treatment as an acute appendix,—those cases of sudden enlargement of the gall bladder usually caused by a single stone impacted in the cystic duct, obstructing its blood supply, and consequently producing an early degeneration of the gall bladder and even gangrene. These cases are not infrequent and are ushered in as a sudden acute upper abdominal crisis with early formation of tumor, moving up and down with respiration, acute tenderness and a rapid rise of pulse and temperature, and should receive immediately operative treatment.

---



---

#### PROPAGANDA FOR REFORM

*Eto-So-Erc.*—A circular letter, signed T. M. Berry, M.D., New Orleans, recommends the intravenous use of "Eto-So-Erc" ("Creosote" spelled backward) in the treatment of pulmonary tuberculosis, influenza, pneumonia, bronchitis and pulmonary gangrene. Eto-So-Erc is stated to be a "highly purified form of Beechwood Creosote, especially prepared for intravenous administration". It is asserted that "it comes indirect contact and becomes fixed to the pathologic tissue and bacteria". Creosote is credited with being of some value in tuberculous infections when taken orally. It is most probable that any benefits derived from the administration of creosote are due to the local effect on the alimentary canal, on the bronchitis and to the antipyretic action; hence, the benefits would not be obtained from its intravenous injection. The argument is advanced for Eto-So-Erc that, in respiratory infection, tubercle bacilli are destroyed by blood containing small amounts of creosote. This assertion is misleading because the tubercle bacilli in the lungs are embedded, in the tissues and therefore, are inaccessible to the creosote said to be contained in Eto-So-Erc. To give creosote, a readily absorbed drug intravenously, is irrational and unscientific. (Jour. A. M. A., Aug. 5, 1922, p. 492).

*Zinc Stearate Dusting Powders.*—Untoward effects from the accidental aspiration of zinc stearate dusting powder by infants are reported. In some cases, bronchopneumonia, of a more or less fulminating type, has ensued. In other infants, an acute toxemia was the most conspicuous symptom. The zinc stearate container, with its large perforations, as now prepared for the nursery, appears to be a distinct menace to the health of infants. (Jour. A. M. A., Aug. 19, 1922, p. 663).

# The Diagnosis and Treatment of Asthma and Hay Fever\*

By MILTON B. COHEN, M.D., Cleveland

*Editor's Note.*—The newer concept of the diagnosis and treatment of asthma and hay fever is based on anaphylaxis. Cutaneous and intra-cutaneous tests are now available for determining those who are sensitive or not to protein. Symptoms in sensitized patients may be seasonal or perennial and this distinction may frequently aid in determining the causal factor. Treatment, according to Dr. Cohen, resolves itself into removal of the offending protein from the patient's environment, elimination of the offending foods from the diet, surgical treatment of any foci of infection, and specific desensitization.

**T**HE MODERN conception of hay fever dates from 1873, when Blackley found that certain pollens, when inhaled by himself, caused a severe attack of the disease. When these pollens were rubbed into the scarified skin an urticarial wheel resulted. Dunbar demonstrated that this skin reaction could be produced by salt solution or alcohol extracts of the pollen as well as by the whole pollen.

## GENERAL CONSIDERATIONS

The proper interpretation of these observations was not made, however, until the work of Richet, V. Pirquet, Schick, Otto, and Rosenau and Anderson showed that, under certain circumstances, minute amounts of certain substances, when injected into the body, could produce serious toxic symptoms and even death.

If for example, a guinea pig be given a sub-cutaneous injection of horse serum, and after a period of from two to three weeks a second injection be given, a remarkable series of symptoms speedily develop. These symptoms are essentially respiratory in character. The animal so injected will within a minute vigorously rub its nose, sneeze spasmodically, and then begin to breathe rapidly. The breathing becomes more and more labored, the mucous membranes become cyanotic, urine and feces are passed involuntarily, and tonic and clonic convulsions ensue. The respiration ceases, is resumed, becomes weaker and weaker and finally stops. The anatomic picture is that of extreme over-distention of the lungs caused by constriction of the muscles of the bronchioles. Richet gave to this series of symptoms the name *anaphylaxis*, because the first dose of serum instead of increasing the guinea pig's resistance to horse serum has lowered it, or in other words has made the pig more sensitive to horse serum. Such a pig is spoken of as *sensitized*. It has been found possible to sensitize animals to all protein materials. The sensitization is specific however, *i. e.*, an animal sensitized to horse serum can be poisoned only with horse serum, or one sensitized to egg albumin, with egg albumin.

## ASTHMA AND ANAPHYLAXIS

In 1910, Metzger suggested that asthma, until that time supposed to be of nervous origin, was

\*Read before the Medical Section of the Ohio State Medical Association, during the Seventy-Sixth Annual Meeting, at Cincinnati, May 2-4, 1922.

really a manifestation of anaphylaxis. He based this suggestion on the close resemblance of the symptoms of experimental anaphylaxis in the guinea pig to those of human asthma. Since that time many contributions to our knowledge of these subjects have been made, and it is now generally agreed that practically all cases of hay fever, and about half the cases of spasmodic asthma are due to sensitization to one or more proteins.

These proteins gain entrance to the body in four ways, they are:

1. *By inhalation.*—In this way we give entrance to those protein materials which are suspended in the air and in the dusts of various industries, examples of which are the pollens of various plants, horse and dog danders and flour dust.

2. *By ingestion.*—All food proteins may enter by this route.

3. *By infection.*—All bacterial proteins which have gained entrance to the body by infection, and the products of bacterial action on infected tissue may give rise to anaphylactic symptoms.

4. *By absorption.*—Absorption plays a negligible role in human sensitization as the unbroken skin permits no entrance to protein.

## SKIN REACTIONS

The skin reaction noted by Blackley has been utilized by various workers, among them Goodale, Schloss, Coca, Vander Veer, Rackemann, Scheppegeggrell and Walker. The consensus of opinion is that the skin reaction is an accurate index of the sensitized state.

There are two ways of testing the skin, neither is ideal. One must be familiar with the technique of each, with its field of usefulness, and with its limitations. The one most generally used is the *cutaneous test*. In performing this test one makes as many linear cuts on the surface of the forearm as there are proteins to be tested and two extra ones for controls. These cuts should be deep enough to enter the dermis but not to draw blood. A small amount of dry protein powder is placed on each cut and a drop of N/10 NaOH solution is added to dissolve the protein. A drop of NaOH solution is placed on each control. After 30 minutes the proteins are wiped off and the reactions are read. A positive reaction is indicated by a dis-

tinct urticarial wheal. The controls must be negative. This test may be made with all proteins.

The *intracutaneous test* is much more delicate than the cutaneous one, but is more likely to give false positive results, and is therefore much more difficult to interpret. Its chief field of usefulness lies in checking a doubtful cutaneous reaction or a negative one, when the history seems to indicate an etiological relationship between the protein and the patient's symptoms. Proteins, which are soluble in salt solution or in distilled water, may be used for this test. As many proteins are soluble only in alkaline solutions this test is limited in its application. Fresh solutions of each protein must be made at the time of the test. These are injected into but not beneath the skin, the sites of the injections being at least two and one-half inches apart. A positive reaction is indicated by the development of an urticarial wheal usually surrounded by an area of erythema, which appears in from ten to thirty minutes. The accuracy of interpretation of both of these tests varies directly in ratio with the number of controls and with the experience of the investigator. The use of an adequate number of controls cannot be urged too strongly.

#### CLASSIFICATION OF HAY FEVER AND ASTHMA

Based on the results of these tests cases of hay fever and asthma may be divided into two classes, *namely*, (1) those who are sensitive to protein and (2) those who are not sensitive, (See Chart 1). The former class, which comprises 100 per cent. of hay fever cases and 50 per cent. of asthma cases, is further subdivided into two groups, (a) those who have symptoms seasonally and (b) those whose symptoms occur throughout the year. *Seasonal cases* appear in two fairly distinct cycles, one in the spring, the other in the fall. They are always due to pollens. The *perennial group*, which occurs throughout the year, is due to animal epidermal proteins, foods, bacteria, pollens, and to dust from flour, orris root and similar substances.

The *seasonal cases* are comparatively easy to diagnose and treat, as they are usually caused by a single pollen or pollen group. The spring types are due to the pollens of the grasses the most common offender of which is timothy, and the fall types to the compositae, the most important member of which is ragweed. This type is occasionally due to corn pollen also.

The *perennial cases* are extremely complex in their etiology. Their study presents a diagnostic problem in difficulty second to none in medicine.

#### VALUE OF A COMPLETE HISTORY AND PHYSICAL EXAMINATION

In this study the value of a complete history and physical examination must be emphasized.

The important facts in the history are the age of onset, the occurrence of anaphylactic symptoms in the family, the season of onset, the duration of the symptoms, and the patient's occupation. Those individuals whose attacks come on in early life are most likely to be sensitive. The food sensitizations also occur early in life. A family history of hay fever, asthma, angioneurotic oedema, urticaria or eczema is presumptive evidence of sensitization in the patient, as there is evidence to show that the sensitized state runs through certain families, and that this state is inherited according to the Medelian Law. An individual whose attacks always come on, and end at the same season each year must have a pollen sensitization. One whose attacks come on every month or six weeks cannot be sensitive to pollens alone as pollens are found only in the summer months. Such attacks must be due to animal epidermal proteins, foods, bacteria, or special dusts. The patient's occupation is extremely important as it frequently gives a clue as to the etiological factor. I. C. Walker has reported the case of a jeweler who was sensitive to the protein in the wood of jewel boxes.

A complete physical examination must be made on every case. Special attention must be paid to search for foci of infection in every part of the body but especially in the mouth and nose. Such foci are frequently the cause of intrapulmonic infections, and are directly responsible for many of the bacterial sensitizations. Chronic bronchitis, emphysema and chronic myocarditis, the triad which always follows prolonged asthma, make the prognosis as to complete relief doubtful.

The methods of performing the skin tests have been described. As about ten per cent. of all people give positive reactions to one or more proteins by one of these two tests, the interpretation of the relation of the positive reaction to the patient's symptoms is often quite difficult. Each positive test is to be regarded as a single clue, which must be subjected to a most critical analysis before it finally may be included in the list of proteins which bear an etiological relationship to the patient's anaphylactic complex. This analysis must be subjective and objective. Frequently the patient will be able to remember instances when attacks have followed exposure to some pollen or animal epidermal protein or the ingestion of some particular food. When this is not the case, carefully controlled biological experiments must be devised in which the patient is exposed to the influence of each positive protein in turn until the proper value can be placed on each.

#### TREATMENT

How is the information obtained by such a study to be utilized for the benefit of the patient? and how much improvement can we promise him?

These are the questions which the average patient asks and which we as physicians must be able to answer. These cases are approached therapeutically in the following ways:—

1. By removal of the offending protein from the patient's environment.
2. By elimination of the offending foods from the diet.
3. By surgical treatment of the foci of infection.
4. By specific desensitization.

The first three methods are practically self-explanatory. If an individual has a dog and is sensitive to dog hair protein, he must get rid of the dog. If one is sensitive to milk one must eliminate all foods containing milk from one's diet. If one is sensitive to some bacterial protein and there are foci of infection in the teeth for example, where these organisms may enter the body, these teeth must be removed. There are cases, however, in which such simple methods will not suffice. A farmer for example, who is sensitive to horse dander cannot avoid horses, a hay fever sufferer cannot avoid the pollen to which he is sensitive, and the patient whose foci of infection are in bronchiectatic or emphysematous lungs cannot have them removed.

We must employ some method which will relieve the patient's unusual sensitiveness to protein.

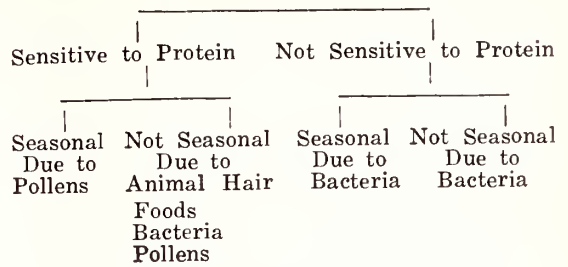
We are indebted to Besredka for the fundamental knowledge upon which specific treatment of the sensitized state is based. He demonstrated that a sensitized guinea pig could be protected against many fatal doses of serum, if the serum was administered in ascending minute doses at frequent intervals. This method has been adapted to the treatment of human anaphylaxis as follows:

Skin tests are made in the usual manner, using decreasing amounts of the protein to which the patient is sensitive and that dose is determined which is just enough to give a skin test. This amount is spoken of as the reaction dose. Hypodermatic injections of pure protein solutions are given in a dosage just below the reaction dose every five to seven days. The dosage is gradually increased until after a course of from fifteen to twenty injections the patient is able to tolerate relatively large doses of the offending protein without experiencing any ill effects.

By proper therapy, based on accurate etiological studies, 80 per cent. of hay fever cases and 50 per cent. of asthma cases can be either completely relieved or much benefitted.

The following charts show in a graphic way the application of these methods to some patients and the results obtained.

CHART 1  
Classification of Asthma



CHARTED ILLUSTRATIVE CASES

CHART 2

Name, R. H. Age 33 years. Type of symptoms, seasonal hay fever, fall type. Duration of symptoms 6 years. Family history negative. Physical examination, negative.

CHART OF PROTEIN TEST

No. Used	No. Pos.	Pollens		Foods		Animal Hair		Bacteria	
		Pos.	Neg.	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.
14	2	2	12	0	0	0	0	0	0

Positive To: Ragweed and corn pollens.

Treatment: Desensitization to ragweed and corn pollen protein.

Result: Complete relief during first year. One attack in second year which lasted two days.

CHART 3

Name, E. M. S. Age 22 years. Type of symptoms, perennial hay fever. Duration of symptoms 4 years. Family history, both parents have anaphylaxis. Physical examination negative.

CHART OF PROTEIN TEST

No. Used	No. Pos.	Pollens		Foods		Animal Hair		Miscellaneous	
		Pos.	Neg.	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.
8	2	0	4	0	0	1	2	1	0

Positive To: Dog hair and orris root.

Treatment: Desensitized to dog hair and advised to avoid everyone who uses orris root.

Result: Much improved.

CHART 4

Name, G. J. Age 26 years. Type of symptoms, seasonal asthma. Duration of symptoms 5 years. Family history negative. Physical examination negative.

CHART OF PROTEIN TEST

No. Used	No. Pos.	Pollens		Foods		Animal Hair		Bacteria	
		Pos.	Neg.	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.
8	1	1	0	0	0	0	0	0	0

Positive To: Ragweed pollen.

Treatment: Desensitized to ragweed.

Result: Complete relief for 2 years.

CHART 5

Name, Mrs. A. E. Age 35 years. Type of symptoms, perennial asthma. Duration of symptoms 30 years. Exacerbations during summer and fall.

Family history positive. Physical examination emphysema and bronchitis.

CHART OF PROTEIN TEST

No. Used	No. Pos.	Pollens		Foods		Animal Hair		Bacteria	
		Pos.	Neg.	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.
24	12	4	3	5	7	5	2	0	0

Positive To: Ragweed, timothy and corn pollen. Milk, rye, corn, wheat, Banana, goose and duck feathers, horse dander, dog hair, cattle hair.

Treatment: Autogenous vaccine for bronchitis. Desensitization to ragweed, timothy and corn pollen protein. Elimination of milk, rye, corn and wheat from diet.

Result: Only one slight attack during first year. Recurrence of asthma in 15 months at time of pollenation of box elder trees.

CHART 6

Name, E. H. Age 25 years. Type of symptoms, perennial asthma. Duration of symptoms 5 years.

Family history negative. Physical examination, nasal sinus disease.

CHART OF PROTEIN TEST

No. Used	No. Pos.	Pollens		Foods		Animal Hair		Bacteria	
		Pos.	Neg.	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.
123	13	4	27	10	63	2	5	2	10

Positive To: Dog hair, mouse hair, streptococcus hemolyticus, diphtheroid, corn, rye, clover and timothy pollen and to 10 foods.

Treatment: Got rid of dogs. Had house cleaned. Eliminated the offending foods from diet. Had sinuses drained. Got rid of white rats.

Result: Much improved.

## CHART 7

Name, J. G. M. Age 54 years. Type of symptoms, perennial asthma. Duration of symptoms 4 years.  
Family history negative. Physical examination, emphysema.

## CHART OF PROTEIN TEST

No. Used	No. Pos.	No. Neg.	Pollens Pos.	Pollens Neg.	Foods Pos.	Foods Neg.	Animal Pos.	Animal Neg.	Hair Pos.	Hair Neg.	Bacteria Pos.	Bacteria Neg.
11	4	0	1	0	6	4	0	0	0	0	0	0

*Positive To:* Horse dander, dog hair, sheep wool and goose feathers.  
*Treatment:* Desensitized to horse dander, advised to avoid dogs, to get rid of pillows and use no wool blankets.  
*Result:* Too early to judge.

## CHART 8

Name, H. A. Age 29 years. Type of symptoms, perennial asthma. Duration of symptoms 7 years.  
Family history negative. Physical examination, bronchitis, cleft palate.

## CHART OF PROTEIN TEST

No. Used	No. Pos.	No. Neg.	Pollens Pos.	Pollens Neg.	Foods Pos.	Foods Neg.	Animal Pos.	Animal Neg.	Hair Pos.	Hair Neg.	Bacteria Pos.	Bacteria Neg.
13	0	0	5	0	5	0	3	0	0	0	0	0

*Positive To:* None.  
*Treatment:*—Made autogenous vaccine from sputum. Gave 12 doses.  
*Result:* Complete relief for 8 months. Asthma then recurred. New autogenous vaccine made and given. Result: Relief for six months.

## CHART 9

Name, Mrs. B. Age 60 years. Type of symptoms, perennial asthma. Duration of symptoms 20 years.  
Family history negative. Physical examination, emphysema.

## CHART OF PROTEIN TEST

No. Used	No. Pos.	No. Neg.	Pollens Pos.	Pollens Neg.	Foods Pos.	Foods Neg.	Animal Pos.	Animal Neg.	Hair Pos.	Hair Neg.	Bacteria Pos.	Bacteria Neg.
15	3	0	7	1	3	2	3	0	0	0	0	0

*Positive To:* Goose and duck feathers, wheat.  
*Treatment:* Eliminated pillows and gave autogenous vaccine.  
*Result:* Had only one slight attack during a period of one year. Patient says: "I have been better this year than any year for ten years."

## BIBLIOGRAPHY

- Blackley: Experimental Researches on the Cause and Nature of Hay Fever. London, 1873.
- Dunbar: Hay Fever. Journal of Hygiene, 1903, Vol. 13, p. 105.
- Richet, Chas.: L'anaphylaxie, 1902.
- Otto: Das Theobold Smithsche Phaenomen der Serum. Überempfindlichkeit. Berlin, 1906, Vol. 1, pp. 153-172.
- Rosenau and Anderson: A study of the Cause of Sudden Death following the Injection of Horse Serum. Bulletin, Laboratory of Hygiene, Washington No. 29, April, 1906.
- Cooke, R. A. and Vander Veer, A.: Human Sensitization. Jour. Immun., 1916, Vol. 1, p. 201; *ibid.* 1917, Vol. 2, p. 217.
- Goodale: Skin Reactions in Anaphylaxis. British Med. and Surg. Jour., 1914, Vol. 171, p. 695.
- Schloss, O. M.: A case of Allergy to Common foods. Am. Jour. Dis. Children, 1912, Vol. 14, p. 341. Also: Allergy in Infants and Children, Am. Jour. Dis. Children, 1920, Vol. 19, p. 433.
- Rackemann, F. M.: A Clinical Classification of Asthma. Am. Jour. Med. Sci., Dec., 1921, Vol. 162, p. 802.
- Walker, I. C.: Clinical Study of 400 Patients with Bronchial Asthma. Boston Med. and Surg. Jour., 1918, Vol. 179, p. 288. Also: Frequent Causes and the Treatment of Perennial Hay Fever. Jour. Am. Med. Assn., 1920, Vol. 75, p. 782. Also: Studies on the Cause and Treatment of Bronchial Asthma. Jour. Am. Med. Assn., 1917, Vol. 69, p. 363. Also: The Treatment of Bronchial Asthma with Proteins. Arch. Int. Med., 1919, Vol. 22, p. 466. Also: Treatment of Bronchial Asthma with Vaccines. Arch. Int. Med., 1919, Vol. 23, p. 220.

## Odors\*

By JOHN J. SUTTER, M.D., Lima

*Editor's Note.*—The sense of smell, highly developed, may become a striking asset in the practice of the general practitioner as well as in the work of the health officer. For the former a great many disease may be distinguished by their odors and handled accordingly. As these odors are usually disagreeable to those about the patient it is important to know how to counteract them and to render the patient inoffensive, particularly if able to continue at work. Aside from hygiene and sanitation, in which odors lead the health officer to the districts that need a clean up, special odors may also indicate the presence of poisonous gases and exhalations.

**O**LFACTION, as one of the functions of the nose, and as a function for yielding pleasure and for serving as a means of information and protection, has been held in far too low estimation. In man this special sense receives very little attention, partly because of the almost universal lack of development and training.

The organs of smell are perhaps the most delicate sense organs of the human body. It is a known truth that the sense of smell is very acute under proper conditions. For particles of matter too minute to be visible even by the aid of a microscope, detached from the odorous body and coming into contact with the olfactory nerves make a marked impression. Indeed, in certain persons, we find the sense of smell so highly developed and so acute that the possibili-

ties of its acuteness seem almost incredible.

Willetta Huggins, age 16 years, an inmate of the Wisconsin school for the blind, who lost her hearing about three years ago and became totally blind two years ago, through the development of her powers of smell and feeling has become more marvelous than Helen Keller. She sees by smelling and hears by feeling. She hears by feeling vibrations and sees colors by smelling things. She tells the number of persons in a room by the sense of smell.

## RACIAL ODORS

That every race of man has a characteristic odor peculiar to its own race, there is no doubt, and in most cases this odor is displeasing to members of different races. It is also admitted that every human being possesses an individual odor, although generally our own sense of smell cannot distinguish one from another. This odor is variable with sex, age, climate, habits, the

\*Read before the Section on Hygiene and Sanitary Science of the Ohio State Medical Association, during the Seventy-Sixth Annual Meeting, at Cincinnati, May 2-4, 1922.



passions, the emotions, the occupations, and the conditions of health. In South American ports, it is said natives can tell by the sense of smell whether it is an European negro or Chinese who has alighted from a boat.

#### DEVELOPING THE SENSE OF SMELL

It is not, however, the purpose of this paper to speak of these variable odors, but more particularly of diseases and odors of interest to the health commissioner.

In order that odors may be detected, certain conditions are essential; the perceptive structures must be normal; nasal respiration must be unhindered; there must be purity and cleanliness of surroundings; no constant odors must be present, for we can easily become habituated to almost any kind of odor, so much so that it will no longer be detected. And in order to distinguish odors accurately a thorough course of developing and training olfaction is required.

Knowing then these facts, there can be no doubt that we derive great benefit in our daily life from good and well-trained olfaction. It may not appear to be of great value in the diagnosis of diseases, since most diseases are diagnosed without the aid of this special sense. Yet we have a few physicians who possess developed olfaction to such a degree that they are rarely led into error by making a diagnosis from the odor of the disease. Some physicians lay great stress upon odor as a clinical symptom. We feel that more attention should be given to the sense of smell, for in our estimation it is next to the sense of sight in the diagnosis and treatment of diseases.

Every health commissioner should have a highly developed sense of smell for he is frequently called upon to give his opinion in matters of odors and developed olfaction would greatly aid him in making correct diagnosis.

Let one thrust his educated nose into the saturated air of odors surrounding the patient and much will be revealed to him. He will be able at once upon entering the sick-room to tell what, if any, provisions are necessary for fresh air, sunlight, water, and cleanliness. It will not only tell him of soiled clothing, garbage, unclean vessels, foul closets, sewage, stale food, unclean cellars, damp walls, and all other stinks present, but in many instances will tell him what disease he has to deal with, its nature, its progress, and its stage of development; for many of the diseases and unhygienic ways of living have a strong characteristic odor peculiar to themselves, very hard to describe, but readily discernable when once recognized. While other diseases have their peculiar odor not so marked, and require a more acute sense of smell, yet in connection with other symptoms the diagnosis can easily be made.

#### ODORS PECULIAR TO DISEASES

We are all familiar with the *hospital odor*. No description of it is necessary. And the wards

containing women and children have their distinctive odor, differing very much from wards containing men. Each has its own peculiar odor.

Lunatics and paralytics, especially when assembled together in institutions, smell. The odor of insanity is a distinct odor, and is always present. An author says that it resembles that of yellow deer or of mice. Knight, lays great stress on this odor, saying that in the absence of this odor he would not hesitate to pronounce a person feigning insanity, or *vice-versa*.

We are also all familiar with the disease affecting the sweat-glands of the feet or arm-pits, *bromidrosis*, very easily diagnosed by the odor, hard to describe however, but readily discernable when once met with.

Again, if one has ever come into contact with a case of *atrophic rhinitis* he will never forget the characteristic odor, frequently so disgusting and loathsome that it ostracizes the patient from his friends. This odor when once smelled is always known thereafter.

In *stomatitis gangrenosum* we find an odor given off which is frightful and which fills the whole house, and the breath of patients suffering with *gangrene of the lungs* has a rotten, fetid, sickly odor, almost unbearable to a physician who makes the examination.

In *tenia favosa* a peculiar odor is noticeable, likened very much to the odor of a mouse-nest.

In *milksickness*, a disease rarely found any more in Ohio, the odor is always characteristic. After smelling it once no mistake will be made in diagnosis thereafter, by the odor alone. Every farmer could diagnosis this disease by its odor when it prevailed in this section of Ohio.

In *typhoid fever* there certainly is a very distinctive odor. It is a musty smell often with the flavor of blood. Nathan Smith describes it as a *semi-cadaverous musty smell*. Berard says that it attracts flies even before death.

A peculiar odor exhaling from patients with *relapsing fever* has repeatedly been noticed by Kelley. The smell is peculiar, not fetid or heavy, but somewhat like burning straw with a musty odor.

In *noma* we find from the very beginning a very characteristic disgusting odor of gangrene which cannot be accurately described, but resembles that of a corpse or of decomposition.

During the days of suppuration of *small pox* we have a characteristic fetid, sickly odor, likened to that of the fallow deer, or in severe cases to a whole menagerie.

We are told that *yellow fever* patients emit as early as the second day a peculiar cadaverous odor.

*Typhus fever* has a mouse-like odor.

In *measles* a peculiar musty odor closely resembling fresh-picked feathers is exhaled by the patient.

An indescribable odor likened by some to that of *bread hot from the oven* attaches to the scar-

let fever patients. This is an important aid in diagnosis.

The odor of *diabetic urine* just passed is usually in no way peculiar, but as fermentation progresses, an odor is developed which is characteristic, compared to stale fruit, and described by some physicians as a sweetish and mawkish smell as of hay. As long as urine remains acid the presence of cystitis or other diseases of the bladder does not necessarily impart to it any characteristic odor. In some cases of bacteriuria, however, the urine may have a mousy or musty odor, and yet without any inflammatory lesion—(Johnson).

In *intestinal troubles*, such as obstruction, catarrh and dysentery, in old persons the breath and sweat has a peculiar offensive odor, and is spoken of as *fecal*, in some instances. In children the odor varies frequently.

In *heat-stroke* the body and discharges soon have a mousy odor—(Wood).

In *gout* the skin secretions give off an odor compared to whey.

*Rheumatics* emit an indescribable odor. Andrews called it acetoformic odor.

Physicians who have treated *cancer of the stomach* are familiar with the peculiar odor which is nearly always present with this affliction, a *chloroform odor*, resembling the breath of a person who has just inhaled chloroform.

In aggravated cases of *chlorosis* an indescribable odor is perceptible. So too there is an indescribable, unpleasant odor, peculiar to *phlegmonous erysipelas*.

In *mercurial ulcers* there is a disgusting odor issuing from the mouth.

*Hysteria* usually develops a smell of violets or pineapples (Andrews).

In *anaemia* an ammoniacal odor is detected.

*Syphilis* can readily be recognized by some from a peculiar odor, unlike any other odor.

The breath of a patient suffering from *quinzy* is very characteristic of that disease.

In all *diphtheria* patients a sickening, gangrenous odor is detected, sometimes very offensive and fetid.

In simple *intermittent fever* we have an indescribable odor, likened by some to *fresh baked brown bread*.

In *eczema*, *impetigo*, and *scabies* a moldy odor is noticeable. And so on through all the changes and wrong conditions to which the body is heir, we find peculiar odors.

#### ODORS AND THE HEALTH COMMISSIONER

We have studied this subject of odors of diseases for many years and lately we have taken up the subject from a health commissioner's stand point, or odors in preventive medicine.

We do not believe that *odors* are ever the cause of disease. Foul or offensive odors are popularly supposed to cause diseases and many people still believe that epidemics of communi-

cable diseases such as typhoid fever, diphtheria, typhus and malaria, are directly due to emanations from sewage, or sewer pipes, polluted streams, stagnant water, garbage, refuse, dead animals and other decomposing organic matter. Odors or gases from these sources are free from bacteria. Communicable diseases are not due to odors or gases.

Although odors do not produce communicable diseases, they have a marked effect on health. We admit that it would be quite a shock to our olfactory sense if we were compelled to be present at a scrap between two skunks fighting near a badly kept fertilizer factory, rubber vulcanizing plant, glue factory and bone ash kiln. Although such a combination would be nauseous, and induce vomiting, it would not produce a disease.

The principal way in which odors affect health is through the mental suggestion of their origin.

We involuntarily take deeper breaths when we sense a pleasant odor, and on the other hand an offensive odor diminishes the respiratory functions, hence a pleasant odor is stimulating and an unpleasant odor is depressing. Odors also influence the nervous system in similar ways. If bad odors lower the vital resistance, they may favor, even if they cannot cause disease.

The principal significance of offensive odors from the standpoint of public health is that they may indicate the presence of human excretions, or of decomposable matter, or disease, from which insects might carry the germs or in which house flies may breed.

The dust in the air of the sick room, or in the air of the crowded room or dust from human excretions may contain living disease germs.

Offensive odors, therefore, should never be permitted to pass without inspection.

Coal-gas, illuminating gas, and chemical gases are dangerous when they are inhaled in large quantities. Some of the offensive gases although not dangerous when inhaled are explosive and therefore dangerous to life and should be investigated. Gases do not cause diseases but are dangerous to health or life because of their direct chemical action.

Noxious exhalations, noisome or offensive smells need not be tolerated in Ohio. The offensiveness is sufficient grounds to authorize the board of health to declare it a nuisance. The standards of the community however should be followed, for the awfulness of the odor of some of our polluted streams, disposal plants, soap or fertilizer factories, garbage fed to hogs, and our fish markets, to the people passing by, is almost unnoticeable by the people living within the odorous zone. The persons working in and those living near these plants and places are usually as healthy as others.

We failed to find any records where the stench, no matter how noisome, has been in any way productive of disease.

# The Autonomic Nervous System in Mental Depression\*

By HOWARD D. MCINTYRE, M.D., Marion

*Editor's Note.*—Dr. McIntyre by means of blood pressure reactions under deep inspiration has charted the normal and abnormal responses of vagotonic and sympathicotonic patients, especially in relation to mental depression. Sinus arrhythmias are usually associated with previous infectious processes and are generally vagotonic in character. Dr. McIntyre has found that mental depression patients of this type respond very favorably to stimulating baths, atropine and thyroid. In fact he is of the opinion that a great deal of endocrine therapy will have to be predicated on the differentiation of vagotonic and sympathicotonic patients.

**I**N THE COURSE of the routine performance of several hundred cardiac examinations on patients suffering with mental and nervous disease, the writer was impressed by the large proportion of sinus arrhythmias presenting themselves among these patients. Such arrhythmias are considered to be normal when occurring in children or young adults but tend to disappear in the later decades corresponding to the ages of our patients.

The question naturally arose, "What relation do these arrhythmias in our patients bear to the normal balance existing between the vagus and the sympathetic systems? Can they in any way aid in the diagnosis of vago-and sympathicotonia?" On investigation we found that Eppinger and Hess<sup>1</sup> of Vienna had suggested that these arrhythmias could be regarded as evidence of vagotonia.

## THE VEGETATIVE NERVOUS SYSTEM

A brief consideration of the vegetative nervous system should be undertaken at this point. Unfortunately, a rather confusing terminology exists in the field of visceral neurology. The old anatomists employed the term *sympathetic* to designate those nerves which controlled the so-called involuntary processes of the body. Langley introduced the term *autonomic nervous system*.

When viewed from a functional and pharmacodynamic viewpoint, it soon became apparent that different portions of the vegetative nervous system subserved different functions; for example, adrenalin stimulated the nerves in the thoraco-lumbar segments, but was without effect on the cranial, bulbar, and sacral nerves.

The physiologists now divide the vegetative system into the (a) *sympathetic*, which comprises all the nerves arising from the sympathetic cord in the thoraco-lumbar segments, and the (b) *para-sympathetic*, which includes the cranial, bulbar, and sacral segments of the vegetative system, made up of the third, seventh, ninth, tenth, and pelvic nerves respectively.

The visceral organs receive a double innervation from these two systems. It is an interesting fact that they exert opposite effects on the organs which they innervate. Cannon<sup>2</sup> states the

law that, "when the thoraco-lumbar division (sympathetic) meets either the cranial or sacral divisions (para-sympathetic) in the innervations of an organ, their effects on the organ are opposed." Examples of this are easy to find. For instance, the para-sympathetic constricts the pupil, slows the heart, constricts the lower end of the large intestine, and relaxes the exit of the bladder; on the other hand, the sympathetic dilates the pupil, accelerates the heart, relaxes the lower part of the intestine, and constricts the exit of the bladder.

The sympathetic system is activated by adrenalin, a similar substance activating the para-sympathetic has not yet been discovered.

Clinical observers, however, have introduced a somewhat different terminology which is not without its advantages. The ruling element of the para-sympathetic system is the vagus nerve. With this fact before them, the clinicians have introduced the term *vagus system*, meaning thereby the para-sympathetic.

Normally, the vagus and the sympathetic are in equilibrium, antagonizing each other equally in the innervation of an organ with perhaps a temporary swaying of the balance of power in favor of one or the other systems.

The division stressed by Eppinger and Hess into *vagus* and *sympathetic systems* is the one which will be adhered to in this paper. Eppinger and Hess<sup>3</sup> suggest that it is quite possible that there is in the central nervous system a common center which controls the activity of the two systems. Any disturbance of the antagonistic balance, be it central or peripheral, may cause an increase or decrease of tonus in one of the two systems which may constitute the basis for a pathological condition.

## VAGOTONIA AND SYMPATHICOTONIA

Persons in whom the vagus system is over stimulated are termed *vagotonics*; those in whom the sympathetic system is over stimulated are termed *sympathicotonics*. However, it is not always easy to separate the two conditions clinically. People, who show symptoms of vagotonia in one system, for example the cardio-vascular, may show symptoms of sympathicotonia in another system, say the gastro-intestinal. Or, some persons may show symptoms of vagotonia one day and of sympathicotonia the next. Therefore, it is better to speak not of vago- or symp-

\*Read before the Section on Nervous and Mental Diseases of the Ohio State Medical Association, during the Seventy-Sixth Annual Meeting, at Cincinnati, May 2-4 1922.

athicotonia but rather consider that the normal balance may be disturbed and so we may speak of an imbalance<sup>4</sup> between the two systems. However, we most certainly do meet persons in whom the symptoms of sympathicotonia persist for a long time and others in whom the symptoms of vagotonia persist without variation over long periods.

The Vienna workers have striven, by means of pharmacodynamic tests, to differentiate vagotonia from sympathicotonia. The following are some of their criteria for vagotonia:—

1. When a subcutaneous injection of one centigram of the nitrate of pilocarpine produces salivation and sweating in excess of the normal, this is a symptom of vagotonia.

2. A positive oculo-cardiac reflex is regarded as a vagotonia symptom. This reflex, discovered by Aschner,<sup>5</sup> is best elicited as follows: place the patient in the recumbent position and by means of the polygraph make a radial tracing with the timer going. Note the normal pulse rate, then make pressure on the eyeballs for thirty seconds, marking the time of pressure on the pulse tracing. The pulse sometimes slows, and in some cases there is a general lowering of the blood pressure with perhaps a feeling of faintness or nausea. The reflex is positive if the pulse slows in excess of twelve beats per minute. This reflex is difficult to elicit at times, and may be absent in typical cases of vagotonia for reasons we may see later. It is inverted at times in sympathicotonia. The blood pressure should be taken simultaneously for reasons to be explained subsequently.

3. There are certain clinical signs which are considered to be evidence of vagotonia, such as epiphora, salivation, sweating, dermatographia, gastric crisis and hyperacidity, pylorospasm, spastic constipation, mucous colitis, bradycardia of sixty or less, arrhythmias both cardiac and respiratory, vasomotor angina pectoris, variations of blood pressure and cardiac action concomitant with inspiration and expiration, such as slowing of the pulse, change of blood pressure even to complete obliteration of the systolic and diastolic sounds during inspiration. Bronchial asthma, eosinophilia, moist hands and feet may be added to the list.

*General vagotonia* is the term applied to that group of cases which shows all or nearly all of the above symptoms in the same patient; while the term *local vagotonia* is reserved for those cases which show symptoms referable to a single system, for example the vascular or respiratory. All of the above symptoms may be exacerbated in vagotonics by a dose of pilocarpine while on the other hand they may be stilled by atropin.

#### SINUS ARHYTHMIAS

As all cases presented in this paper have a bearing on sinus arrhythmia and allied phenomena it will be well to consider sinus arrhythmia

at this point. This type of heart irregularity consists of a quickening of the heart rate on inspiration together with a slowing during expiration. This arrhythmia has received different names by different authors, Lewis calling it a sinus arrhythmia, while Mackenzie calls it the youthful type of irregularity. Concerning it, Lewis<sup>6</sup> writes, "Young adults manifest an appreciable irregularity of the pulse when they breathe deeply. The pulse quickens when the chest is inflated and slows when it is emptied." He further states that this is of vagal origin. Mackenzie,<sup>7</sup> referring to the irregularity, states, "It is generally agreed that this irregularity is of vagus origin." He also speaks of a small group of cases in which the heart *slows* for short periods. Concerning this type of irregularity he writes, "The immediate cause of this irregularity is vagus stimulation, the act of breathing being sufficient to stimulate the vagus which acting on the sino-auricular node causes a transient slowing of the whole heart."

However, we must remember that in considering these arrhythmias we must also consider the sympathetic system as well as the vagus. Normally, life may be considered as an expression of depressor and pressor activities, that is, of vagus and sympathetic phenomena. Under normal situations the two mechanisms balance each other and the response required of the sympathetic would appear to be determined by the vagus. When we stimulate the vagus the vagus depressor mechanism sets in, the pulse rate tends to decrease and the arterial tension tends to lower. But reaction at once sets in, the strong systoles of the sympathetic follow the diastoles of the vagus, the sympathetic compensates, the pulse rate quickens, the arterial tension is increased and effort is capable of being carried out.

It is well to recall the work of Roget<sup>8</sup> at this point, it being borne in mind that the sympathetic nervous system, as opposed to the vagus depressor system, is activated by adrenalin:—

"When, in a normal rabbit, we excite, by a faradic current, the peripheral end of the cut vagus, we observe a true stoppage of the heart, that is to say, a diastolic fall, sharp and profound, which is almost always followed by a return of the beats. The curve resulting is V-shaped. The first excitation always produces the most marked effect. . . .

"If now we carry out the experiment on a decapsulated rabbit the first tracing obtained looks like a normal tracing, but during the second faradization the stoppage of the heart is prolonged and the return of the beat is made with difficulty. . . .

"Continuing our excitations we soon obtain diastolic periods lasting as long as 30 or even 40 seconds. . . .

"How are we to explain these differences? We might say generally that the vagus in the normal rabbit shows less and less effect on repeated

stimulations because it is becoming exhausted. If this was the correct explanation we should find the same phenomenon in the decapsulated rabbit. But since in the decapsulated rabbit exactly the reverse is found, we are forced to take into consideration the only element that differs in the two series of experiments—the suprarenal capsules. We thus arrive at the following conception:—

“When the action of the vagus becomes preponderant, when it acts, that is to say, with full force on the heart, a reaction probably of the nature of a reflex is produced on the suprarenal capsules, which give out adrenalin. The adrenalin counterbalances the action of the vagus, prevents the stoppage of the heart, and raises the arterial pressure.”

In other words, when we stimulate the vagus we induce what we may term a vago-sympathetic reflex, the sympathetic responding to offset the depressor effect of the vagus. We have a familiar example of this in the *secondary augmentation* or the acceleration of the heart which follows the slowing induced by vagus stimulation.

By correlating all of the foregoing, we are better able to explain the sinus arrhythmia of young adults as follows:—

The act of inspiration stimulates the vagus, which at once sets to work calling upon the sympathetic for an adequate response; *namely*, a strong systole overcoming the diastole of the vagus. The result of the sympathetic response is an increased pulse rate during inspiration. This is probably the explanation of sinus arrhythmia and not vagus stimulation alone.

But what about that small group of cases alluded to by Mackenzie where he states that there is a *slowing* of the heart due to vagus stimulation during the act of respiration?

The work of Wilson and Carrol<sup>10</sup> throws much light on this type of sinus arrhythmia. These observers found in certain of their cardiac patients that when the vagus was stimulated by a deep inspiration,\* a marked slowing of the pulse occurred with, at times, a decrease in the arterial tension as evidenced by the height of the radial pulse wave. This decrease of pressure during inspiration at times amounted to a total obliteration of the radial pulse,—the so-called *pulsus paradoxus*. This phenomenon could be removed temporarily by the administration of a dose of atropin. They attribute these phenomena to a hyper-excitability of the vagus system, rendered so by a toxæmia which remains after

some infectious process, such as trench fever, influenza, and rheumatism, as all patients showing such reactions gave evidence of some previous infection. These patients were easily fatigued physically and depressed mentally by inadequate stimuli.

#### CLINICAL RESEARCHES

Following chiefly the lead suggested by Wilson and Carrol, we applied the following test to several hundreds of persons, including both normal individuals and patients suffering from various types of mental and nervous disease.

*Test.*—The aneroid type of blood pressure instrument is applied in the usual manner in observing blood pressure. The systolic pressure of the individual is taken and the instrument set at that point so that the systolic sound may be heard plainly. The subject is now instructed to inspire deeply, thus stimulating the vagus, and to hold the breath for at least 30 seconds. During this time the blood pressure is noted at 5 second intervals.

We have expressed the results of these tests by means of curves, the blood pressure in millimeters being plotted on the vertical. We consider a normal curve as that shown in curve 2. This curve means that when a normal individual inspires deeply, stimulating the vagus, there results at first a slight drop in the systolic pressure followed by a quick return to the normal level with perhaps a slight elevation over the original pressure. In terms of vagus and sympathetic balance this means that on first stimulating the vagus, the vagus depressor mechanism acts at the same time calling on the sympathetic pressor mechanism, which responds adequately overcoming the vagus depressor pull, raising the blood pressure back to the original or perhaps two to four millimeters above this. This clinical observation has its counterpart in the laboratory experiment of Roget as already quoted.

In Curve 1 we see that the blood pressure on inspiration drops as in 2 but later rises to a considerable height above the original. Such a result as this we consider as evidence of increased excitability on the part of the sympathetic. This may be explained on the same basis as Curve 2. The act of inspiration stimulates the vagus depressor mechanism which acts, at the same time calling upon the pressor mechanism of the sympathetic, which being hyperexcitable, responds in an exaggerated manner, raising the blood pressure above the original systolic level during the act of deep inspiration. It is an interesting fact that in a few of the instances where this type of reaction was present the patients showed a pupillary reaction in theoretical accord with the blood pressure observations. They possess large pupils of the mydriatic type which respond quickly to light, (autonomic action) but immediately dilate again to their original size with the light stimulus still present,

\*NOTE.—The cardiac center can be influenced by every afferent nerve path in the body. The outflow for the afferent impulses is through the vagus and sympathetic fibres to the heart. Of all the afferent paths, the peripheral fibres in the lung on stimulation exert a more powerful effect on the vagus than any other.<sup>11</sup> The sensory fibres of the fifth cranial nerve are probably the next in effect on the vagus. This physiological fact may help to explain the changes in pulse rate during inspiration, and during pressure on the eyeballs (oculo-cardiac reflex). The afferent path in the oculo-cardiac reflex is in the ophthalmic division of the fifth as in one sided fifth nerve palsies the reflex can be elicited through the sound side but not the paralyzed side.

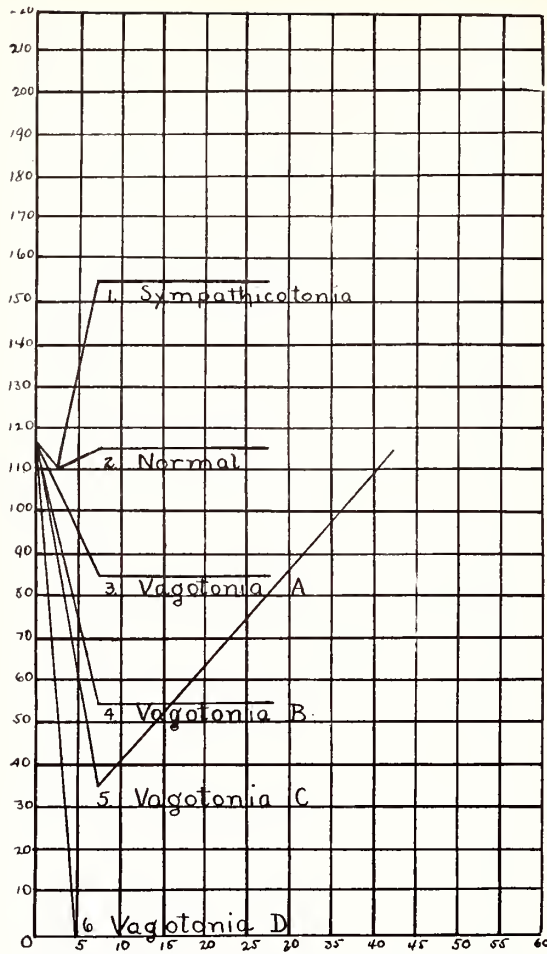


Fig. 1. Changes observed in the systolic pressure on deep inspiration.

(sympathetic action). Also, the pulse rate quickens during inspiration, a condition obtaining in the sinus arrhythmia of children and young adults. The foregoing is probably the explanation of the so-called hippus or springing pupil.

Curves 3, 4, and 6 illustrate a type of blood pressure reaction in which we see a drop in the systolic pressure during the act of deep inspiration. This may be so marked that in some patients there is a complete disappearance of the radial pulse and a disappearance of all systolic and diastolic sounds (Curve 6).

#### DISCUSSION

Theoretically, several factors may be at work in order to bring this about. *First*, we may have a normal vagus acting against a weakened sympathetic as in Addison's disease. *Second*, we may have a hyper-excitable vagus working against a normal sympathetic, in this case the drop in blood pressure will not be so great. *Third*, we may have a hyper-excitable vagus working against a fatigued sympathetic producing the condition of complete disappearance of the radial pulse. Blood pressure reactions of the type shown in Curves 3, 4, 5, and 6 coincide

with the results of Wilson and Carrol, already cited, and demonstrated by them with combined pneumographic and radial tracings. Nearly all such reactions observed by us occurred in patients showing isolated attacks of mental depression as distinguished from the depression occurring in alternating depression and mania of Kraepelin. In most instances the depth of depression varied directly with the amount of drop in the blood pressure.

#### ILLUSTRATIVE CASE REPORTS

The following are abstracts of some of our case reports showing the relation of vagus stimulation to mental depression:—

*Case 1.*—A young man of 29 years suffered an attack of mental depression which lasted for about two months. He had never been troubled with such attacks before and during this attack he attended to his business as usual except for the fact that he had to retire to his rooms from about four o'clock in the afternoon until the next morning. During this time he was more depressed than usual, even becoming so depressed that he cried at times.

*History.*—His father had died four months before. This had been a great shock to him but he righted himself and attended to his rather extensive responsibilities. Four months after his father's death he had an attack of influenza of the intestinal type. This was not severe as he had an elevation of temperature for only three days. After getting up he began to have attacks of tachycardia his pulse rate ranging from 110 to 130. He had dyspnoea and pallor on climbing steps, some giddiness which once or twice almost amounted to syncope. He also complained of precordial pain and a definite area of hyperalgesia could be made out in the pulmonary area. At this time he became mentally depressed. He had no especial reason for this depression but could not shake off a feeling of impending disaster.

*Examination.*—His oculo-cardiac reflex was positive, his systolic blood pressure was 120 but dropped to 90 on vagus stimulation. This drop in pressure could be temporarily removed by 1/100 gr. of atropin.

*Treatment.*—The young man was given digitalis and atropin; also stimulating baths on arising and at the time of day when his depression was most marked. His improvement was marked and prompt. Gradually his depression cleared up, his drop of blood pressure on inspiration disappeared, as did his giddiness and precordial pain. His depression lessened and within two months was entirely gone. He has not suffered a relapse after two years of observation.

*Case 2.*—A wealthy farmer, aged 62, was admitted to Longview Hospital suffering from a very deep depression. He was afraid that he was going to die, said that he had lost all of his money, said that his favorite son was going to

die, was very much dejected, cried a great deal, was otherwise normal mentally, was oriented for time, place and events.

*History.*—Aside from the fact that one brother died of *fits*, his family history was negative.

Patient admitted gonorrhoea but denied lues. His Wassermann reaction was negative. His past history disclosed that ten years previous he had suffered an attack of mental depression. This followed an attack of rheumatic fever. At this time he was in a sanatorium from November, 1909, till February, 1910, made a complete recovery and was discharged. He has never had any manical attacks.

In February, 1921, he was again admitted. He had been depressed following a severe attack of *flu* complicated with pneumonia.

*Examination.*—On admission his oculo-cardiac reflex was positive. His normal pulse rate was 80 with occasional extra-systoles. His blood pressure was 140 systolic, 80 diastolic. On deep inspiration the systolic blood pressure dropped to zero and remained there as long as the breath was held. Also, the pulse wave disappeared at the wrist. This phenomenon could be removed temporarily by 1/50 gr. atropin.

The patient was incapable of carrying out any sustained effort, the mere act of arising being sufficient to cause fatigue.

He was kept under observation until September 30, 1921, when he was discharged, his mental condition and his vagotonic symptoms alike unimproved.

*Case 3.*—A merchant, of 53 years, suffered an attack of depression beginning June, 1920. He had had no manical attacks. His father had bronchial asthma.

The patient had lues 25 years ago, influenza 4 years ago, attacks of bronchial asthma which were relieved by adrenalin and atropin. His blood pressure was 100 systolic; dropped to 70 on inspiration. This could be temporarily removed by atropin. Condition of the patient has remained unchanged since June, 1920.

*Case 4.*—An iron worker, white male, age 55 years, was admitted to Longview May 24, 1921, suffering from mental depression.

*History.*—Six months before he had been struck in the head by a falling beam. He recovered from the injury but began to have buzzing in his ears and dizziness when working on high buildings. He worried about this, became greatly depressed and cried a great deal.

*Examination.*—On admission his pulse rate varied from 50 to 60, his oculo-cardiac reflex was negative, his blood pressure was 100 systolic, with a drop of 30 on deep inspiration. This could be removed temporarily by 1/100 gr. of atropin.

He remained in a state of mental depression for 2 months and then began to improve. His blood pressure rose to 110 systolic with no fall on vague stimulation. His condition continued

to improve and he was paroled September 26. He returned to see me a week later. His blood pressure had risen to 120 systolic. He showed no drop in pressure on vagus stimulation, his mental condition was excellent. He has remained in this condition since then.

#### CLINICAL IMPRESSIONS

We could cite many other case records similar to these but we will not multiply instances. Suffice it to say that we have observed over 20 cases of mental depression in which the above features were common to all; that is, a syndrome of vagotonia which persisted throughout the depression, temporarily benefitted by atropin, and which disappeared with the return of the normal mental condition. The depth of depression varied directly with the severity of the vagotonia. In those cases where the blood pressure fall was 20 to 30 mm. the symptoms cleared up much sooner than when the drop was greater. In cases in which the drop in blood pressure was complete with no compensation on the part of the sympathetic the mental depression was most profound.

Previous infections such as flu and pneumonia, played an etiological role in over 60 per cent. of our cases, while all cases showed evidence of some focus of infection in the teeth, tonsils, and sinuses. It is the opinion of the writer that all the numerous cases of depression following influenza are due to an upset in balance between the vagus and sympathetic systems caused by toxemias remaining after such infections.

As to treatment of these cases, we feel that they will clear up much more quickly when given stimulating baths, atropine, and thyroid, than if left to their own devices. We followed Wilson's and Carrol's<sup>12</sup> lead in the matter of the thyroid. They used it to good advantage in their cardiac cases showing vagotonia. Wilson explained the good results on the basis that thyroid enhances the power of the adrenalin in the patient's blood three hundred per cent. as shown by Levy and Hoskins. However, there are some cases that do not seem to be benefitted by any treatment.

Theoretically, we consider the evidence as presented in the foregoing paper to bear out the idea of William James<sup>13</sup> as regard the emotions. He stated in his theory that the bodily reaction determined the emotional states of an individual. Without the physical changes peculiar to emotions bring present, James believed there could be no emotion. In other words the emotions were merely highly complex sensations for which the visceral and other bodily changes supplied the afferent stimulation. We have fully discussed this phase of the subject in an earlier paper<sup>14</sup>.

Viewed from a practical standpoint we believe that the subject of the autonomic nervous system has received all too little consideration from the American neurologists. To be sure the European

literature in recent years has been full of the subject. With the exception of such splendid work as Cannon, White and Jellife, Kempf, and a few others, we Americans have more or less left this field for others. There is scattered through the literature quite a large amount of data regarding the autonomic nervous system together with several methods of investigation of the processes occurring therein. As this system is activated by the glands of internal secretions it is quite obvious that in order to appreciate the disorders of the endocrines we must work out tests of the physiology of the autonomic nervous system, also tests for the pathology occurring in the system. With such information at our command we will then be better able to diagnose accurately the endocrine dyscrasias as well as be able to scientifically prescribe the various glandular products indicated in disease, instead of the use of the various *shotgun* endocrine prescriptions with which the medical market is so filled at the present time. If we are ever to arrive at scientific administration of the endocrines we will have to follow such a path as outlined above. However, we are at present quite a long way from the solution of many of the elements in the

problem but this must not prevent us from using the knowledge we have thus far gained. We need more research and more coordination of results. If this effort on the part of the writer does no more than stimulate work by other investigators he will feel that his effort has not been wasted.

#### SAWYER SANATORIUM.

#### REFERENCES

1. Eppinger and Hess: Nervous and Mental Disease Monograph Series, No. 20, p. 18. Nervous and Mental Diseases Publishing Co., New York, 1915.
2. Cannon: Bodily Changes in Pain, Hunger, Fear, and Rage, p. 34. D. Appleton and Co., New York and London.
3. Eppinger and Hess: *Ibid*, p. 11.
4. M. Segard: Asthma. Bulletin Medical, Feb. 25, 1922, Vol. 36, No. 9, p. 160.
5. Aschner, B.: Wien, Klin. Woch., 1908, No. 44; also see M. Laignel-Lavastine. Nervous and Mental Disorders, Monograph Series, No. 30, p. xiv.
6. Lewis: Clinical Disorders of the Heart Beat. 4th Ed., p. 12, 13, 14. Paul Hoeber, New York, 1919.
7. McKenzie: Diseases of the Heart, 3rd Ed., p. 183; also, Principles, Diagnosis and Treatment in Heart Affections, p. 144-145.
8. Roget: Presse Medicale, Nov. 22, 1917, Quelques Recherches Recent sur les Fonctions des Capsules Surrenales.
9. Burton-Opitz: Text-book of Physiology, p. 314.
10. Wilson and Carrol: *Ibid*, p. 14.
11. Tigerstedt: Text-book of Physiology, p. 194.
12. Wilson and Carrol: *Ibid*, p. 130.
13. Wm. James: Principles of Psychology, Vol. II. See chapter on Emotions.
14. McIntyre, H. D.: The James-Lange Theory of the Emotions. Alienist and Neurologist, October, 1919.

## Blood Typing\*

By H. R. HUSTON, M.D., Dayton

*Editor's Note.*—Dr. Huston considers the selection of serum for grouping as one of the most important factors in blood grouping. The serum is kept in ampules, thus eliminating the danger of contamination. By running a control the action of the serum is constantly checked. By ice-boxing the doubtful cases for 24 hours, Dr. Huston has found that a definite statement as to the group to which the patient belongs can be made. If the blood is grouped correctly, and a proper technique is followed, it is Dr. Huston's belief that you do not get any more reactions with the citrated blood than you do with whole blood.

**T**HERE are at present two methods employed in typing blood, *namely*, that of matching the recipient's blood with the donor's directly, and the grouping method developed by Dr. Moss of Johns Hopkins. The second method mentioned is the one used in this series of 940 cases.

#### THE SERUM FACTOR IN GROUPING

The most important factor in blood grouping is the selection of the serum for grouping. We take about 8 c.c. of blood from each of our type II and type III donors that we use and test the serum for grouping, using our known serum as a control. Type II serum must completely agglutinate known type III and type I corpuscles in 20 minutes or less and have no agglutination in type II or type IV corpuscles in the same time. Type III serum must completely agglutinate known type II and type I corpuscles in 20 minutes or less and have no agglutination in

type III or type IV known corpuscles in the same time.

We must obtain the same results with corpuscles which have been suspended in 0.9 per cent. NaCl solution for 24 hours, as we do with fresh corpuscles which are suspended in 0.9 per cent. NaCl solution before we will use the serum for typing. We find that we can use the serum from about 8 per cent. of the type II class and about 50 per cent. of the type III class for grouping purposes. There seems to be a lack of agglutins in the other 92 per cent. of Type II and 50 per cent. of type III, thus making them unfit for typing purposes.

#### PREPARATION OF SERUM

The serum is centrifuged until it is perfectly clear, using previously sterilized centrifuge tubes. With a pipette, that has been drawn out to a long narrow point, the serum is put in one c.c. sterilized ampules, four minims to each ampule. The ampules are sealed by heat and kept in an ice box. In this way we can keep our serum from becoming contaminated, using a

\*Read before the Meeting of the Group on Clinical and Laboratory Diagnosis, during the Seventy-Sixth Annual Meeting of the Ohio State Medical Association, at Cincinnati, May 2-4, 1922.



fresh ampule every time that we group. The stored serum can be used for about six months. We do not use any preservative, thus ruling out another source of error.

When taking the patient's blood for grouping, the lobe of one ear is cleansed with alcohol and dried with sterile piece of cotton. Two drops of blood is suspended in 3 c.c. of 0.9 per cent. sodium chloride solution.

#### GROUPING TECHNIQUE

We use Moss's method of grouping. The only difference between Moss's and Jansky's grouping is that Jansky's group I corresponds to Moss's group IV and *vice versa*. We use new glass slides that have been previously cleansed with H<sup>2</sup>SO<sup>4</sup> solution and kept in 50 per cent. alcohol until used. Three glass slides are used for each grouping. One slide is marked with the patient's name, the other two are marked as controls, using known type II and type III corpuscles suspended in 0.9 per cent. NaCl solution. The right end of each slide is marked No. 2 and the left end is marked No. 3. With a small sterile pipette, one drop of a known group II serum is placed on the right half of each slide. With another sterile pipette one drop of known group III serum is placed on the left half of each slide, every precaution being taken to avoid mixing the serum of group II with group III. With a third sterile pipette, one drop of the suspension of patient's corpuscles is mixed with the serum on the right and second drop mixed with the serum on the left on glass slide marked by the patient's name. With a fourth sterile pipette, one drop of the suspension of known group II corpuscles is mixed with the serum on the right, and a second drop mixed with the serum on the left of the glass slide marked known group II corpuscles.

We agitate the slide every five minutes so that the serum and corpuscles become completely mixed. Observation is taken every three minutes for 20 minutes until reaction is complete.

If no agglutination takes place within 20 minutes, the corpuscles belong to group IV, since the corpuscles of group IV are not agglutinated by serum of any other group. The members of this group are called *universal donors* as they may give blood to any group, but can only receive blood from their own group.

If the *two* serum agglutinates the corpuscles and there is no agglutination with the *three* serum, they are members of group III. Members of this group may receive blood transfusions from their own group or group IV. They may be donors for their own group or group I.

If the *three* serum agglutinates the corpuscles and there is no agglutination of corpuscles with the known *two* serum, they are in group II. Members of this group may receive blood transfusion from their own group or group IV. They may be donors for their own group or group I.

If both the *two* and *three* serum agglutinate the corpuscles, the corpuscles belong to group I. Since the group I corpuscles are agglutinated by serum of all other groups, but the group I serum agglutinates the corpuscles of no other group, members of this group are called *universal recipients* as they may receive blood transfusions from their own group or any other group. They may be donors for their own group only.

Agglutination and hemolysis may be observed at any time from sixty seconds to twenty minutes. Hemolysis does not occur without agglutination but agglutination may occur without hemolysis. Where you have agglutination only, the corpuscles impart a finely granular appearance to the field, which looks like cayenne pepper. This may usually be seen macroscopically, but can be more readily determined in doubtful cases with the aid of a microscope.

#### PERSONAL EXPERIENCES

In this series we have 940 cases, taken from the surgical service of Drs. Bowers and Arn, in which 320 have been recipients. We found 3.2 per cent. of blood to be in type I, 44.45 per cent. in type II, 9.35 per cent. in type III and 43 per cent. in type IV.

There are a certain number of cases that you cannot definitely determine their grouping on the first trial. In these cases, with the aid of the microscope, you will see many fields in which several corpuscles have a tendency to clump together in either serum, perhaps with both serums, but you will not get a definite agglutination. On the other hand, if you look at the control you will have a definite agglutination or else the corpuscles will be unchanged. This proves that your serum is in perfect working order. In these cases, we put the test tube that contains the patient's corpuscles suspended in 0.9 per cent. NaCl solution in the ice box for 24 hours then regroup. Nine times out of ten, in the regrouping, the corpuscles will completely agglutinate in 20 minutes or remain unchanged and you can make a definite statement as to the group of the patient, of which you were not sure 24 hours previous.

We have transfused 320 cases and have had ten reactions, or an incidence of 3-1/3 per cent. Four of the reactions were due to incorrect grouping. Citrated blood was used in 312 of these, and whole blood in 8 cases.

If the patient has any one of the following symptoms develop within six hours after transfusion, we call it a reaction:—

1. If the temperature goes up over 1-1/2 degrees.
2. If they have nausea or vomiting or severe headache.
3. Pain in back or chest.
4. Dyspnea.
5. Urticaria.

#### CONCLUSIONS

1. We consider the selection of serum for

grouping as one of the most important factors in blood grouping.

2. We keep the serum in ampules, thus eliminating the danger of contamination.

3. By running a control we have a check on the action of our serum.

4. By ice-boxing the doubtful cases for 24 hours, we can make a definite statement as to the group to which the patient belongs.

5. We believe you do not get any more re-

actions with the citrated blood than you do with the whole blood, if the blood is grouped correctly, and a proper technique is followed in citrating and giving blood.

In this series, the old saying holds true, "The proof of the pudding is in the eating", for we have used over 2/3 of the series either as donors or recipients with an incidence of only 3-1/3 per cent. reactions.

FIDELITY MEDICAL BLDG.

## Dacryocystitis: Etiology, Pathology, Treatment, Medical and Surgical\*

By C. S. MEANS, M.D., Columbus

*Editor's Note.*—Dacryocystitis may be due to many causes but all produce somewhat the same distressing symptoms so far as the patient is concerned. Many methods of irrigation with antiseptics and dilatations with probe have been tried, but eventually patients come for radical operation before real relief is secured. Dr. Means prefers the external extirpation of the sac by the Meller method under local anesthesia, with due care that no particle of the sac is left in place. A firm pressure dressing is one of the essentials in securing the best results. Dr. Means has not found it necessary to excise the lachrymal gland in any of his cases. Properly fitted lenses protect the patient from annoyance after operation.

**D**ISEASES of the lachrymal sac have been described and treatment for their relief or cure have been the subject of so many thesis and discussions, that one is scarcely justified in again urging the matter; but when we see patients wiping their eyes to get rid of the constant formation of muco-purulent secretion, and often filled with the fear of abscess forming on the cheek, we reiterate that something must be done to give these people relief.

We find interesting mention of lachrymal disorders and methods for their treatment in the medical writings of antiquity.

The Papyrus-Ebers, relating to Egyptian ocular therapeutics of 1500 B. C. states that "For the driving away of a swelling on the nose, (no doubt meaning dacryo-cyctitis) use antimony, myrrh, and dried honey, rubbing it into the eyes for four days."

Celsus, a Greco-Roman physician of the first century, recommended excision of the lachrymal sac in cases of fistula. With a clamp the margin of the opening was seized and the entire abscess cavity excised down to the bone. The bone was then cauterized by the actual cautery or some caustic such as copperas applied.

Galen writes in the second century that Archegenes, in case of fistula lachrymalis, perforated the nasal bones with a small drill.

Compression of the tear sacs with instruments, the injection of medicine and the dilatation of the nasal ducts by sounds were first recommended by the Arabian physicians in the tenth and eleventh centuries; but it was left to Berlin, in 1868, to give the first impetus, in comparatively modern times, to the extirpation of the lachrymal

sac, now so commonly and successfully practiced.

### ANATOMY AND PHYSIOLOGY OF THE LACHRYMAL APPARATUS

In the conduction of tears into the nose, two factors are present. The entrance of tears into the lachrymal sac and their transmission through the latter into the nose. The conveyance of tears through the puncti into the lachrymal sac is affected by winking. The tears accumulate in the horse-shoe shaped notch of the inner angle of the eye which forms the lacus lachrymalis into which the puncti dip. When a winking movement takes place the fibres of the palpebral portion of the obicularia contract. These fibres spring from the internal palpebral ligament and when they contract, draw the ligament away from the lachrymal bone. The wall of the lachrymal sac, being connected with the palpebral ligament, is drawn along with it. This in turn dilates the sac and the contents of the canaliculi are sucked into the sac. The subsequent conveyance of tears from the lachrymal sac into the nose is affected by the elasticity of the sac. In virtue of this elasticity the sac, when distended by tears, tends to contract again, thus expelling the tears into the nose; hence in pathological cases, in which the lachrymal sac has lost its elasticity, the conduction of tears downward is arrested even though the nasal duct is patent.

The tears are not driven back again into the canaluculi by the contractions of the lachrymal sac, but pass into the nasal duct. The secretion of tears results from psychic excitation or reflexly from the trigeminous or optic nerves.

In the normal state the lacrymal gland secretes scarcely any more liquid than is lost by evaporation from the surface of the eye-ball, so but a very small part of the fluid is discharged

\*Read before the Eye, Ear, Nose and Throat Section of the Ohio State Medical Association, during the Seventy-Sixth Annual Meeting, at Cincinnati, May 2-4, 1922.

into the nose. It is only when the secretion is increased that any quantity of tears is discharged into the nose.

The moistening of the eye-ball is not due to the lachrymal gland alone. The secretion of the conjunctiva and the mucous glands help in this lubrication, hence after removal or degeneration of the lachrymal gland, the eye does not become dry.

#### ETIOLOGY

1. *Congenital Atresia*.—Normally open at birth, the duct may still be closed at the nasal end by a thin septum, a foetal residue. Usually this septum becomes atrophic through being stretched as the canal widens, finally leaving a perforation. Other contributing factors are blocking of the lumen by circular folds of mucosa (valves of Hasner), stenosis through infraction of bone in forceps delivery; also on account of the curved course of the lachrymal duct in the foetus, as against its straight course in the adult.

2. *Stenosis* may be caused by:—

(A) Acute swelling of the mucous membranes of the duct, or only of the mucous membrane surrounding the outlet of the duct into the nose.

(B) Chronic inflammatory processes such as trachoma.

(C) A cicatricial or osseous obstruction due to direct or indirect trauma.

(D) Erosions, ulcerations or abscesses from nasal catarrh or diseases of the nasal sinuses (ethmoid cells and antrum of Highmore).

(E) A tubercular process of the nasal duct or lachrymal sac occurring in both children and adults.

(F) Syphilis, in children and adults, may cause inflammation and scar formation in the nasal sac or duct.

(G) Actino-mycosis of this region has been reported by Von Schroeder and Nagel.

(H) Gonococcal infection, of infrequent occurrence.

(I) Foreign bodies, such as beard of wheat, rye and hair and rarely concretions.

#### PATHOLOGY

In every case of closure of the duct, the fluid in the sac is decomposed by the bacteria present and there occurs a mucous or muco-purulent catarrh or catarrhal dacryo-cystitis. Long continued expansion of the wall, due to retention, causes an ectasia.

Often, through expansion, the wall of the sac becomes inelastic and the ectasia may remain long after the nasal duct has been made patent. If the contained fluid in the sac causes a continuity of the tissue of the sac epithelium, the bacteria may get into the deeper tissues and lead to a phlegmon. When pus breaks through externally a fistula of the tear sac is formed and when such a fistula is lined with epithelium, as soon occurs, spontaneous healing is no longer

possible. Repeated attacks of inflammation of the tear sac may lead to shrinking or obliteration of the sac.

#### TREATMENT

Anyone, who has tried the old method of washing, by the aid of a syringe and antiseptics of all kinds and colors and has had an argyrosis resulting from the silver salts entering a sinus in the sac walls, will be very careful of any future procedures of this kind. When after months and years of dilatation we find the patient going the rounds of other doctors, we come to the conclusion that this sort of treatment is also a failure. It is almost impossible for the majority of people to come to a physician for treatment daily or even two or three times a week. The pain induced by pressure of the probe is to many almost unbearable and some soon become nervous wrecks if it is persisted in.

Operative procedures of various kinds have been advocated, but it is generally conceded that either the intra-nasal window or removal of the sac by Meller's method of external extirpation and total occlusion of the nasal ducts offers the best results. No doubt the techniques of operators who become proficient in the various methods have more or less worth. In my hands the external excision of the sac, by the Meller method has given the best, quickest and greatest relief. A few vital points must be observed.

First of all, local anesthesia is to be preferred. In very small children and nervous people this cannot be used, but when possible, local is the anesthetic method of choice. There is no pain if the eye is first anesthetized by a few drops of a 4 per cent. cocaine-adrenalin solution. Then the sac is injected through the puncti with a 1 per cent. solution of cocaine. This can be repeated two or three times, if no fluid goes through the canal into the nose. The skin is now injected with a 1 per cent. solution of cocaine and adrenalin, a 2½ per cent. solution of cocaine being used in the deeper tissues until the sac is reached, after this the needle is inserted to the bone following the periosteum. A drop is inserted at short intervals until the tissues are anesthetized. This injection is done both at the upper and lower end of the sac; after this the needle is inserted into the intra-nasal end of the canal.

Make the incision as described by Meller and dissect the sac out clean, leaving no particle behind. Many fail at this juncture by allowing some of the sac to remain. The field should be free from blood and exudate so that every point of the groove can be examined.

Then the canal to the nose should be thoroughly curretted so there is no mucous membrane allowed to remain and complete closure may be obtained. Here, I believe, is the greatest cause for failure. The periosteum and cellular tissues should be closed by two deep sutures and several superficial ones, then every particle of blood

and secretion expelled by a firm pressure dressing.

It is my routine practice to apply a small pad of gauze, about one-half inch wide and one inch long, first over the wound, then gradually build up by dressing with longer and larger pieces of gauze until it is large enough to cover the wound and field securely, including the eye. A roller bandage is then applied firmly too tight for comfort, but this firm pressure is the great secret of success. If no infection or blood clot be allowed to remain, the wound should be completely closed and stitches removed in three or four days. The resulting scar is almost negligible and in a few weeks cannot be seen by the casual observer.

The above treatment, in my hands, has been so successful and satisfactory that I make it a routine practice. A few of the patients will have some bother with tears flowing over the cheek but they are in the minority and are so much improved, in comparison with the old methods tried, that they are satisfied with the new.

If the eye is freed from all irritation by properly fitted lenses, even if very little correction is needed, the protection from wind and dust will give greater relief and lessen the amount of lachrymation. The lachrymal gland can also be extirpated, but I have not found this necessary in any of my cases.

The window or internal operation advocated by many has not been as successful in my hands, but some claim excellent results. We all know that openings in the nasal tissues, no matter how large, are very prone to close and the resulting contractions and scar tissues give unsatisfactory end results.

137 E. STATE ST.

#### DISCUSSION

DR. F. W. LAMB (Cincinnati):—The management of dacryocystitis depends largely on the pathological condition present and the personal equation of the surgeon. A method of treatment which may be very successful in the hands of one man may be a failure with others. We should, therefore, not condemn absolutely a procedure which has failed us as this very procedure may give another man good results.

Concerning the pathological condition present there can be no question as to the right thing to do in a case of acute purulent or acute phlegmonous dacryocystitis—the abscess must be opened. A free incision over the point of fluctuation is all that is required, although some one has suggested a conjunctival incision in these cases, the idea being that a fistula would be avoided. The incision is made into the sac through the conjunctiva between the caruncle and the lower lid. I have had no experience with this incision. These cases must have a radical operation later and should a fistula result from the incision it can be taken care of when the radical operation is done.

Cases of chronic dacryocystitis with dilation

of the sac and profuse purulent secretion always require radical operation, with extirpation of the sac or dacryocystorhinostomy. I have had no experience with the intra-nasal method which was first advocated by Toti, I believe, and later by West and others. This method may be entirely satisfactory. I do not know. I do know, however, that extirpation of the sac has given me very satisfactory results. It is not necessary in my opinion to follow rigidly the technique of Meller. It is much easier, and just as thorough, to dissect the skin well back on each side of the incision and cut directly down to the bone just anterior to the so-called lachrymal crest. Then with a curved blunt instrument the sac can be lifted out of its bed and grasped with forceps. From now on the dissection is comparatively easy. The important thing just here is to get the top of the sac. Even though we leave some of the sac behind, if the top is removed and both canaliculi are severed the result will be good.

Cases of chronic dacryocystitis with a small amount of clear mucoid secretion can sometimes be cured by probing and syringing. If, however, after a reasonable length of time, there is no improvement then these cases must have a radical operation.

It is important to remember that all cases of epiphora are not due to dacryocystitis. A chronic catarrhal conjunctivitis will sometimes produce a most annoying epiphora. These cases of course do not require operation on the sac. They require treatment of the inflamed conjunctiva. Closure of the punctum will also cause epiphora. These cases do not require operation on the sac but operation on the punctum, enlarging it by slitting the canaliculus or what is better, excising a triangular piece of mucous membrane.

The probe and syringe, while of doubtful therapeutic value, are important aids in diagnosis. Let us not extirpate lachrymal sacs or do window resections of the nasal wall for conjunctivitis, closure of the puncti or stricture of the canaliculi. On the other hand let us not slit the canaliculi or enlarge the puncti for stricture of the nasolachrymal duct. Let us use the probe and syringe to make an accurate diagnosis and let our treatment depend on the actual pathological condition present.

---

*Diseases of the Thyroid Gland*, by Arthur E. Hertzler, M. D., F. A. C. S., Professor of Surgery in the University of Kansas School of Medicine; Surgeon to the Halstead Hospital, Halstead, Kansas; Surgeon to St. Lukes Hospital and St. Mary's Hospital, Kansas City, Mo., and to Provident Hospital, Kansas City, Kansas. With a chapter on Hospital Management of Goiter Patients, by Victor E. Chesky, A. B., M. D., Associate Surgeon to Halstead Hospital. One hundred and six original illustrations. Price \$5.00. C. V. Mosby Company, St. Louis, Publishers.

## Granuloma Inguinale\*

By H. L. CLAASSEN, B. S., M. D., Cincinnati  
Junior Dermatologist Jewish Hospital Dispensary, Cincinnati General Hospital.

*Editor's Note.*—In the experience of Dr. Claassen, granuloma inguinale is not as rare in this locality as most physicians believe. None of his patients had ever been in the tropics. The peculiar bodies described by Donovan are not constantly present, although they seem to bear an etiological relationship, for numerous workers in all parts of the world have found them in cases of ulcerating granuloma. It still remains to be proved whether they like the spirochaeta are not merely saprophytes. Granuloma inguinale is a distinct entity and very fortunately the intravenous administration of tartar emetic constitutes a specific form of treatment.

**T**HESE CASES are presented because of their supposed rarity and because this troublesome condition has been masquerading in this vicinity under various diagnoses and treatments.

### SYNONYMS

The synonyms associated with this disease are: Ulcerating granuloma of the pudenda; groin ulceration; sclerosing granuloma; serpiginous ulceration of the genitalia; granuloma venereum; and granuloma inguinale tropicum.

These synonyms, while descriptive of the lesions, are not expressive enough for the condition is not confined to the tropics nor to the inguinal region. A new name should be suggested derived from its etiological factor just as soon as this has been definitely decided upon.

### DEFINITION

*Granuloma inguinale* is a chronic, local, auto-inoculable, ulcerative disease characterized by the formation of deep seated nodules with subsequent ulceration and serpiginous extension, being limited chiefly to the Ethiopian race and urogenital triangle, showing little tendency to systemic manifestations and none towards spontaneous recovery.

### HISTORY

It was first noticed by McLeod of India, in 1882. He described this disease under the title of serpiginous ulcerations of the groins. In 1889 Galloway described a case seen in England. Conyers and Daniels, in 1895, more adequately described it as seen among negroes and East Indians of British Guiana. In our country it was first described clinically by Grindon, in 1913. Since his article numerous others have appeared by Driscoll, Goodman, Symmers, Campbell and Winfield. From the number of articles appearing during the last year this disease is either becoming more common, or our diagnostic acumen is becoming greater.

### GEOGRAPHIC LOCATION

It is found chiefly in the tropics, although not endemic to this region, for sporadic cases have been seen from London to Australia and in our

own country from New York to Texas, so that it is of practically world wide distribution.

### REGIONAL LOCATION

Lesions are found chiefly in the inguinal region, from which, by extension, the whole urogenital triangle, together with the contiguous surfaces of the thighs may be involved. It is exceedingly rare to have other surfaces affected, and only very few cases have been reported in the literature.

### AGE AND RACE

It appears to be confined to middle age adults, and is found chiefly in the Ethiopian race and

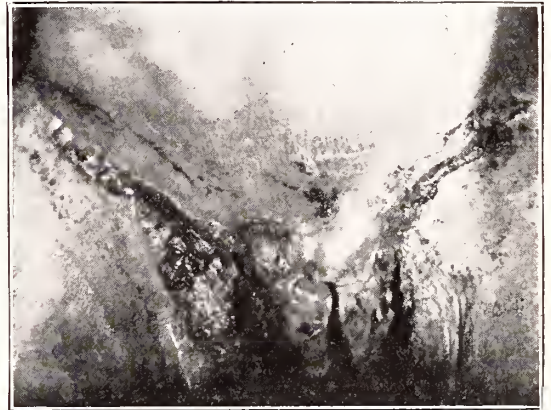


Fig. 1. L. H., aged 40 years, white. Never in tropics. Lesion present since 1912. Photographed May, 1922. No treatment. Wassermann reaction 4 plus.

those of negro descent; is fairly common among the Mongolians, but exceedingly uncommon among the Caucasians, so that the two cases presented have more than ordinary interest.

### CONTAGIOUSNESS AND INCUBATION

Maitland reported a case in which the victim subsequently developed the condition upon the buccal mucous membrane and tongue. Walker and Randall each tried auto-inoculation upon three cases, but all six efforts were unsuccessful. In my own case the lesion appeared upon the hand one and one-half years after its appearance upon the genitalia. The incubation period has been variously reported as from two to eight days. In Lows' case the lesion appeared two days after exposure. Maitland gave a four day in-

\*Read before the Section on Dermatology, Proctology and Genito-Urinary Surgery of the Ohio State Medical Association, during the Seventy-Sixth Annual Meeting, at Cincinnati, May 2-4, 1922.

cubation period. Arago and Vianna reported a case in which the incubation period was eight days.

#### SYMPTOMS

Granuloma inguinale usually begins as a papule, which the patient can feel better than see. At first the skin is not involved and is freely movable over the nodule. As this grows larger the skin becomes tense, adherent and of a reddish purple hue. Ulceration now takes place, the thinned epidermis being broken by trauma and the ulcerative area assumes a granular aspect. These granulations bleed very readily and have a discharge, which in some cases, is thin and serous; in others, thick and hemorrhagic. The odor is said to be characteristic so that a definite diagnosis can be made upon entering the ward. My olfactory nerves never developed this highly specialized sense. The ulcers coalescing with others or spreading centrifugally, soon transform the area into a serpiginous, polycyclic ulcerative mass, whose edges undermine the irregularly thickened fibrotic border which sloughing off, may fall upon the rich red granulations and dry into brownish-black crusts or be cast off by the exuding secretions. Cicatrizing islands form within the mass of granulation tissue but in spite of their apparent firmness, they too like the fibrotic border, break down due to the development of new nodules. Thus it spreads on and on frequently starting in the inguinal region, apparently following the line of discharge, seemingly making great progress in the hairy region, until the whole area from the anterior superior spine of the ileum to the pubes has become involved; then by continuity the genitals and by auto-inoculation the contiguous

surfaces of the thighs or any other part of the body, so that in an extensive case the whole area extending down from the brim of the pelvis to the pubes, the genitalia, perineum, coccyx is involved in one hideous, foul-smelling ulcerating mass.

Due to the resulting inflammation and oedema, elephantiasis of the affected part is a common complication, this together with scar tissue contractures may markedly alter the natural contours of the body. When the urethra and rectum are involved ulceration and scar tissue formation may make micturition and defecation painful and almost impossible.

Suppuration is not a common complication and there is usually no concomitant adenopathy. This has not been my experience for all cases showed the neighboring lymphatics to be enlarged. The patient's health is generally very good. *Those cases showing an extensive involvement of several years duration usually show a secondary degree of anemia.*

#### MICROSCOPIC EXAMINATION

Under low power the corneum shows an increasing degree of thickness, until the band of sclerosis is reached which surrounds the granulating area. Here it becomes enormously enlarged to once again fade away into the granulation tissue. There is no associated parakeratosis.

The rete Malphigii shows an increasing degree of acanthosis, the rete pegs at first long and club shaped become confluent, forming flat plateau-like areas and these coalescing, form broad sheets of epidermis which ultimately disappear into the granulating area. This change in the rete parallels the cellular infiltration in the corium. Coinciding with the degree of acanthosis is an inter- and intra-cellular oedema, which, in places, is so intense that small lakes filled with cellular debris are formed. The nuclei in many of the cells are shrunken and float in a fluid which in some cases fills over one-half of the cell. The rete, staining intensely with Unna's Polychrome methylene blue, hematoxylin and other basic dyes, loses the power of retaining these stains as the oedematous areas are reached. This, however, is less noticeable in the lowermost portions being most marked in the supra-papillary layer.

The stratum Lucidum is nowhere in evidence. The stratum granulosum, consisting of three to five tiers of cells, increases relatively in width as the spongiotic area is reached, this being due to the inter- and intra-cellular oedema. These cells lose the keratonyaline granules together with their power of retaining basic dyes as they become more and more oedematous, finally disintegrating and disappearing into the granulation tissue. The columnar cells of the basal layer become more and more cuboidal from the interstitial oedema, the central portion staining less



Fig. 2. W. H., aged 32 years, colored. Never in tropics. Lesion appeared in July, 1920. Amputation done July, 1921. Appearance of hand lesion September, 1921. Photographed November, 1921. Wassermann reaction negative. Required 7 grams of tartar emetic and one month's time to heal hand lesion, and 14 grams and three months for penile lesion.

intensely than the periphery, the pigment becoming irregularly scattered, diffusing like grains of sand into the rete, finally disappearing entirely as the spongioid tissue is reached.

*Corium.*—A dense mesoblastic infiltration fills both the pars papillaris and the pars reticularis being most marked in the latter. This consists of red blood cells, plasma, mast, small round and connective tissue cells together with leucocytes. These latter, however, are not much in evidence, there being no tendency towards suppuration.

Under the influence of this infiltration the collagen fibrils become swollen and finally disintegrate refusing to take the ordinary connective tissue stains; the elastic tissue sharing the same fate. According to Galloway the entire epidermal adnexa shares the same oedematous changes. This same infiltration, only more marked, fills the granulating area; here, however, the gorged, dilated blood vessels with their swollen endothelial cells are more numerous.

#### DURATION AND DIFFERENTIAL DIAGNOSIS

Granuloma inguinale is extremely chronic and a spontaneous cure has never been observed. This disease is more frequently diagnosed as a gummatous syphilide than as any other condition. The edge of a granuloma is definitely sclerosed and overhangs the friable, granulating, cicatrizing base, while that of a luetic ulcer, although indurated, is sharply punched out and has a flat, greasy, lardaceous, undulating base. The Wassermann reaction is of absolutely no value for we may have a definite case of lues together with a negative reaction and a positive granuloma together with a positive Wassermann.

*Chancroid.*—Here we have one lesion sharply punched out, rapidly forming new lesions by auto-inoculation, acutely inflammatory, no sclerosed border, together with a painful inguinal adenopathy with its resulting bubo, all of which is a marked contrast to the picture presented in granuloma.

*Fourth Venereal Disease.*—There is no sclerosed border, the lesions are very superficial being covered by brownish crusts; microscopic examination does not help us to differentiate for the same type of Spir. together with the fusiform bacillus may be found in both, however, the condition responds magically to arsphenamine while granuloma does not; on the other hand, granuloma responds just as quickly to tartar emetic while the fourth venereal disease does not.

*Tuberculosis.*—There are no signs of tuberculosis elsewhere; and the tuberculin reaction is negative. Failure to find the bacillus, inability to communicate the disease to guinea pigs, absence of giant cell arrangement, and caseation absolutely differentiate these conditions.

*Epithelioma.*—Epithelioma, like syphilis, is a common diagnosis for ulcerating granuloma and superficially, it does resemble an extensive

squamous cell type, with its indurated edge and friable granulating base. However, the youth of the patient, absence of glandular involvement, presence of cicatrizing islands, effect of treatment and a different histological picture, for we do not have pearl formation, nor long interlacing cords of cells, absolutely differentiating these two conditions.

#### BACTERIOLOGY

The etiology of granuloma inguinale is uncertain and much debated in the literature. Conyers and Daniels, Le Dantic and Jeanselme consider it to be of a tubercular nature. Wise, Maitland and Bosanquet believe the granuloma



Fig. 3. C. M., aged 24, colored. Never in tropics. Lesion appeared in August, 1920. Photographed in March, 1922. Wassermann reaction negative. Patient disappeared before lesion entirely healed.

to be a manifestation of syphilis for these men found spir. of *Tr. Pallidum* type. Driscoll, H. Goodman, MacLennon, Winfield and Hoppe have demonstrated spir. other than *Pallidum*. In one of my cases I was able to demonstrate spir. of *Refringens* type.

In 1905 Donovan found intra-cellular bodies in large mononuclear cells and since then these have been found with increasing frequency. Arago and Vianna, Siebert and Martini, found this organism pathogenic for kittens, guinea pigs and rats. Walker and Campbell believe it to be a bacillus belonging to the bacillus *Mucosus Capsulatus* group. It is not due to Friedlanders bacillus as Small has shown that these organisms do not cross agglutinate with Donovans bacilli. Lynch, Goodman and Symmers have all been able to demonstrate this encapsulated diplococcus.

*Synopsis of Dr. Whery's report* is as follows:—Smears showed cocci, minute bacilli in chains and diphtheroid bacilli. Cultures upon 2 per cent. Sabouraud's media, blood agar and blood broth yielded staphylococci and diphtheroid bacilli. The minute bacilli did not grow nor were there any colonies of Friedlanders bacillus as described by others. No acid fast bacilli were

demonstrable. A white mouse, white rat and malaccus monkey were inoculated sub-cutaneously with ground up tissue from edge of ulcer. The monkey died rather suddenly on the fourth day. On *post mortem*, at the inoculation point there was a serogelatinous exudate in which were a few diphtheroid bacilli. These were grown in culture and tested upon guinea pigs with negative results.

*Relapses.*—Ashford expects twelve per cent. of recurrences. Arago and Vianna report three relapses in twenty-five cases. Randall reported two per cent. recurrences in sixteen cases.

#### TREATMENT

In tartar emetic we have apparently a specific. Arago and Vianna, stimulated by the glowing accounts of its use in trypanosomiasis and other tropical diseases, tried it on granuloma with the



Fig. 4. L. F., aged 34, white. Never in tropics. Lesion appeared in May, 1919. Photographed in February, 1922. Wassermann reaction negative. Required 4 grams of tartar emetic and one month's treatment to cause disappearance of lesion.

result that we today are still using this preparation. The patient who has been bathed in antiseptics, cauterized, curetted, X-rayed and surgically ablated, looks upon this new method as being merely another unsuccessful attempt. This outlook on life is immediately changed, however, for he returns with a cheerful intensely interested attitude, as he can definitely notice an improvement even after the first injection. Healing does commence almost synchronously with the administration of the drug. Extravasations are much more painful and local reactions more severe than with arsphenamine. Elephantiasis seen so frequently in labial involvements gradually disappears during the course of treatment.

According to Lynch those cases complicated by an existing lues are more refractive to treatment. This has not been my experience, but all

cases do not respond alike, some being quite obstinate to treatment. The dosage varies in different hands, but nearly all observers advocate a 1 per cent. solution. This is used with normal saline as a diluent gradually working up to a straight 1 per cent. solution, which is then continued on alternate days until about three grains per injection are administered. I used a straight 1 per cent. solution, beginning with 3 cc. and increasing 1 cc. per injection on alternate days, until the patient showed signs of intolerance. The tolerated dose was then continued until healing had definitely taken place. The injections were then discontinued for one month, when another course of about one month's duration was instituted. Cases showing secondary degree of anemia must receive supportive treatment in conjunction with tartar emetic.

The symptoms manifested during administration were coughing, nausea, vomiting, dizziness, increased perspiration and an absolute fall in both systolic and diastolic pressures, together with an increased pulse rate. These lasted with diminishing intensity for about one-half hour. The dangers arising from the administration of tartar emetic are not to be underestimated, for deaths have been reported following its use. Crevin, in 1568, wrote that there is no drug with which one might more secretly poison a man, and the students of Heidelberg were required at one time to take an oath never to use it. According to many investigators (Salkawiski, Breini and Priestley) the prolonged administration of tartar emetic produces fatty degeneration of the liver, kidneys, heart and muscular tissue of the diaphragm. Other preparations of antimony, such as the colloidal antimony sulphide, sodium antimony, tartrate or acetyl-p-aminophenyl stibiate of sodium as used by Caronia and Sir Leonard Rogers in Kala Azar and Lishmaniasis, should be tried, as they are much less toxic and of greater efficacy than tartar emetic. With the healing of the granuloma our troubles are not over for in those cases, in which the orifices of the body are involved, strictures frequently develop, which require careful dilatation.

#### SUMMARY

Summarizing, we may say:—

1. The disease is not endemic to the tropics, but occurs in the temperate zones as well.
2. It is not as rare in this locality as most physicians believe.
3. The adjective tropicum is not justifiable and a new name should be suggested.
4. The peculiar bodies described by Donovan are not constantly present, although they seem to bear an etiological relationship, for numerous workers in all parts of the world have found them in cases of ulcerating granuloma. It still remains to be proved whether they like the spirochaeta are not merely saprophytes.



5. Granuloma inguinale is a distinct entity.
6. The intravenous administration of tartar emetic constitutes a specific form of treatment.

## DISCUSSION

DR. ELMORE B. TAUBER, (Cincinnati).—It was with a great deal of pleasure that I listened to Dr. Claassen's terse, lucid and comprehensive presentation of granuloma inguinale, which, while unfamiliar to the general profession, is not as rare as was commonly thought. On account of faulty diagnosis, or errors in diagnosis, the condition has been improperly catalogued in the literature and has become known as a rare disease; but now, thanks to work like Dr. Claassen's, the general practitioner should have a better understanding of this condition and be able to make a quicker diagnosis.

The cases that I have seen both in private and clinical practice, have been of the same type of granulations and ulcerations described by Dr. Claassen and of bright red to deep red in color tone. While Dr. Claassen referred to the offensive odor as being characteristic, I think it is nothing more or less than the characteristic odor that we get with all infections in this locality and more especially with the class of people who get this disease and who are not clean or whose environment is not good enough to keep these parts aseptic; so that with a natural saprophytic infection and putrefaction, you get this odor, which also occurs in many other diseases of the inguinal region.

Non-involvement of the glands was mentioned but the absence of cachexia was not. There are two significant points, the non-involvement of the glands and patients not being cachectic. With a condition of this type, you would look for grave involvement, but you do not find it, and when you do, it is due to a secondary infection.

The histology of granuloma is simple. The condition is purely a plasmoma with enormous hypertrophy of the papillary tissues of the skin. We have not yet isolated the real causative organism but will undoubtedly do so soon.

Luckily, we have a specific treatment in tartar emetic by intravenous injection, which gives brilliant results; and I am sure, with better diagnosis, the result which Dr. Claassen aimed at, a better understanding of the disease, will surely become general.

DR. CLAASSEN (closing).—In conclusion, I want to emphasize the importance of early diagnosis, for this condition is contagious and these cases should be quarantined until they have received several injections of tartar emetic. The rapidity with which some of these cases respond to treatment is truly remarkable, and is the most satisfactory part of the work.

I wish to express my thanks to Dr. Wherry, for his painstaking and arduous laboratory cooperation, and to Dr. E. Hendricks for his faithful and untiring zeal in the treatment of the cases reported.

## A Precocious Mother: Case Report

M. F. HUSSEY, M. D., Sidney,

ON July 17, 1922, 8 a. m., I was called to a neighboring village to see Miss E. L., at that date 10 years, 11 months, 13 days of age. The phone message stated that the girl was seriously ill and would like my immediate attention.

On my arrival, about twenty minutes after the message, I found an intelligent, well nourished girl whose age would impress one as 12 or 13 years.

The mother gave me the history of her having taken sick suddenly at 4 a. m. with abdominal cramps; that her bowels had not moved though she had gone to the vessel eight times before my arrival.

I found her temperature 100, pulse 132, and immediately suspected appendicitis. Physical examination soon eliminated that and revealed the abdomen irregularly enlarged.

There was a ridge the size of a man's arm extending from the pubis to the ensiform cartilage, two inches or more to the right of the median line with a tumor-like projection at the

superior point the size of a cocoanut. There were no striae on the abdomen.

My mind now changed to either pregnancy or intussusception. I called the mother into another room and began to enquire about her social habits and previous health. She had attended school regularly; had been seen by neighbors daily; had had, as far as parents knew, no opportunities for clandestine meetings; had menstruated once when ten years old. Parents and neighbors with whom I afterward talked never suspected pregnancy.

Upon re-examination, external of course, I found the breasts enlarged and the areola discolored but this did not convince me of pregnancy as the fetal heart was not readily audible.

I asked for consultation: Drs. Beebe and Anderson responded. Before their arrival I had given her two doses of one-eighth grain morphine each.

Giving Dr. Beebe the history with his external examination, his tentative diagnosis was intussusception. She was anesthetized to permit a more complete examination and lo and behold we found the beginning of the second stage of labor with head left, occipito-posterior.

Dr. Anderson remained and kept her under a mild anesthesia until 3 p. m., when I applied the

instruments and delivered alive a six-pound boy. At this writing mother and child are doing well.

The following measurements were taken post-partem: height 5 ft.; weight 82 lbs.; pelvis, spine 22CM.; crest 25CM.; trochanters 28CM.; Baudelocque's diameter 21CM. These measurements are about 4CM. under normal. No internal measurements were taken.

There was nothing particularly unusual in this

case except the youth of the mother, the shape of the abdomen and extreme length of the baby compared to its weight.

This girl is of American parentage. Mother born in Indiana and father in Ohio. Her age has been verified by a copy of her birth report sent in from Mahoning County, Ohio. This is the youngest recorded mother in Ohio.

August 22, 1922.

## PUBLIC HEALTH NOTES

A corps of three doctors and 15 nurses awaited the opening of the Akron public schools, September 5. A preliminary inspection of the 33,000 pupils was first undertaken to find those suffering from communicable skin diseases. These were ordered to their homes until well. Following the primary inspection work will begin on the general physical examinations which continue throughout the year. This will include work in the "cripple school" and in the open window rooms maintained in six buildings.

—Dr. Gertrude Hastings Transeau, Columbus, has been selected by the Children's Bureau of the Federal Department of Labor to carry out special research work during the next year in connection with a study of 10 or 12 of the leading child-placing institutions in America. Dr. Transeau will report on the nature of preventive and curative work being conducted by the child care agencies and the technical training of the employes utilized.

—A Sandusky County resident, arrested on the charge of having broken a quarantine law, was heavily fined. The affidavit was sworn to by County Health Commissioner Thomas, who with his deputies gave testimony for the state.

—Weighing stations where the development of children may be tested by parents have been established by the Columbus board of health in various parts of the city. This is in line with the slogan of the Child Health Council of America, "The rate of gain in weight is an index of a child's health."

—Two wells in the public square of Bucyrus were recently condemned by the city board of health. This action was taken because the State Department of Health has condemned all dug wells and because typhoid fever existing in the city to some extent had been produced by water from dug wells. One of the "town pumps" had been in use nearly 90 years.

—Reduction of the Highland County health budget from \$7,200 this year to \$2,000 for the year 1923 will mean that the county must employ a health commissioner on a part-time basis and forego the services of a public health nurse.

—In a two-day tuberculosis clinic held at Wapakoneta, August 29-30, under the auspices of the state and local health departments and the county medical society, 21 out of 47 persons examined were found to have positive symptoms of the disease, and 16 of the suspects were under 30 years of age. On the evening of the first day of the clinic directors of the Auglaize County Public Health League held a meeting which was addressed by Robert G. Paterson, executive secretary of the Ohio Public Health Association.

—Request for \$16,250 for the Franklin County health department for 1923 has been filed with the budget commission by Dr. C. M. Valentine, county health commissioner. The increase of \$2,250 over the amount allowed last year will, if approved, be used to purchase typhoid antitoxin and employ an additional nurse.

—Miss Uarda Faine, New Straitsville, has been added to the staff of the State Department of Health as dietician in the bureau of child hygiene, whose program and personnel have been expanded for operation under the Sheppard-Towner maternity act. Miss Faine is a graduate of Ohio University, trained as dietician at Harlem-Bellevue Hospital, and did post-graduate work in dietetics at Boston.

—Dr. Arthur W. Thomas, secretary of the Mahoning County Medical Society, has been employed by the Youngstown board of education as school physician. He will devote his mornings to school work, giving special attention to the prevention of contagious diseases.

### Births vs. Deaths

Provisional birth and death figures for the first quarter of 1922, just announced by the Department of Commerce at Washington, as compared with the corresponding quarter of the previous year shows that the number of deaths in Ohio materially increased and the number of births declined.

For the first quarter of 1922, there were 31,555 births and 20,285 deaths in Ohio. During this same quarter in 1921, there were 32,903 births and 17,164 deaths.

In 1922, for the first quarter there were 11,270 more births than deaths and during the same period in the previous year there were 15,739 more births than deaths.

## Medical Leadership, Public Health Activities, and Professional Relations Discussed at Annual Conference of Ohio Health Commissioners

Not alone in the importance of the conference itself, but in the fundamental problems which it recognized, and in its approach to a unity of purpose in which the medical profession of the state plays the leading role, the annual conference of health commissioners of Ohio, held in Columbus on September 5, 6, 7, and 8, typifies a new era.

One hundred and twenty-four of the 166 health commissioners of the state attended this third annual conference under the auspices of the State Department of Health. A report made at the outset of the meeting indicated that those who were unable to be present were either prevented by reason of illness, accident, or the presence of communicable diseases in their districts. The conference was declared to be a greater success than any similar meeting held in this state either before or since the Hughes-Griswold health code became effective.

### FUNCTION OF HEALTH ADMINISTRATION

The function of public health administration, as conceived and expounded by Dr. W. S. Rankin, secretary of the North Carolina State Department of Health, and president of the American Public Health Association, in addition to disease prevention is to educate the public to the value and necessity of private medical practice. He declared that by raising the popular intelligence of the community in these matters that there must inevitably come an increased demand for medical service as well as an increased reward for such services. He declared that before health administration could be effective, it must be established on a basis of mutual interest with the medical profession. "We must realize the necessity of a well paid medical profession; we must enlarge the value of service not only for us as health officers, but the value in service for the profession to which we belong," he said.

### INCREASING THE DEMAND

In elaborating on "team work" between local medical societies and local health administration, he emphasized the importance of information plus inspiration, through personal contact and the spoken word, and on this subject he said:

"In increasing the demand for medical science, in intelligently enlarging the usefulness of medicine, we have an educational problem confronting us. Intelligence appreciates, uses, and pays for medical science, but ignorance neither appreciates, uses, nor pays.

"There are two principal ways and two principal means for this educational work. One way is by the written word, bulletins, pamphlets, press articles, and literature in various

forms. The other way is by the living voice addressed to individuals collectively. The first is the method of the Bible; the second, that of the preacher. The first way is the usual method pursued, and, in general terms, about the only method available for such central agencies as federal, state, and associational health services; furthermore, for most local health agencies, where personnel in proportion to the population to be reached is limited, it, education by the written word, is the method that has to be depended upon very largely. The second way, the living word, is a method that exists potentially rather than actually. It is needed for close-up work; it has the element of personal contact which carries, in addition to the letter, the spirit that gives it life; it is the only way that a very large, unreading, potentially influential, voting population gets its information and its inspiration. The first way, the written voice, scattered broadcast through printed page from some long distance agency, is helpful and is necessary as is the barrage in preparation for a hand to hand fight, but the second way, the meeting of the masses in person, talking to them collectively, answering their individual questions before collective groups, dealing with them as man to man, is as necessary to carry the strongholds of superstition and prejudice for the forces of science and progress as is the infantry attack in battle.

"It is not necessary to discuss here public health education through the written word. We are all familiar with that. I do, however, want you to consider carefully and seriously the need and the potentialities of educational work through the living voice directed toward raising the popular intelligence with respect to the prevalence of disease and impairments and the more extensive use of medical science. Consider, if you will, the weak position of our church or denominational organizations if these organizations depended upon their state publications, their correspondence, their traveling evangelists, and had no local and fixed group to do the collective educational work through the living voice, following this with the pastoral or case work which the preaching makes possible and extends. Our local physicians, members of county medical societies, make their pastoral calls to heal the body sick physically as the minister makes his local call to heal the body sick spiritually, but they do not complete the minister's program, they do not speak to their congregations, they do not preach the gospel of good health, of right living here, they do not teach the people collectively.

"Our units of medical organization are so constituted today as to inhibit rather than to encourage the education of the local people collectively by the living voice of their own local physicians. Let some member of the average county medical society begin to make public addresses in his county upon subjects in which he is especially interested and which are of far reaching importance to the general welfare. No matter how worthy his purpose and how well performed his task, he unavoidably takes an advantage of his fellow practitioners in that he, in educating his own people collectively, inevitably advances himself personally; he is looked upon askance by his fellows, is called an ad-

vertiser, is discouraged, and suspends operations. Only the outsider from some distant point can speak to the people of the county without the risk of suspicion.

"Suppose on the other hand the average rural county medical society, say with 25 members, selects 25 subjects which will include 90 or 95 per cent. of the information on hygiene and health that the county people need, secures the promise from each of its members to speak or read once each month a public address or paper which the county society writes, has written, or secures from some outside source and finally adopts as its own address. Note that the address or paper is now not that of the person who presents it, but is that of his profession. Such a program would mean a total of three hundred public addresses during the year which, given to average audiences of only 100 people, would reach a total audience during the year of 30,000, that is, practically the entire population of the county. Under such arrangements collective medicine would make contact with collective thought, and no outsider, federal official, state official, or any one else could come between the local group of doctors and their own people. It is high time that the organic units of the medical profession begin to assume their rightful leadership in public thought, the local professions no longer being content with pastoral visits and with no well considered plan of collective work for the physical salvation not only of their people but of themselves as well."

It was estimated by Dr. Rankin that 40 per cent. of the service rendered in the practice of medicine is charity service. He declared that this burden of charity should be arranged so that it should rest on the shoulders of all citizens—not alone on the shoulders of the relatively few medical men in that particular community, and as applied only to "indigent" cases. He illustrated by experience in a comparatively small community through the organization of a charity clinic directly under the supervision of the county medical society wherein some financial return is secured for the physicians from such indigent cases in return for their willingness to serve the community in raising its health standards.

On this subject he said:

"In considering the professional organization of such a clinic in an average county of 25 practicing physicians, a service of 4 hours per week per physician would provide 100 hours of professional service every week for the county. Such a public clinic could operate 2 afternoons, 4 hours each, every week with 12 physicians in attendance; or 4 afternoons, 2 hours each, with 10 physicians in attendance; or 4 afternoons, 3 hours each, with 8 physicians in attendance; however, the number of hours served by the combined county medical society and their arrangement of one day, or one afternoon, or several afternoons, and in groups of four, six, eight, or ten physicians are details for the consideration of the local county society. With 100 hours per week and with physicians working in groups as they did in examining the drafted men during the war, from 100 to 150 people per week, from 400 to 600 per month, from 5,000 to 7,000 per year could be examined.

"As a result of these examinations a large increased demand for medical treatment will inevitably arise. Those needing and seeking

treatment may be classified into those who can pay and those who cannot pay. The first class should always be referred by the clinic to their family physician; in considering the second class, those who cannot pay, the charity practice of the county, we come to the business considerations involved in this organized effort to meet the increased demand for medical science.

"In dealing with the business elements which enter into this problem it will be well to observe in the outset that the burden of charity practice, constituting from 20 to 40 per cent. of practice, is a burden which should not rest upon 25 practicing physicians, but is a burden which should be distributed and which should rest upon the entire citizenship of the county, its 30,000 people. *All treatment administered in the clinic to the needy should be paid for by the public, and the funds paid in divided among the physicians serving the clinic, according to details to be worked out jointly by the county medical society and the group representing the public.*

"In securing funds for such a clinic, the following possible sources are to be considered: (1) a nominal charge against all who apply for clinic benefits; (2) local Red Cross chapter funds; (3) local funds received through the sale of Christmas Seals; (4) appropriations by the city or town authorities; (5) appropriations by the county authorities; (6) an annual church collection from the churches of the county in response to that commission 'heal the sick'; and (7) contributions from benevolent and financially able citizens of the county. With the educational work upon which all this is predicated, the necessary revenue to maintain a public clinic would be assured.

"A business organization of interested, broad-visioned, public-spirited men and women should be effected to organize the people of the county around the clinic. Such a lay organization would assume two definite tasks; (1) arrange for the places and notices for public addresses by the physicians; and (2) secure funds with which to finance the clinic.

"The local medical society would work out with this group of business men, and define on paper, the conditions under which the business group, representing the community, would issue cards of admission and also requisitions for treatment to those who apply. In the whole scheme, the local society, through organized effort, would assume the initiative and approve everything that was done both in providing for the increased demand with respect to diagnosis and the increased demand for treatment.

"The profession at present is extensively and intensively interested in the development of public hospital facilities. This is a worthy interest and should be encouraged in every way. But the hospital is something that will come only when the local county people have been informed through educational methods as to the prevalence and meaning of disease and impairment, and when they have had demonstrated, through a public clinic, what can be done through organized effort in the treatment of disease and impairment. In short, public organization to care for disease and impairment in an adequate way will follow and never precede professional organization. We shall have organization and cooperation without when we get organization and cooperation within."

#### PROFESSIONAL LEADERSHIP IN HEALTH WORK

That the medical profession must always be considered the most important part of the pub-

lic health machinery in any community was the declaration of Dr. George E. Vincent, chairman of the International Health Board, and president of the Rockefeller Foundation, in his address to the conference. Sanitation, and the control of communicable diseases were declared by him as the two fundamentals toward which more effort in health administration must be centered. It was his opinion that other efforts and activities of local health administrations must be adapted to the particular community needs commensurate with the financial ability of the community to pay.

"If public health is a purchaseable commodity how much can a community afford?" asked Dr. Vincent. "Some forms of health work some communities cannot afford; the question is to find out what can best be afforded and applied to secure practical results. For example, it would be perfectly possible to raise strawberries in the Arctic Circle, yet it has been estimated that each strawberry so raised would cost \$11.40. The abstract theory of raising them there would be proved but there would be no practical result", he said.

"Some foolish people have claimed that public health administration will do away with the need for the medical profession in private practice. Such a development can never come, and any plan, system, or propaganda which indicates that there will be a lessening in the importance of the medical profession as such, is fallacious. However, all public health efforts arising as they do from the practical results of private medical practice, must be based on the confidence, goodwill and support of the profession.

"Health commissioners cannot be public health despots. Their field is determined by their ability to grapple with concrete problems, and ability to cooperate hand in hand with the profession to which they belong."

His conclusion was that public health work is sound only as it is consistent with the best interests as well as the highest ideals of physicians in private practice.

On the subject of the shortage of physicians, Dr. Vincent analyzed the economic aspect of this development and illustrated by showing that some communities can better afford to send outside for a physician than to attempt to maintain one permanently in a very small isolated community. He called attention to the procedure which has developed in some communities which have offered county subsidies to a physician to settle in that locality. He declared, however, that such a system while unfortunate is not state medicine, for it permits the physician to practice and charge as his judgment dictates.

Dr. Vincent stated that the eyes of the public health world are on Ohio. He stated that not only is important history being made in this state, but that an example is being set.

#### VITAL STATISTICS

The health commissioners went on record as favoring elimination of the more than 1500 local registrars of vital statistics in the state, and their replacement with a local registrar for each

health district. This would provide for 95 city registrars and 88 general health district registrars, corresponding to the counties outside the cities, a total of 183.

The subject came up in the form of a report by the committee on vital statistics, presented by its chairman, Dr. A. W. Neal of Hamilton County. The committee reported the draft of a bill to be presented to the eighty-fifth general assembly for enactment. It would authorize general and city district boards of health to appoint registrars of vital statistics, with jurisdiction coextensive with the health districts in which they would operate, to qualify under requirements and operate under regulations formulated by the state department of health.

It also provides for appointment of assistant registrars where needed, and for appointment of local deputy registrars, reporting to the central office, in territory not convenient to the centers of registration.

Finally, by providing for the repeal of the present law, for which the new bill is proposed as a substitute, it seeks to do away with the ex-officio functioning of township and village clerks as local registrars. The present system was regarded as cumbersome and not satisfactory because there is nothing in the law to compel these officials to do the duty prescribed, whereby thousands of birth and death records are lost yearly, it was said.

#### MILK REGULATION

One of the outstanding features of the conference was the report of a committee appointed at the 1921 conference to draft milk regulations. The regulations suggested will be carried back to their respective districts with the purpose of having the local boards of health adopt them.

The principal recommendation of the committee of which Dr. G. D. Lummis, health commissioner of Middletown is chairman, provides:

"All milk sold in each district where the regulations are adopted shall be drawn from cows free of tuberculosis or other diseases. Each cow furnishing milk for sale shall be tuberculin tested annually by a licensed veterinarian approved by the department of agriculture.

"When one or more cows in a herd react to tuberculin, the reactors shall be removed from the herd and the remainder of the herd shall be tuberculin tested at intervals of six months for the following year.

"All milk not drawn from tuberculin tested cows shall be pasteurized, which comes from dairies not scoring seventy points on the standard score card.

"All milk sold in the district shall be subject to examination for sediment by the health commissioner. Milk which shows a sediment of more than two on a scale of six as shown by the vacuum sediment tester, shall not be sold in the district."

## DISTRICT HEALTH DIVISIONS

Inefficiency in general district health departments in Ohio can be eliminated only by a thorough house-cleaning, Dr. F. G. Boudreau, chief of the division of communicable diseases of the state department, declared in his address before health commissioners.

"Departments which are weak are in worse shape now than they were when first organized early in 1920," he said. "There is no salvation for the incumbents; they are hopeless. The only remedy is to get rid of them."

Dr. Boudreau said inefficiency is far from being wide-spread in Ohio. "There are 50 district health commissioners in the state who are making a name for themselves," he declared. "For the most part it can be stated truthfully the work is being carried forward on a high plane of efficiency."

Dr. Boudreau took occasion to condemn a 'tendency toward carelessness in registration of births, deaths and cases of sickness."

"The importance of this work must not be minimized," he said. "The whole system of records must be improved and maintained if real health service is to be given the people of Ohio."

\* \* \*

A committee was appointed to draft a report on sanitary conditions at Buckeye, Indian and Portage Lake districts and to urge the legislature to enact legislation and make necessary appropriations to provide adequate sanitary systems.

## DIPHTHERIA IMMUNIZATION

Dr. W. H. Park, director of laboratories of the New York City health department, spoke on modern methods to prevent diphtheria. He introduced toxin-anti-toxin as a means of immunizing diphtheria into the United States and he also is the foremost exponent in America of the Schick test to determine susceptibility of an individual to the disease. Ohio is using this test more extensively than any other state except New York.

## PUBLIC HEALTH NURSING INSTRUCTION

Public health nurses in Ohio will receive a correspondence study course similar to that provided for health commissioners of the state as a result of action taken by a committee, appointed to pass upon the advisability of the proposal.

The report adopted by the committee, consisting of representatives of public health nurses in all sections of the state, approved creation of a special course of instruction, under direction of the state department of health.

The course is to be made available, first, to those acting in official capacities in the state and later, after the success of the project has been established, to those acting with voluntary agencies and commercial organizations as a means of acquainting them with the scope and

limitations of law and procedures under state and local public health administrations.

In addition to the formal addresses, discussions and committee reports, one of the most interesting sessions of the conference was a symposium participated in by State Director of Health, Dr. H. H. Snively, and the heads of the eleven bureaus in the state department, as well as the symposium on "Essentials of Successful Health Administration", in which a number of outstanding local health commissioners presented their views.

## Group Meetings This Month on "Mental Hygiene"

Through the cooperation of the State Association's Committee on Medical Education and the special committee on Mental Hygiene and on the recommendation of Dr. Robert Carothers, president of the State Association, the subject "Mental Hygiene" has been selected for presentation at the series of group meetings planned for this year.

Plans for these group meetings, to be held during October, are now being arranged by the Committee on Medical Education in order to convey to the practicing physicians in every locality an opportunity to secure a resume of the "Mental Hygiene" problem as it affects the profession.

It is the intention of the committee to present the subject in a uniform manner, emphasizing the fact that insanity is a serious illness and pointing out the early danger signals in neurosis. Emphasis will be placed on the organic or physiological basis for mental disturbances, including focal infections. The subject is to be discussed in a way that will be of special interest to general practitioners.

In addition to the lectures for the group meetings, the special Committee on Mental Hygiene expects to undertake a study looking forward to the adoption of a state-wide policy on mental hygiene with perhaps an advocacy later on of the revision of the state laws in regard to commitment, retention and parole of inmates in insane and feeble-minded institutions.

Tentative plans for group meetings include the following cities: Defiance, Tiffin, Mansfield, Chillicothe, Portsmouth, Athens, Zanesville, Steubenville, Youngstown, Akron and Delaware.

The State Committee on Medical Education consists of Dr. R. H. Birge, chairman, Cleveland; E. F. McCampbell, Columbus; and A. H. Freiberg, Cincinnati.

Several of the county societies are making preparations for the next National Cancer Week, which is to be held during the week of November 13, under the auspices of the American Society for the Control of Cancer.

## Lessons of the Past\*

FREDERICK R. GREEN, M.D., Chicago

**M**EDICAL organization has been carried to a higher point in the United States than in any other country. Besides the A. M. A. with its 56 state and territorial branches and 2200 county societies with an aggregate membership of 89,000 physicians there are 77 national, special, interstate and regional medical organizations. These medical societies hold at least six thousand meetings annually, at which papers are presented, covering every conceivable subject in the field of medicine. American physicians support 240 journals, in which are published the papers read before medical societies as well as much additional matter written specially for the publication.

Most of these papers endeavor to increase our knowledge by observation, experience and experiment. In seeking to resolve each problem into its component factors, they are essentially analytical. But analysis is only one method of increasing human knowledge. Equally important is synthesis, the combining of the parts into the whole, the drawing from a large mass of details of general principles and the application of these principles to human activities. The medical profession in the last fifty years has produced by analytic methods an astonishing amount of knowledge regarding the nature, treatment and prevention of disease. It has, so far, produced almost nothing in the form of synthetic principles which may be applied to our relations to either the public or the state.

Such an increase in our knowledge of disease as has taken place in the last half century could hardly occur without far reaching effects on the relations of physicians to the public. These changes have taken place so gradually and imperceptibly as to be almost unrecognized, while the effects of these discoveries on social conditions have been given little attention. As Prof. Robinson says, "The knowledge of man, of his springs of conduct, of his relations to his fellow men, singly and in groups, and the felicitous regulation of human intercourse have made no such advance as has our scientific knowledge. Human affairs are, in themselves, far more in-

*Editor's Note.—Conditions of medical practice are in process of change. The old order when a physician's contact was solely with the individual and his only knowledge of disease was its manifestation in the individual patient has passed with the tremendous increase in our knowledge gained during the last half century. The change has come about gradually, almost imperceptibly, but it is affecting vitally the relations of physicians to the public. New conceptions of this reciprocal relationship are in the process of making, and it behooves the medical profession both for its own sake and that of the public to help shape the new order. Dr. Green's exposition of the subject is clear and his conclusion is deserving of thoughtful consideration.*

tricate and perplexing than molecules or chromosomes. But this is only the more reason for bringing to bear on human affairs that critical type of thought and calculation for which the renumerative thought about molecules and chromosomes has prepared the way." Most progress, as H. G. Wells has said, has merely been "muddling."

In order to understand human conduct and human organization, we must study social conditions as critically and as dispassionately as we do the natural sciences and must then formulate our views as a result of this examination. The attitude of physicians toward the physical causes of disease is based on sound scientific methods, that is, the securing of all the available facts by painstaking study, experiment and observation, and, after careful checking and elimination of error, the deducing from these facts of sound general principles. But in the field of social relations, our methods are still empirical and unscientific, based largely on inherited prejudices and established customs, or on personal opinions formed often without accurate knowledge or impartial investigation. If you doubt this, ask yourself what is the difference in the average physician's attitude towards a tubercle bacillus and a chiropractor. In the case of the tubercle bacillus, the medical student, as part of his scientific training, is taught everything known regarding its life history, its pathological manifestations and the best methods of controlling its ravages. Any medical college which failed to give such instruction would be regarded as unworthy of recognition. Any new facts regarding tuberculosis or any new methods for its control are at once published in our scientific journals, discussed in our societies, and verified by innumerable observers. In the case of the chiropractor, the medical student is taught nothing and is left to grapple with the problem as best he can. Yet the chiropractor as a social phenomenon is just as deserving of study as is the bacillus as a bacteriological problem.

The next question to consider is, how has the development of modern scientific medicine in the last fifty years altered our relations to the public.

Prior to 1870, the practice of medicine was wholly individual. The only knowledge the physician had regarding disease was its mani-

\*Read before the last Annual Conference in Medical Education, Hospitals and Health, Chicago, March 9, 1922.

festation in the individual patient. Even in times of great epidemics, the physician was not consulted until the individual contracted the disease, then his advice related only to the care of his patient. The medical men of former generations had no relation to the public because they had no knowledge of disease, except as an individual phenomenon. As Sir George Neuman, Health Officer of the British Ministry of Health, says, "Prior to 1850 the only public health function which physicians had was the application of quarantine, the enforcement under the police power of the state, of measures to prevent the infected from coming into contact with the uninfected."

Probably the most important factor in determining the relations between physicians and the public has been the efforts of physicians to secure the passage of health laws. It was natural that physicians in the early seventies, when our first definite knowledge regarding the causes of disease and its prevention was beginning to develop, should make their first attempts to apply this newly found knowledge for the public good by the only method they knew, viz., the enactment and enforcement of police measures. It was also natural, that, as physicians were the only men who had any knowledge on the subject, the first method proposed to develop the social or governmental side of public health should be the creation of boards composed exclusively of physicians. It was with this idea that Massachusetts in 1869 first established a state board, an example soon followed by the other states. There were, at that time, no specially trained health officers. Any physician was regarded as competent to serve as a health officer. The remains of this system still exist in several of our states and many of our cities, where health officers are private practitioners who give their spare time to health work.

This condition was in the beginning at least, probably the best method which could be devised. But, as frequently happens in human affairs, the by-products, although entirely unforeseen and sometimes unappreciated, were quite as important as the direct results.

The first by-product was the idea that, as the prevention of disease resulted in the saving of human life, it was the duty of physicians to serve the public, either without compensation or for a very inadequate amount. This was due to the fact that all previous financial relations of physicians had been with individual patients. The only basis of compensation which had ever existed in the medical profession was so many dollars for so many calls on individual patients. There were no standards of compensation for professional services to the community. The physicians who organized our early health boards were so eager to utilize their newly acquired knowledge that they were careless of their own interests and accepted whatever they could get

from the state or even offered their services free. As a result, public health work has been until recently, regarded both by physicians and by the public as a form of professional philanthropy. Now a doctor's stock in trade is his professional knowledge and ability. To attain these qualifications, he must undergo what is today the longest and most expensive training required of any professional man. He should be properly compensated for any service he may render whether to an individual patient or to a municipal or state government. Many of the economic problems of our profession today are due to the fact that physicians are giving away the most valuable part of their knowledge and skill and are endeavoring to live on the proceeds of the remainder. While no true physician would hesitate for a moment to relieve suffering or to minister in time of emergency or need to any one requiring his services, there is no reason why a physician should give his services to a city or state for 1/5 or 1/10 what they are worth. The first principle, then, that should be recognized in determining our relations to the public is that all professional services rendered to the community or state should be paid for at reasonable rates. Physicians should insist on this, not only as a matter of individual justice but also in order to maintain the economic standards of living in the profession, to attract the best and most capable men and so make it possible to render the best possible service to the public.

The second by-product was the feeling that public health was a monopoly of physicians and that no one but physicians were competent or should be allowed to serve as health officers or on state boards. This naturally grew out of the fact that physicians were the only men who knew anything about disease. Today, public health has become recognized as a distinct specialty in medicine, instruction on which is given in supplementary or independent courses. Whether the health officer of the future will be a physician as we now conceive him, we do not know. He may be a doctor of medicine with a year or two of special training; he may have the first two years of a medical course with a final two years of special work in public health, or he may be given an entirely separate training. However this problem may be worked out, we must recognize that public health cannot be regarded as a monopoly of any one class, that state activities for the protection of health are functions of the citizen body, just as are good roads, protection of property or any other community undertaking, and that the function of the medical professional is to furnish technical experts to carry on certain definite parts of public health work.

The third by-product was the idea that the medical profession was a divinely commissioned body, charged with the duty of protecting the public against disease. This view originated from the fact that in the early days of public health



physicians were the sole possessors of knowledge by which disease could be prevented. But with increased knowledge of the causes and prevention of disease has come the recognition of the fact that most contagious diseases are due to causes beyond the control of the individual and that their prevention is a duty, not of the individual or of any one class but of the community or the state. Take typhoid fever as an example. Physicians were the first to discover that polluted water caused typhoid and that pure water meant freedom from this disease. Naturally they were the leaders, sometimes the sole advocates of laws for improving sanitary conditions. Often these laws were secured in the face of public indifference or open opposition. The leaders in these efforts were naturally men of strong personality and convictions. From this situation the transition was easy to a belief that it was the duty of physicians to secure laws for the protection of a public that was generally ignorant, often indifferent and sometimes openly hostile to the proposed measures.

This led to the development of a fourth by-product, viz., the prevalent but erroneous belief that it is the duty and one of the important functions of medical societies to secure the passage of laws for the protection of the public, and to defend and enforce such laws as have already been passed. This belief still persists in many of our professional bodies.

This idea is responsible for the fifth by-product, the pauperizing of the public in health questions. Both the people and the legislators have relied on us to protect them from disease, with the result that they have largely lost any sense of their own responsibility.

A sixth result, less important, but more irritating is that that portion of the public which is through ignorance or mental obliquity, opposed to scientific medicine, has endeavored to make capital of our efforts to protect the public by attributing to us mercenary motives. We are accused of being in favor of vaccination, because, according to the antivaccinationists, we want the 25 cents paid for "injecting filthy animal poisons into the bodies of healthy children." Yet these objectors entirely overlook that fact that the courts have held that \$500.00 is a reasonable charge for attending a single case of smallpox and that if doctors were as mercenary as is claimed, we would vaccinate ourselves and our families and let the rest of the community have smallpox. As we would gain \$499.75 in each case by this process, it is evident that if we are mercenary we must be very poor mathematicians.

The development of our health laws and health enforcement machinery has been mainly inspired and promoted by physicians. In our desire to utilize our newly found knowledge in the saving of life and the prevention of avoidable disease, we have often lost sight of the end in the means, and have failed to recognize

clearly where our professional functions terminated. Physicians are not a body of supermen, or of superlatively wise advisors. Doctors come from the same families as lawyers, farmers business men and teachers. We are simply a body of men with special training, experience and qualifications in the knowledge of the causes and the methods of preventing human diseases and in their diagnosis and treatment.

The protection of the public against disease is a public and not a professional function. Our business is to give the people the benefit of our specialized knowledge, to show them how they can protect themselves if they so desire, and to insist as a measure of justice, both to ourselves and them, that whatever services we furnish in giving them such protection shall be adequately paid for. The enactment and enforcement of health laws are functions of the state, just as are the enactment and enforcement of laws for the protection of property. We should always be ready and willing to furnish expert advice and assistance, either to the public or to the legislators, but we should at all times insist that the public carry the full responsibility for its acts and accept the consequences. Physicians are not the guardians of health, any more than lawyers are the guardians of property. Nor is this statement a reflection on the honesty or sincerity of either great profession. It is simply a recognition of the limitations in the functions of both. Physicians are not lawmakers, neither are they trained in the drafting of administrative measures. When we attempt to draft laws, we generally fail. Whenever we attempt to assume functions for which we are not trained and to perform activities for which we are not fitted, we confuse our attitude to the public and misunderstanding and confusion result.

These views are advanced without the slightest desire to impugn the motives of those members of the profession who have given much time and labor in endeavoring to secure better conditions. They are rather an effort to formulate, after long observation, some criticisms on the methods which the medical profession has followed. That these methods were the best that could be devised at the time and that our motives have been the highest and most unselfish are willingly conceded. But the whole problem of the relations of the physicians to the public is today assuming an importance second to none in our profession. It is causing perplexity, irritation and discord in our own ranks. We have acquired more knowledge in the last fifty years that is of direct and vital importance to the public than is possessed by any other group of men. The public gladly accepts our advice on individual questions. The average citizen unhesitatingly puts not only his own life, but the lives of his wife and his children in our hands and goes to the hospital or the operating room with complete confidence in our knowledge, ability and

integrity. Yet, when we propose general measures based on exactly the same knowledge and endorsed by the same men, we are met with opposition and distrust. Is it any wonder that individual physicians are bewildered, confused and often angered by this apparent paradox, that the same public which trusts us implicitly as individuals, distrusts us collectively. Such a situation, by the process of elimination, seems to result from two causes, viz: that we have not devoted the same study and care to the treatment of social conditions that we have to the treatment of individuals, and that our psychology in presenting our suggestions to the public has been at fault. It is within our power, as scientifically trained men, to correct both of these errors, if we will devote the same amount of impartial and unprejudiced study and thought to relations to the public that we give to the performance of our duties to our individual patients, and if we will endeavor to formulate our proposals so that they will appeal to the public, instead of expecting the public to modify its point of view to conform to our methods.

The bearing of this question on the problem of developing effective cooperation between an organized medical profession and an organized public for efficient health promotion is, I trust, obvious to all. No effective cooperation can possibly take place between two groups, until the functions and relative responsibilities of each are clearly defined and understood. We must agree on a definite policy and must clearly define our own functions before we ask the public to cooperate with us. It is the duty of physicians to furnish facts. It is the duty of the people and the legislatures to make the decisions. If they decide wrongly, then either our methods are at fault, or they have deliberately refused the protection we offer. If the first, then it is up to us to revise our methods. If the second, then we are free from any responsibility or charges of selfish interest. In those few cases where the personal rights or privileges of physicians are involved we should take a frank and open stand for the protection of our own interests without subterfuge or concealment.

About twenty years ago, a new force entered the field in the form of voluntary health organizations. Over 100 such societies have been formed in that time. A recent survey by the Rockefeller Foundation showed that there were 35 national societies on child welfare, 11 on tuberculosis, 10 on social diseases, etc.

Without attempting to discuss in detail the origin, development and work of these 100 voluntary health organizations, the situation today may be summarized as follows:

1. The prevailing system of separate independent health organizations is not leading to any effective organization of the public for health work.

2. There is no prospect that this method will ever result in the effective organization of the public on account of the comparatively

small number of people interested in each organization and the impossibility of uniting these organizations into a common body.

3. The various organizations in the field have no common plan of campaign and consequently operation is very expensive, resulting in duplication of officers and equipment with decreased efficiency.

4. The multiplication of organizations and the constant appeals to the public being made by each body are confusing and irritating, rather than educating the public. Witness the number of tag days and drives that have become a nuisance in most of your cities.

5. The competition between these organizations results in the promotion of half-baked and ill-considered public health policies, or of sensational schemes to catch public attention.

6. The separate organizations are each so absorbed in promoting and administering their own organization that no time, energy or money are available for investigation or for the development of a unified public health program.

Summing up the present situation, the following propositions may be assumed:

1. The present organization situation in the public health field is not satisfactory nor effective.

2. The public health movement is rapidly passing out of the propaganda stage and is entering a period where constructive effort should predominate.

3. The public health movement can no longer be confined to one class or profession.

4. The public health movement has passed the charitable and philanthropic state. Any plans for the future must consider health as a public function and must include the entire public, not as beneficiaries but as participants.

If these assumptions are sound, then there are two tasks which must be accomplished if the medical profession wishes to maintain its leadership. These are, first, our medical organizations must be made more effective working machines, and second, there must be devised some plan by which the public can be effectively organized as allies of the medical profession.

In conclusion, I wish to urge with all of the earnestness with which I am capable that physicians both as individuals and in our societies devote more thought and study to these questions. The past fifty years have been largely occupied in acquiring knowledge, the next half century will probably not see so great and revolutionary an addition to our knowledge but will be marked rather by the application of this knowledge to practical conditions. In this process, the methods of practice and the personal relations of physicians, both to their patients and to the community, will be largely modified. How, we do not know. We cannot prevent these changes. They are going to come whether we opposed or accept them. The question for the present generation of physicians to decide is whether we will be passive victims of the new order or the guiding hand in developing a cooperation with an educated and sympathetic public under such conditions as will insure a well trained, well paid and self respecting profession.



## HOSPITAL NOTES

Laying of the cornerstone of the new building of the Columbus Children's Hospital was appropriately celebrated, September 15. All records for the number of patients treated at the old hospital were broken during August, when 156 cases were cared for, including 131 new and 25 old cases. The hospital operates at an average daily cost of \$3.23 per patient, according to Dr. Marion S. Reynolds, superintendent, who attributes a large part of the success of the institution to the splendid spirit of cooperation and service on the part of Columbus physicians.

—Toledo city council has approved legislation providing for a bond issue of \$200,000 for the purchase and rebuilding of an apartment building for use as a communicable disease hospital. The hospital will have a bed capacity for 150 patients.

—Services by Cleveland hospitals this year have been 34 per cent. charity work, 44 per cent. part pay, and only 22 per cent. paid in full by patients. These facts were disclosed in the annual budget studies of the Welfare Federation to determine how much money the Community Fund must seek during its November campaign. Unless conditions improve, it is estimated the hospitals will face a \$350,000 deficit by the end of the year. Eighteen hospitals obtain aid from the Community Fund. A threatened tie-up in the completion of the new Cleveland City Hospital was averted, September 5, when the city council authorized issuance of bonds for \$310,000 for this work.

—Plans have been prepared for a new 154-bed addition to Bethesda Hospital, Zanesville. The addition will be in the form of two wings, one at each end of the present building and a fourth floor over the entire structure.

—Steps to enlarge the hospital at Ohio State University are contemplated in plans for the medical building group. Plans for a new hospital building had been completed, but with the recent elimination of the College of Homeopathic Medicine it became advisable to construct an addition to the present building which was formerly used as a homeopathic hospital.

—Plans for erection of a Stark County tuberculosis hospital this year have been abandoned by the county commissioners who considered the cost estimated by architects excessive. The county now cares for part of its tuberculars at Springfield Lake Sanatorium, through an arrangement with Summit County, and cares for others in a temporary hospital in Canton.

—Mr. A. E. Hardgrove, for ten years Akron city chemist, assumed the duties of superintendent

of the City Hospital in September. He succeeded Mr. Charles Bulger, professor of romance languages at the Municipal University of Akron, who had served as acting superintendent since the resignation of Mr. H. G. Yearick. An orthopedic department for crippled children was recently established at the hospital.

—In the reorganization of Protestant Hospital, Columbus, Dr. U. K. Essington became director of the surgical division and Dr. J. M. Rector of the medical division. They, with Dr. S. A. Stephan, the hospital superintendent, and two of the 10 department chiefs, will compose the executive council which will direct the affairs of the institution, to which enlargements are contemplated. The personnel of the staff announced is as follows:

General Surgery—Drs. U. K. Essington, E. A. Hamilton, V. A. Dodd, J. W. Means, Frank Warner, C. D. Hoy, W. P. Smith, R. R. Kahle, P. J. Reel.

Obstetrics—Drs. S. J. Goodman, Wayne Brehm, E. H. Ryan, E. C. Beam, W. D. Murphy, H. H. Fisher, R. E. Krigbaum.

Ophthalmology and Oto-laryngology—Drs. R. Blee Smith, A. C. Wolfe, G. C. Shaeffer, A. W. Prout, T. R. Williams, C. H. Hoffhines, Ivor G. Clark.

Orthopedics—Dr. A. M. Steinfeld.

Urology—Drs. A. B. Landrum, W. N. Taylor, H. O. Bratton.

Gynecology—Dr. Yeatman Wardlow.

General Medicine—Drs. J. M. Rector, Rush Robinson, S. Hindman.

Pediatrics—Drs. A. G. Helmick, E. G. Horton.

Neurology and Psychiatry—Drs. F. C. Wagenhals, G. T. Harding, Jr.

Dermatology—Drs. H. M. Platter, C. J. Shepard.

Roentgenology—Dr. W. H. Miller.

Anesthetics—Drs. E. C. Ludwig, P. E. Stiffey.

Pathology—Drs. Ernest Scott, C. L. Spohr.

### PAY PATIENTS IN STATE HOSPITALS --- A CORRECTION

Following the publication of an item in the September *Journal*, the fundamentals for which were secured from ordinarily reliable sources, concerning a plan for the more extensive use of state hospitals for the mentally afflicted who are able to pay maintenance costs, an Ohio physician applied to Dr. H. S. MacAyeal, Director of the Department of Public Welfare, for a detail of this purported plan and received the following reply:

"The ambition of the Department is to place our State Hospitals for the insane on a high plane, so that we shall be able to give the wards of the state every possible advantage that can come from a thorough-going treatment in a hospital fully supplied with every facility for operation. My feeling has been that people who can pay their way are abundantly able to take care of themselves; but that those who must be sent to the State Hospitals as wards, should not be denied as good service as that given to pay patients in private institutions.

"I believe the medical profession will agree with me that this is a sound policy and am depending on the medical fraternity to back me in carrying out such a program."

# Constitutionality of the Sheppard-Towner Act Attacked

## Bay State Brings Legal Action

New York has refused to participate in the provisions of the Sheppard-Towner Maternity act. Maine has informed the federal government that she is amply able to take care of her own mothers and babies. The old Bay State not only assails the constitutionality of the law, but has now instituted an action in the Supreme Court of the United States, asking permission to bring an original suit against the Secretary of the Treasury, the Chief of the Children's Bureau of the Department of Labor, the Surgeon General of the U. S. Public Health Service and the Commissioner of Education, who under the act constitute the Board of Maternity and Infant Hygiene.

This action marks the first legal attack to be launched against the constitutionality of the act.

The proceedings were instituted by the Attorney General of Massachusetts acting under an order of the General Court and seek to restrain those charged with the enforcement of the law from carrying its provisions into effect, especially by prohibiting the expenditure of any public funds.

Massachusetts contends that the act is void because it tends to impair and violate her sovereign rights and the rights of her citizens.

Congress, it is pointed out, in enacting the maternity act, "unlawfully assumed a power not delegated to it, but reserved to the states by the tenth amendment to the constitution."

In order to participate in the apportionment of the funds, a state must accept the provisions of the law and submit plans for carrying them out.

Appropriations by Congress "of funds to be paid for objects which are not national but local," the petition to the Supreme Court avers, "is believed to be an effective means of inducing states to yield a portion of their sovereign rights for the considerations offered."

"Unless checked by this court", it is further asserted, "on the ground of unconstitutionality, no limit can be foreseen to the amounts which may thus be expended for matters of local concern, by statutes providing for the establishment of large federal bureaus with many officers for the performance of duties which are entirely beyond any authority conferred upon the United States by the Constitution."

The burden of providing funds necessary for the maternity bureau and similar legislation, it adds, falls very unequally upon the different states, "as the main source of federal revenues is the internal revenue taxes, which rest heavily upon industrial states. Three-fourths of such taxes, it is declared, were collected from ten states, which under the terms of the maternity act would receive less than 35-per cent. of the money appropriated by Congress."

"If Massachusetts should accept the act," the petition continues, "the return to it thereunder would be less than one-half of the amount collected from its citizens, while if Massachusetts should not accept, its citizens would be taxed in order to carry out the act in other states."

The Massachusetts petition is to be considered by the Supreme Court when it convenes this month.

Undoubtedly the Massachusetts litigation will be watched with considerable interest in Ohio, as Ohio is primarily an industrial state. Last year, Ohioans paid more revenue taxes than nineteen other states combined, and is ranked with New York and Pennsylvania as leading other states in amounts paid in federal taxes.

## "Medical Men vs. Mothers?"

In answer to editorial comment in *The Ohio Woman Voter*, official publication of the Ohio League of Women Voters, upon the action taken by the House of Delegates of the Ohio State Medical Association last May concerning the Sheppard-Towner Maternity act, Dr. J. H. J. Upham, chairman of the State Committee on Public Policy and Legislation, has addressed the following letter to Miss Juliette Sessions, president of the League:

"My attention has been drawn to an editorial comment in the June number of the *Ohio Woman Voter* entitled "Two Resolutions" which gives a part of a resolution passed by the Ohio State Medical Association at its meeting in Cincinnati, then quoting the action of the Ohio League of Women Voters, assumes the two resolutions to be diametrically in opposition and condemns the medical profession utterly and in toto by the dramatic and alliterative conclusion, "So the case reads, Medical Men vs. Mothers."

"I do not know who wrote this article but it certainly seems to me to have been done *without investigating* the facts, as I prefer to say rather than *without regard* to the facts, for as far as the conclusion/drawn is concerned, I do not know any other basis for it than either feminine intuition or intentional bias.

"As Chairman of our Legislative Committee I should be in a position to know, and I am unaware of any effort being made to ascertain the actual position of the Ohio medical profession on the Sheppard-Towner law. One of your local members telephoned me just previous to your meeting making some query in regard to our Cincinnati resolution, and I offered to appear before your society and explain our action and held myself in readiness to do so, but no opportunity was extended.

"As a matter of fact, representatives of the Ohio State Medical Association already had met with the State Department of Health and tentatively approved of the suggested plan of operation for Ohio, which plan contemplated our co-operation in the education of expectant mothers in pre-natal care so as to guard against the difficulties and dangers of pregnancy, labor and the puerperium. If you will read the portion of our resolution quoted you will note that it opposes the appropriation of any monies 'for the purpose of *providing medical attendance* under the pro-

vision of the said law'. This is in strict accord with the position of the medical profession of Ohio, and in fact of the entire profession of the country, that the providing of medical attendance by the state, except in the institutional treatment of the indigent sick or where treatment is essential to the prevention of epidemic diseases, is not for the best interest of the people at large.

"There are many socialistic theories that are beautiful as theories, but unfortunately human nature is so constituted that they do not work out as one would wish. Especially is this true as regards the furnishing of medical attendance by the state or community. In the practice of medicine, as in every field of human activity, the average individual is stimulated to his best efforts by the hope of reward in some form or other from the individual or individuals to whom the services are rendered, and commensurate with the quality and amount of such services.

"Without such hope of reward men's work becomes perfunctory and less effectual; there are

exceptions of course, to whom the work is sufficient inspiration, but unfortunately we must recognize and deal with general conditions and the usual tendencies. It is for this reason that our State Association is opposed to the providing of state paid medical attendance in maternity cases just as it is opposed to state sickness insurance, in the belief that in the removal of the expectancy of individual reward for individual service an inevitable deterioration of the character of the service would result and the best interests of the people, and even health and lives, would suffer.

"We believe that this has been sufficiently demonstrated in European countries to date as to prove our contention and to justify our endeavor to protect the health of our citizens and their state treasury against a raid to carry out socialistic experiments which might even lead to serious results to expectant mothers and their infants to whose interests, I claim, the medical profession always has been, is and always will be earnestly devoted."

## DEATHS IN OHIO

*Henry Herbert Baker, M.D.*, Ohio Medical University, Columbus, 1902; aged 48; member of the Ohio State Medical Association; died at Mercy Hospital, Columbus, August 18, from pleurisy. Dr. Baker's home was at Albany, Athens County. During 1903 and 1904, he served as provincial health officer of the Philippines and upon his return to the states located in Newark where he practiced until ill health forced him to retire in 1920. Surviving are his wife, mother and two brothers.

*Joseph H. B. Adams, M.D.*, Physio-Medical Institute, Cincinnati, 1872; aged 74; died in Celina, July 19. Dr. Adams lived at Fort Recovery.

*Elmer Ellsworth Curl, M.D.*, Jefferson Medical College of Philadelphia, 1889; aged 60; died at his home in Degraff, August 13, from diabetes. Dr. Curl spent practically his entire life in Quincy and Degraff with the exception of a few years during which he practiced his profession in Marion.

*Charles Daniel Dennis, M.D.*, Ohio Medical University, Columbus, 1896; aged 62; member of the Ohio State Medical Association and Fellow of the American Medical Association; died at his home in Columbus, August 14, from complications. Dr. Dennis was at one time demonstrator of anatomy at his alma mater. Besides his wife he is survived by his mother.

*Mitchell Fernberg, M.D.*, Miami Medical College, Cincinnati, 1887; aged 72; member of the Ohio State Medical Association; died at the Jewish Hospital, Cincinnati, September 2, following an illness of one week. Dr. Fernberg had been a district physician for the Cincinnati health board for many years. He is survived by his wife, two sons and one daughter.

*Herschel Isaac Fisher, M.D.*, Miami Medical College, Cincinnati, 1886; aged 64; member of the Ohio State Medical Association and Fellow of the American Medical Association; died at his home in Lebanon, August 5. In his earlier professional life Dr. Fisher practiced in De-Moines, Iowa, but for the past 25 years he had been located in Lebanon. Dr. Fisher served as

secretary and program committeeman of the Warren County Medical Society for 18 consecutive years and in his death the organization suffers a great loss. He was also a moving spirit in the Civic League of Lebanon, having in charge the Harmon hall and gymnasium and Harmon Park which served the youth of Lebanon for many years. These two organizations with the Selective Service Board, of which Dr. Fisher was a member, united in a memorial service in his honor, September 5. Among representatives of these groups who paid tribute were Dr. Ben R. McClellan, Xenia, a former president of the Ohio State Medical Association, and Dr. B. H. Blair, Lebanon, on behalf of the Warren County Medical Society. In a letter explaining his inability to be present at the service, Dr. Robert Carothers, Cincinnati, president of the State Association, wrote: "Dr. Fisher was to me ideal and words are not adequate to express my appreciation of his character as a man and his qualities as a physician. Warren County will miss him and his activity in the society cannot be replaced." For some years Dr. Fisher was editor of the Western Star of Lebanon. His wife alone survives.

*Francis Marion Fitton, M.D.*, Miami Medical College, Cincinnati, 1887; aged 63; member of the Ohio State Medical Association and Fellow of the American Medical Association; died at his home in Hamilton, August 31, from agina pectoris. Dr. Fitton spent his entire medical career in Hamilton. At the time of his death he was secretary of the Butler County Medical Society, a position he has held continuously for many years and in which he served at various times during his long membership. During the war Dr. Fitton was a valued member of the draft board and its medical examiner. In the death of Dr. Fitton the medical profession has lost a member who deserved the high esteem and confidence in which he was held, and the community a citizen who was a credit to the city.

*J. Arthur Hines, M.D.*, Georgetown University School of Medicine, Washington, 1869; aged 80; former member of the Ohio State Medical Association; died at his home in Van Wert, August 31, from agina pectoris. Having retired from medical practice several years ago, Dr. Hines was interested in a drug firm. He was the son of the late Dr. J. P. Hines, pioneer phy-

sician of Van Wert County. His widow, son and daughter survive.

*Otto Juettner, M.D.*, Medical College of Ohio, Cincinnati, 1888; aged 57; former member of the Ohio State Medical Association; died at his home in Cincinnati, August 25. A native of Nimptsch, Germany, Dr. Juettner came to America in 1865. He was professor of clinical medicine and physical therapeutics, Cincinnati Polyclinic and Post-Graduate School, in 1909. He held membership in many professional organizations in this country and abroad. Dr. Juettner was an author of note, among his works being "Modern Physio-Therapy", and "Songs of the University of Cincinnati." He served as a captain in the Medical Corps of the Army during the World War.

*Benjamin Franklin Kiester, M.D.*, Medical College of Ohio, 1875; aged 74; died at his home in Dayton, August 21, after an illness of several months duration. Dr. Kiester began practice in Arcanum, where he was associated at different times with his brothers, Drs. S. W. and W. H. Kiester. He later removed to Dayton and practiced until 1905, the year of his retirement. He leaves his wife, one son, one sister and two brothers, one of whom is Dr. W. H. Kiester, Dayton.

*August J. A. Kuehn, M.D.*, New York University Medical College, 1892; aged 67; died at St. Vincent's Hospital, Toledo, August 9, from complications.

*Joseph Warren Leatherman, M.D.*, Western Reserve University School of Medicine, 1876; aged 73; died at his home near Hillsboro, July 27, from paralysis. Dr. Leatherman retired from active work in his profession nine years ago. He was, however, coroner of Highland County at the time of his death.

*James Bailey Rogers, M.D.*, Vanderbilt University Medical Department, Nashville, Tennessee, 1910; aged 36; died, July 15, from tuberculosis at the Edward Sanatorium, Naperville, Illinois. Dr. Rogers' home was in Cincinnati. He was formerly bacteriologist at the institution in which he died, and had served as pathologist and instructor of bacteriology at the University of Cincinnati Medical College.

*Arlington Stephenson, M.D.*, Cincinnati College of Medicine and Surgery, 1878; aged 71; member of the Ohio State Medical Association and Fellow of the American Medical Association; died at his home in Ottawa, July 17.

*John Frank Benham, M.D.*, Mooresville, Indiana, Medical College of Ohio, Cincinnati, 1890; died recently.

*Alonzo J. Edson, M.D.*, Rockford, Illinois; Eclectic College of Medicine and Surgery, Cincinnati, 1857; aged 95; died June 5.

*Elam S. Gibbs, M.D.*, Monticello, Minnesota; University of Wooster Medical Department, Cleveland, 1869; aged 75; died recently from cerebral hemorrhage.

*Enos M. Hoover, M.D.*, Elkhart, Indiana; University of Illinois College of Medicine, Chicago, 1906; aged 52; died in Van Wert, Ohio, August 25, from apoplexy with which he was stricken while driving an automobile four days prior.

*Joseph M. Powers, M.D.*, Warrensburg, Missouri; Eclectic Medical College, Cincinnati, 1875; aged 73; died recently from chronic interstitial nephritis.

## Death of A. M. A. Secretary

*Alexander Righter Craig, M.D.*, University of Pennsylvania, Medical Department, 1893; aged 54; secretary of the American Medical Association; died of uremic poisoning while on his vacation at Port Deposit, Maryland, September 2. Dr. Craig's election to the secretary-ship of the A. M. A., a position he has since filled with distinction, in 1911 was the culmination of many years of service to organized medicine. He had previously practiced in Philadelphia and Columbia, Pennsylvania, and as a delegate from that state had been active in the House of Delegates and committee work. Dr. Craig was a member of the American Academy of Medicine and president in 1912, and a member of the American Academy of Ophthalmology and Otolaryngology.

## State Institutions Show Increased Populations. Physicians Appointed

State institutions of Ohio for the fiscal year ending June 30 show one of the largest gains in their history. From a daily average population of 23,499 on June 30, 1921, the number increased to a daily average of 25,172 on June 30, 1922, being the largest number of wards ever housed in the history of the state of Ohio. The largest increase was noted at the penal institutions.

In the group of institutions for the insane and feeble minded, the Columbus state hospital for feeble minded showed the largest increase, advancing from a daily average population in 1921 of 2501 to 2610 in 1922, or a gain of 109, while the Ohio hospital for epileptics at Gallipolis increased from 1568 to 1672, a gain of 109.

But three institutions showed a loss in the average daily population, the state school for the blind leading in this regard with a loss for the school year of 20, or a population of 222 in 1922, as compared with 242 in 1921.

The average daily population in the various state institutions under direction of the department of welfare, as prepared by the fiscal supervisor, for the year 1921 and 1922, follows:

	1921	1922
Athens state hospital.....	1288	1329
Cleveland .....	1771	1816
Columbus .....	1934	1985
Dayton .....	1204	1242
Lima .....	868	928
Longview .....	1502	1575
Massillon .....	1854	1938
Toledo .....	1874	1943
Gallipolis .....	1568	1672
School for blind.....	242	222
School for deaf.....	491	503
State sanitorium .....	165	181
Madison Home .....	38	34
Boys' Industrial School.....	1198	1165
Girls' Industrial School.....	430	478
Ohio Soldiers' Home.....	734	914
Penitentiary .....	2037	2570
Reformatory (Men's) .....	1612	1894
Reformatory (Women's) .....	171	200
Juvenile research .....	17	33

One of the notable increases was that of the soldiers' and sailors' home at Sandusky, where a gain of 180 was noted. This is attributed to the fact that many World war veterans have been

on the roll for several months, many of them being incapacitated and unable to work.

Increase in the hospital for feeble minded has been possible because of recent additions and opening up of new cottages at the Orient farm. The Columbus state hospital for feeble-minded is the only institution in Ohio that included in its population has representation from every one of the 88 counties of the state. It is also the only institution where 189 single men representing the entire new male admissions, were admitted during the year ending June 30. Of the 90 women received during the same time, 11 were married, four widowed and one divorced.

Figures showed 51.5 per cent. of all admissions to the Cleveland institution during the year were foreign born. Of the foreigners admitted, 44 were from Austria, 27 from Germany, 26 from Hungary, 22 from Poland, 19 from Russia and nine from Italy.

Immediate appointment of nine men who passed civil service examinations for assistant physicians at state institutions was announced, September 5. Twenty more vacancies exist and another examination will be held soon.

Those who received appointments are: Drs. William W. Young and Roy R. Reynolds, Massillon; Frank E. Crisier, Dayton; Stanley H. Erleback, Mt. Vernon; Cecil C. Burnett, Gallipolis; Lovett E. Park, Orient; Wm. L. Calvert, Lima, and John P. Thoenle, St. Bernard.

### Ohio's Feeble Minded Problem

The last General Assembly appropriated \$200,000 to purchase a site for a new institution for the feeble-minded. Governor Davis has indicated that he does not favor the purchase of land for the new institution until the incoming legislature sees fit to make an additional appropriation for the purpose of constructing the new institution.

It has also been suggested by the governor that a survey be made to determine the immediate needs and anticipate the future demands that will be made to care for the feeble-minded situation. With this data available, he has expressed himself as favorable to recommending to the next legislature the appropriation of an amount necessary to complete a new institution.

Contracts have already been awarded for the construction of six new cottages at the Orient farm. Two new buildings are to be erected at the Columbus Institution for Feeble-Minded. With these additional facilities, the state will be in a position to care for approximately 1500 more feeble-minded.

### NEW BOOKS

*The Eighteenth Amendment, and the part played by organized medicine*, by Charles Taber Stout. Mitchell Kennerly, Publisher, New York. Price \$1.50.



## What is it worth to be sure?

TO the physician treating a case of diphtheria or immunizing a child prophylactically, what is it worth to be sure that the Anti-toxin or Toxin-Antitoxin used is absolutely dependable? What is it worth to know that he is fighting the disease with products both safe and potent?

The efficacy of Antitoxin and Toxin-Antitoxin in the control of diphtheria has been definitely established. The dependability of these products is predicated on that of the laboratory which makes them. Equipment, personnel, supervision—all of these must be of a high order to insure a trustworthy product. But above all the laboratory supplying these vitally important immunizing agents must be dominated by ideals of service and must be deeply conscious of its responsibility.

"DIPHTHERIA IMMUNIZATION," a reprint, sent on request. Write nearest branch: Detroit, New York, Chicago, Kansas City, Baltimore, New Orleans, St. Louis, Minneapolis, or Seattle.

## Parke, Davis & Co.

# Eyes of the Public Health World Focused on Cleveland this Month

When the Fifty-First Annual Meeting of the American Public Health Association Opens October 16-19

The fifty-first annual meeting of the American Public Health Association is to be held in Cleveland on the 16-19 of October.

Thousands of those interested in the field of public health are expected to attend this meeting, where the foremost health problems of the day are to be discussed by specialists in the various phases of the work.

Lectures, roundtables, illustrated talks and conferences will mark the activities of the four-day session. Coincident with this meeting, the Ohio Association of Industrial Physicians will hold its annual meeting, combining activities with the Public Health Association. One feature of the O. A. I. P. meeting will be a trip to the plant of the National Lamp Company, where the results of modern health measures will be demonstrated.

The tentative program, which has been arranged in sections, includes:

## Child Hygiene

Dr. J. Levy, Director of Child Hygiene, N. J. State Board of Health. "Maternal Mortality and Mortality in the First Month of Life."

Dr. H. J. Gerstenberger, Medical Director Babies' Dispensary, Cleveland. "Preventative Infant Feeding—Its Simple Application."

Edgar Sydenstricker, Statistician, U. S. Public Health Service. "Indices of Growth in Children."

Dr. Arnold Gesell, Professor of Child Hygiene, Yale University.

Dr. M. E. Champion, Director, Division Child Hygiene, Massachusetts Department of Health. "The Channel and Some Shoals in Municipal and State Child Hygiene Administration."

Dr. Kennon Dunham, Cincinnati.

Dr. Howard Carpenter, Philadelphia. "Should the Social Service Department in Children's Hospitals be Superseded by Departments for Prevention of Diseases?"

Dr. Florence L. McKay, Director Division of Maternity, Infancy and Child Hygiene, Albany, N. Y. "The New York State Program for Maternity and Infant Welfare."

## Public Health Administration

Symposium. Next Step for State Health Departments. Discussion by prominent state health officers.

Round Table. Plans to reduce the High Mortality from Acute Respiratory Diseases in Winter.

Control of Milk Supplies as a Public Health Measure and the Value of Pasteurization in the Prevention of Epidemics.

Report of Results of Work at the Chicago Pageant of Progress in Milk Ordinance for a Small City.

Symposium: Control of Diphtheria.

## Food and Drugs

Address of Chairman—R. E. Doolittle, Bureau of Chemistry, U. S. Department of Agriculture.

James P. Kilcourse, Chief, Food Inspection Bureau, Chicago Department of Health. A New Method of Transporting Milk from the Country to the City (Illustrated).

Dr. Louis Klein, Detroit. The Present Status of Glandular Therapy (Illustrated).

Dr. J. C. Geiger, U. S. Public Health Service. Important Considerations in the Relation of Food to Disease.

Wm. D. Bigelow, Ph. D., Chief Chemist, National Canners Association. Report of Committee on Problems of Canning.

Maj. Roy A. Haynes, Federal Prohibition Commissioner. Character of Moonshine Liquors.

Dr. P. H. Bryce, Ottawa, Canada. The History of Cold Storage.

H. H. Mitchel, Ph. D., Asst. Professor of Animal Nutrition, University of Illinois. The Place of Proteins in the Diet in the Light of the Newer Knowledge of Nutrition.

Prof. H. C. Sherman, Columbia University. The Present Status of Our Knowledge of Vitamines.

The European Food Deficiency and its Effect on Public Health (speaker not announced).

Dr. Harold J. Knapp, Chief Diagnostician in charge of Laboratories, Department of Public Welfare, Cleveland. Report of the Committee on Drugs and Nostrums.

Dr. Charles E. Terry, Committee on Drug Addictions, New York. Report of Committee on Habit Forming Drugs.

Effect of Fraudulent and Extravagant Advertisements of Food and Drugs on Public Health—speaker to be announced later.

James P. Kilcourse, Chief, Food Inspection Bureau, Chicago Department of Health. The Sanitation of Bottled Beverages and Soda Fountain Drinks.

Prof. S. S. Prescott, Dept. of Biology and Public Health, Massachusetts Institute of Technology. Coffee, Its Origin, Derivation and Physiologic Properties.

Fred C. Blanck, Baltimore Dept. of Health. Report of Committee on Preparation, Packing and Transportation of Foods.

W. E. Ward, Brookline Mass. Dept. of Health. Report of Committee on Retail Distribution and Marketing of Foods.



Dr. W. A. Lipman, Swift & Co., Report of Committee on Meat Inspection.

R. M. Allen, Director Research Products Department, Ward Baking Co., New York. Report of Committee on Conservation and Development of Food Supplies.

## Vital Statistics

### EPIDEMIOLOGY

Dr. W. H. Frost, Prof. of Epidemiology, Johns Hopkins University. The Importance of Epidemiology as an Administrative Function of Health Departments.

Dr. Haven Emerson, Columbia University. The Influence of Epidemiology upon Present Day Methods of Control of Communicable Disease.

The Epidemiological Work of State Health Departments. Discussion by Dr. E. S. Godfrey, Jr., N. Y.; R. W. Pryer, Michigan; Dr. F. G. Boudreau, Ohio; Dr. E. C. Levy, Virginia; D. C. Bowen, New Jersey; Dr. C. V. Chapin, Rhode Island.

### STATISTICAL EVALUATION OF PUBLIC HEALTH ACTIVITIES

Raymond Pearl, Professor of Biometry and Vital Statistics, School of Hygiene and Public Health, Johns Hopkins.

Discussion: E. C. Meyer, International Health Board; Dr. O. R. Eichel, N. Y.; E. W. Kopf, N. Y.

### VITAL STATISTICS

E. S. MacPhail, Supt. Dominion Bureau of Statistics, Ottawa, Canada. Development of Vital Statistics in Canada.

F. L. Hoffman, Dean of Advanced Dept. Babson Institute, Mortality Statistics in South American Republics.

Dr. O. R. Eichel, Director, Vital Statistics, New York. Some Practical Problems in the Improvement of the Registration of Births.

S. G. Thompson, Director Vital Statistics, Florida. Some Practical Problems in the Improvement of the Registration of Deaths in a Southern State.

Round Table on Morbidity Reports.

Public Health Climatology. Dr. Geo. T. Palmer.

Institutional and Hospital Statistics. Dr. L. F. Hoffman.

Educational and Professional Standards for Statisticians. E. W. Kopf.

Forms and Methods of Statistical Practice. R. C. Lappin.

Accuracy of Certified Causes of Death and its Relation to Mortality Statistics and the International Classification—Dr. Haven Emerson.

Registration Officers—Dr. W. H. Davis.

Securing the Next International Conference on the Classification of the Causes of Sickness and Death.

## Sanitary Engineering

Mosquito Control. M. Z. Bair, Chief Engineer, Arkansas State Board of Health.

Bathing Places. G. W. Simons, Jr., Chief Engineer Florida State Board of Health.

Refuse Collection. M. N. Baker, Associate Editor, Engineering News Record.

Sludge Disposal. Langdon Pearse, Sanitary Engineer, Chicago.

Milk Supply. H. A. Whittaker, Director of Division of Sanitation, Minnesota State Board of Health.

## Industrial Hygiene

Business Meeting Ohio Association of Industrial Physicians.

President's Address. Dr. Sidney M. McCurdy, Youngstown.

Causes of Absenteeism Among Store Workers. Dr. Charles A. Swan, Medical Director Halle Brothers Company, Cleveland. Discussion by Dr. A. B. Emmons, director Harvard Mercantile Health Work, Boston.

Computation of Partial Loss of Vision. Dr. William Mehl, Buffalo. Discussion by Dr. Webb P. Chamberlain, Cleveland.

Mental Hygiene in Industry. Dr. Frederick W. Dershimer, National Lamp Works, Cleveland. Discussion by Dr. A. G. Cranch, medical director National Carbon Company, Cleveland.

Heat Hazards in Industry. Dr. G. H. McKinstry, medical director Spang, Chalfant & Company, Pittsburgh. Discussion by Dr. S. H. Johnson, Carnegie Steel Company, Pittsburgh.

### SECOND SESSION, NELA PARK

Business Meeting Industrial Hygiene Section, American Public Health Association.

The Tuberculosis Problem in Industry. (Stereopticon Illustration.) Dr. Horace John Howk, assistant medical director Metropolitan Life Insurance Company, physician in charge Metropolitan Life Insurance Sanatorium, Mt. McGregor, N. Y. Discussion by Drs. H. A. Pattison, supervisor medical service, National Tuberculosis Association, New York City; James A. Britton, International Harvester Company, Chicago; George M. Price, director, Joint Board of Sanitary Control, New York City.

Industrial Dermatoses. (Stereopticon Illustration.) Dr. Harold N. Cole, associate professor of dermatology, Medical Department, Western Reserve University, Cleveland. Discussion by Dr. Charles Baskin, Akron.

Health Education in Industry. (Stereopticon and Motion Picture Illustration.) Dr. Ralph W. Elliott, manager medical department, National Lamp Works of General Electric Company, Cleveland.

Lighting and Vision—with Special Emphasis on School-lighting and Home-lighting. Followed by lighting demonstrations. M. Luckiesh, Director of Applied Science, Nela Research Laboratories.

Industrial Lighting. Followed by Demonstrations. Ward Harrison, Illuminating Engineer, National Lamp Works.

## Public Health Nursing

Miss Margaret E. Burkhardt, Bridgeport,

Conn., Presentation and Discussing the Chapter on Public Health Nursing of the Report of the Committee on Municipal Health Department Practice.

Miss Elizabeth Holt, Dayton. The Coordination of Public and Private Agencies in the Conduct of a Completely Generalized Public Health Nursing Service.

Miss Mary Laird, Rochester, N. Y. The Importance of Home Visiting.

### Health Topics Scheduled for Welfare Conference

Public health is to be one of the major topics for discussion at the annual Ohio Welfare Conference, to be held in Columbus, November 1, 2 and 3.

The program for the Health Division, as announced, follows:

#### THURSDAY, NOVEMBER 2

1. The Sheppard-Towner Act, for the Public Protection of Maternity and Infancy—Dr. Anna E. Rude, Director, Division of Hygiene, U. S. Department of Labor. Discussion—Dr. J. H. J. Upham, and Dr. R. G. Leland, Ohio Department of Health.

#### FRIDAY, NOVEMBER 3

1. What Shall We Do About Our Mental Hygiene Problem?—Dr. V. V. Anderson, Associate Medical Director, National Committee for Mental Hygiene, New York. Discussion—Dr. E. A. Baber, Superintendent, Dayton Hospital for the Insane.

2. The Progress in State Care of the Mentally Abnormal—Dr. H. S. MacAyeal, State Director of Welfare. Discussion.

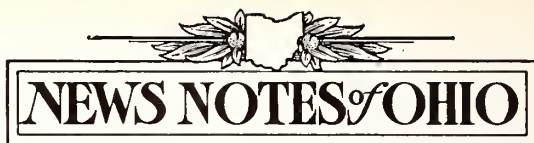
3. The Child Health Demonstration in Mansfield and Richland County—Dr. Walter H. Brown, Director.

Possible Alternate Subject: How Shall We Provide Nursing Care for the Family of Moderate Means?—Mrs. Norma Selbert, Assistant Professor Public Health, Ohio State University.

This conference is held annually under authority of the state. The object is to present an opportunity to the various county, city and state officials, and representatives of private agencies, directly or indirectly interested in social welfare problems, to discuss late developments in this field.

#### GOOD HEALTH WEEK

Good Health Week, October 23-30, is being fostered by leading manufacturers of the country, with the endorsement of the Federal Department of Labor, in an effort to stimulate the layman's interest in that portion of public health work in which he may do his part. The activities which may be directed or energized by the laymen will be stressed under the three headings: ventilation, sanitation and personal hygiene.



## NEWS NOTES OF OHIO

*Mt. Vernon*—Dr. James F. Lee has been appointed physician and surgeon for the United States Employes Compensation Bureau in Knox County.

*Columbus*—Announcement has been made of the marriage of Dr. Joseph Price, chief of staff of Mercy Hospital, this city, to Miss Georgia Smith of Ravenna, September 2.

*Dayton*—"Ancient and Modern Medicines and Their Biblical Relations" was the subject of a talk given by Dr. F. I. Shroyer before a local Bible class recently. The famous Hippocratic oath was read and explained and medicine and the physician's art were traced from their beginnings.

*Paulding*—The death of Mrs. C. E. Huston, wife of Dr. C. E. Huston, occurred at her home here in early September.

*Norwood*—Dr. Clarence J. Shafer has been appointed medical inspector of the public schools of this city by the board of education. He succeeds Dr. Edgar Snyder.

*Toledo*—Dr. H. A. Delcher has returned from a period of post-graduate study in gynecology and urology at Johns Hopkins Hospital, Baltimore.

*Akron*—Dr. J. G. Blower and daughter were painfully bruised and Mrs. Blower suffered a fractured collar bone, August 13, when the automobile in which they were riding was struck by another machine and completely wrecked near Penfield. Dr. Blower is a member of the State Medical Board.

*Dayton*—Dr. S. H. Ashmun has returned to his home here after completing a post-graduate course in pediatrics at Harvard Medical School.

*Columbus*—Dr. Gerald P. Lawrence spent several weeks in September attending clinics at the New York Lying-in Hospital.

*Cincinnati*—Dr. Harris H. Vail, son of Dr. D. T. Vail, is convalescent after undergoing an operation for appendicitis.

*Canton*—Dr. John N. Hoffmann has recently moved to this city from Akron.

### Rockefeller Objects

The directors of the University of Cincinnati have received a letter from the chairman of the general education board, asking that action taken to name a chair in the college of medicine after John D. Rockefeller be deferred because of the millionaire's objection to such a course. The communication said that "Mr. Rockefeller would prefer to have his name recorded into the hearts and lives of those using the improvements which donations from him have made possible rather than carved in stone or officially connected with the building."

# Money Doubles

in twelve years if invested at 6% with interest compounded.

If your surplus money is not invested or is not earning a fair rate of interest, that money is not of full value to you.

One of the simplest and most profitable forms of investment is in well-secured bonds issued by Governments and Municipalities, or by prosperous and growing corporations.

This type of investment requires almost no personal attention. The income is available in convenient form and principal is readily accessible should occasion require.

The services of our organization are offered to you in the selection of bonds. We are not brokers, but merchants of securities, purchasing outright, only after careful investigation, the bonds we offer; consequently, we must be *absolutely sure* as to the value of the security.

*We shall be glad to serve you by suggestions or recommendations. If agreeable, we would like to include your name among those to whom we make regular offerings of bonds. We invite your inquiry.*

## E. H. Rollins & Sons

BOSTON  
200 Devonshire St.

NEW YORK  
43 Exchange Pl.

PHILADELPHIA  
1421 Chestnut St.

CHICAGO  
111 W. Jackson St.

SAN FRANCISCO  
300 Montgomery St.

DENVER  
315 International Tr. Bldg.

LOS ANGELES  
203 Security Bldg.

## ACADEMIES AND COUNTY SOCIETIES

### FIRST DISTRICT

*Warren County* Medical Society held an extra meeting in Lebanon, August 8. The scientific program included papers on "Ectopic Pregnancy," by Dr. G. M. Cummins, Hamilton; "Gonorrhoea," by Dr. Mark Millikin, Hamilton, and "Knee Sprains," by Dr. Ralph Carothers, Cincinnati. The attendance was excellent and included a number of guests from Montgomery and Butler Counties. Resolutions of regret on the death of Dr. Herschel Fisher, secretary of the society for many years, were adopted.—T. E. Keeler, President.

### SECOND DISTRICT

*Darke County* Medical Society held its regular meeting in Greenville, September 14. Drs. W. D. Inglis and C. W. McGavran, Columbus, were the speakers, and their subjects "The Toxemias of Pregnancy" and "The Advantage of a Complete Physical Examination", respectively. Attendance 30.—B. F. Metcalfe, Correspondent.

### THIRD DISTRICT

*Logan County* Medical Society enjoyed its monthly meeting in Bellefontaine, September 1. Seventeen members were present and listened attentively to a paper by Dr. James C. Walker, Dayton, on "Orthopedic Surgery". He spoke mainly of the deformities resulting from anterior poliomyelitis, tuberculosis of bone, and the commoner forms of deformity as talipes equinus, etc., illustrating his paper by lantern slides. The society appreciated Dr. Walker's keeping his engagement despite a severe laryngitis for which he could have well been excused. The October meeting will be held on the 6th with Dr. Cohen of Cleveland speaking on "Asthma."—M. L. Pratt, Secretary.

### FOURTH DISTRICT

*Sandusky County* Medical Society met in Fremont, September 1, with President M. O. Phillips in the chair. Drs. T. S. Jackson and M. A. Blankenhorn, Cleveland, were the guests of the evening. The former presented a splendid paper on "Significance of Enlarged Glands of the Neck," which emphasized the importance of early recognition and treatment. The latter spoke on "Rheumatism, Diagnosis and Treatment," discussing in detail the types of acute rheumatic fever.. Dr. Edward Vogel was elected to membership.—C. I. Kuntz, Secretary.

### SIXTH DISTRICT

*Summit County* Medical Society, after a summer vacation, convened at the Peoples Hospital, Akron, September 12. There was an attendance of 70 from Akron, Copley, Cuyahoga Falls, Peninsula, Uniontown and Wadsworth. Two

new members were admitted. The history of the society recently completed, was ordered published. The program consisted of two very entertaining addresses: "The Advantages of Business Methods Applied to the Practice of Medicine", by C. S. Marvel, cashier of the First Second National Bank, and "The Psychology of Salesmanship as Applied to Professional Life", by D. C. Rybolt, mayor of Akron.—A. S. McCormick, Secretary.

### EIGHTH DISTRICT

*Muskingum County* Academy of Medicine held its September meeting in Zanesville on the 6th, with an attendance of 21 members and three visitors. Dr. R. A. Kidd of the McMillen Sanatorium, Columbus, read an instructive paper on "Dementia Praecox." Dr. T. L. Sutton reported an interesting case.

The annual picnic of *Muskingum, Perry, Licking* and *Fairfield County* Societies was held at Summerland Beach, Buckeye Lake, August 31. Dr. W. D. Inglis, Columbus, gave an interesting and instructive talk on "Obstetrics," centering on eclampsia particularly. Eighty-five people were served with a bountiful chicken dinner at the Summerland Beach Hotel, at 5 p. m. and the ladies were entertained with a motor boat ride in the afternoon.—Beatrice Hagen, Secretary.

## Sixth Councilor District Hears Talk on Investments

The 193d session of the Union Medical Association of the Sixth Councilor District was held at Lake Brady, Portage County, August 9.

The meeting was opened at 11 o'clock in the skating rink, where the chirping of sparrows and the friendly toot and rattle of automobiles as an accompaniment throughout the session, necessitated care and close attention to differentiate between the various attractions.

Routine business out of the way, the regular program was taken up. The subject under consideration for the forenoon was "Ulcer of the Stomach and Duodenum." Dr. George F. Zinninger, Canton, presented it from the standpoint of the internist, and Dr. J. G. Blower, Akron, that of the surgeon. A general resume was given of the various methods of treatment, pointing out their successes and failures. Both essayists admitted the difficulty in making correct and reliable diagnosis, and likewise in handling these cases successfully in general practice. If the patient could be made to follow the instructions in the home as carefully as under forced regime in the hospital, better results would follow, but relapses will occur in any event, no matter how thorough the treatment.

Both essayists agreed that the internist and surgeon are coming to a better understanding as to what is best for the patient, inasmuch as each is conscious of his limitations and neither can

*X-Ray,  
Radium,  
Removal of  
Foreign Bodies*

CHAS. F. BOWEN, M. D.  
344 East State Street  
Columbus, Ohio

## Radium Rental Service

Radium loaned to physicians at moderate rental fees, or patients may be referred to us for treatment if preferred.

Careful consideration will be given inquiries concerning cases in which the use of Radium is indicated.

### BOARD OF DIRECTORS

William L. Baum, M. D.    N. Sproat Heaney, M. D.    Frederick Menge, M. D.  
Louis E. Schmidt, M. D.    Thomas J. Watkins, M. D.

## The Physicians Radium Association

1110 Tower Building, 6 N. Michigan Ave.  
CHICAGO, ILL.

Telephones: Randolph 6897-6898

William L. Brown, Manager

afford to say his is the only method. A very interesting discussion followed these two papers.

The afternoon program was planned with the intention of making it mutually interesting and profitable to the laity as well as the profession, inasmuch as the ladies were invited to this meeting. Dr. John P. Sawyer, Cleveland, gave an address in clear and forceful manner, on "Foods—Their Use and Abuse." He said the value of perfectly good foodstuff may be lost, because the method of preparation is such that it cannot be appropriated. On the other hand, foods that are not so attractive may be rendered valuable when properly prepared, so that the real value of foodstuff depends largely upon the cook.

Dr. Sawyer declared that an average of about 2400 calories a day in food is sufficient as a heat-producer, but this does not signify nutritive value. Sight must not be lost of the chemical elements and value of food as well—proteids, carbohydrates, fats and salts—which must be properly balanced according to the needs of different individuals, under various circumstances. The vitamins also must be considered. People differ in their digestive capacities, in health as well as in disease. Food in the stomach is not yet in the body, it is not yet of value. Here is where the physician's work comes in—to find out and give advice. Have the food finely subdivided before it enters the stomach, so it will leave the stomach within a short time. Give the stomach an opportunity to do its work without fatigue and it will always be ready to do its work well.

Mr. Wells L. Griswold, of the Dollar Savings Bank of Youngstown, then gave an address on "The Dollar—When Earned, How to Make it Safely Productive." Some of the things he said: A man with \$50,000 to invest which he does not need, and a woman with a six-room house, three children and only \$3,000 ready cash, are very different propositions. Under investment, two things—security and amount of income—should always be borne in mind and carefully investigated. For this information go to a trustworthy banker. Even these are not infallible, so better go to two or three. Their ideas may differ. If so, act accordingly, and you are reasonably sure of being within safe bounds. That is their business, same as practicing medicine and surgery is yours. Never take the say so of the man or woman who sells the security. Their zeal for the commission there is in it for them may overshadow the safety of the security.

When you invest in real estate, inquire first whether the title is good. Next, is it sufficiently productive to take care of itself. Unproductive real estate is a poor investment, unless you have no immediate use for your money and you can afford to let it lay idle. Mortgages on real estate with clear title are good investments, provided they are productive. So is a mortgage on a rolling mill, provided it continues to roll. Government bonds are good. The income is small,

but it is taxfree and safe. They need no investigation and are always salable.

Municipal bonds are gradually going into disrepute because of so much inefficient management of municipal government. Railroad bonds and industrial bonds may be of highest type so far as paper statement goes, but these are not always reliable. Preferred stock is good, in that it has precedent, and is not taxable, but the owner is a partner in the business and responsible for its debts. The company is not obliged to pay either principle or interest, that is, this may be prolonged indefinitely.

A safe thing to do is to scatter your available money around in different investments, then if one fails, you are still safe in the others.

Both these addresses were listened to with unabating interest, because the subjects concerned every one present in a practical way.

J. H. Seiler, M. D., Secretary.

### Northwestern Ohio Medical Association to Meet in Lima, October 3

The following program has been announced for the meeting of the Northwestern Ohio Medical Association to be held in Lima, October 3, at 10 a. m.:

1. THE REFLEXES, by Dr. J. B. Wilson, Van Wert. Discussion opened by Dr. M. A. Darbyshire, McComb.

2. SURGERY OF THE CENTRAL NERVOUS SYSTEM, by Dr. Homer Heath, Toledo. Discussion opened by Drs. Louis Miller, Toledo, and J. R. Tillotson, Lima.

3. RHEUMATISM IN CHILDHOOD—AN ENGLISH VIEWPOINT, by Dr. Russell Young, Lima. Discussion opened by Drs. Frank Boyle, Bowling Green, and F. J. Stueber, Lima.

4. TREATMENT OF DIABETES MELLITUS, by Dr. C. W. Waggoner, Toledo. Discussion opened by Drs. Ralph R. Hendershott, Tiffin, and J. P. Baker, Findlay.

5. THE ROLE OF PTOMAINES IN THE PRODUCTION OF ARTERIAL HYPERTENSION, by Dr. P. I. Tussing, Lima. Discussion opened by Dr. W. S. Powell, Defiance.

6. CLINICAL MANIFESTATIONS OF CARDIAC ARRHYTHMIAS, by Dr. Joseph W. Young, Toledo. Discussion opened by Dr. J. A. Weitz, Montpelier.

7. ORATION by Dr. William A. White, Superintendent, St. Elizabeth Hospital, Washington, D. C.

Officers of the society are Drs. Charles H. Clark, Lima, president; Thomas H. Hubbard, Toledo, vice-president; Norris W. Gillette, Toledo, secretary; R. J. Morgan, Van Wert, assistant secretary and treasurer; R. R. Hendershott, Tiffin, and C. W. Waggoner, Toledo, counselors of the Third and Fourth Districts, respectively, for the State Association.

# Artificial Pneumothorax

in  
Pulmonary Tuberculosis



**LOUIS MARK, M. D.**  
327 East State Street  
Columbus, Ohio

## KIDNEY FUNCTION

is being universally determined by the Rowntree - Geraghty Phenolsulphonephthalein Test.

## The Dunning Colorimeter

(Price \$6.00)

is the apparatus of choice for the colorimetric determination of dye excretion. Information concerning the test, descriptions of the colorimeter and of

**Phenolsulphonephthalein Ampules, H.W. & D**  
will be supplied upon request.

H. W. & D.—Specify—H. W. & D.

**Hynson, Westcott & Dunning**  
BALTIMORE

# Cincinnati Radium Laboratory

22 West Seventh Street

**Needle, Tube and Plaque  
Applicators**



CHARLES GOOSMANN, M. D.  
X-Ray Treatment When Indicated.

**Let this  
Catalog  
Help You  
Save Your  
Dollars**

Not only does this Catalogue contain a complete line of standard instruments, dressings, rubber goods, bags, glassware, steel furniture, etc., but it includes as well, many new specialties that will be particularly interesting to you.

The general mailing has been completed and if you have not received your copy just fill out the coupon and it will be sent to you at once. This catalogue may be accepted as establishing a standard of fair price and honest value.

**FILL  
IN  
THE  
COUPON**

**Frank S. Betz Co.**  
Hammond, Ind.  
New York  
Chicago.

FRANK S. BETZ CO., Hammond, Ind.  
Dear Sirs:  
Send me at once a copy of your free  
complete catalogue No. 22.  
Name .....  
Address .....  
City .....

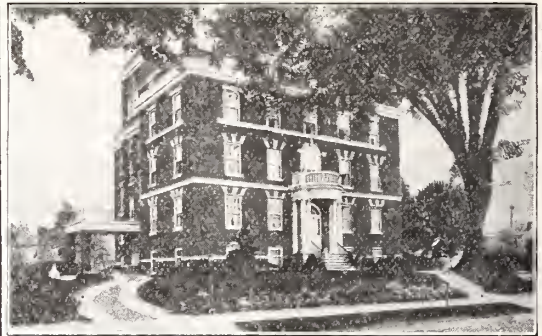
### Three Out of Four

Four arrests made in Youngstown recently by the State Medical Board on charges of practicing medicine or surgery without license, resulted in three pleas of guilty.

C. A. Young, whom the affidavit stated had received \$125 for treatment of a cancer, was fined \$100 and costs. P. B. Derr, who was alleged to have received \$70 for the treatment of nervous trouble, was given a fine of \$200 and costs, one-half of which was suspended upon repayment of the \$70 to the patient. George Fink, charged with bleeding the patient whom Derr has previously treated, drew a fine of \$100 and costs, with \$75 of the fine suspended.

"Rev. Dr. G. Schuster", who pleaded not guilty and gave bond, is charged with three specific charges, one of which is for the treatment of Frank A. Dorsey, State Medical Board inspector, who went to Schuster for treatment to secure evidence.

One of the men who pleaded guilty is said to have practiced a combination of alleged divine healing, fortune-telling and medicinal cure. When a patient visited him he would first read the Bible, then deal a pack of cards and from deductions made from these two maneuvers, prescribe for the patient.



## The Holzer Hospital Gallipolis, Ohio

*Radium for all  
therapeutic  
uses*

U. S. ARMY SURPLUS

### JOHNSON & JOHNSON AND BAUER & BLACK BANDAGES

Individually wrapped, sterilized, 6-yard bandages approximately 50% of their regular selling price. They are 44-40 gauze, packeted one gross to the carton. Each carton contains 4 doz. 2½-in., 4 doz. 3-in. and 4 doz. 3½-in. bandages.

Per Carton, 1 Gross, Post Paid  
**\$5.00**

ORDER NOW BEFORE THE SUPPLY  
IS EXHAUSTED

### Charles E. Findlay Co.

Jobbers of Physicians and Hospital Supplies  
677 North High Street  
COLUMBUS, OHIO

Bell, Main 6518

Buy from Findlay—You Will Eventually.

## Radium Laboratory

350 East State St., Cor. Grant Ave.  
Columbus, Ohio



Edward Reinert, Ph. G., M. D.  
R. R. Kahle, Ph. B., M. D.

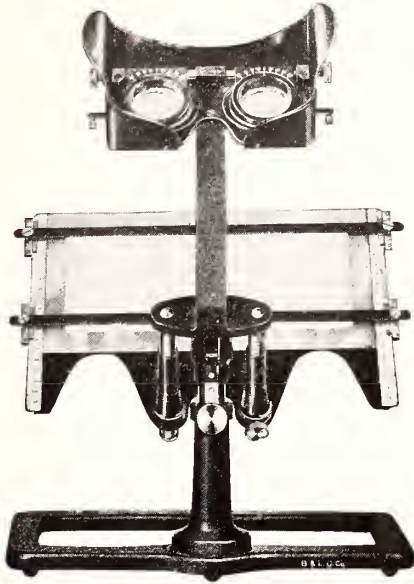
Citz. 9215

Bell, M. 7417



# THE TREMENDOUS ADVANTAGE of the BAUSCH & LOMB STEREO CAMPIMETER

Over Any Monocular Device is Universally Known, as is Manifested by Its General Use Among the Best Men in the Profession



Previous to its introduction, perimetry and campimetry examinations, have had to depend upon monocular vision, and monocular fixation. It has been necessary for the patient, with one eye covered, to keep the other eye fixed steadily upon a light or other object directly before it, while keeping the mind and attention upon some moving object near the margin of his visual field, where vision is indistinct.

From the patient's standpoint this is a most difficult thing to do, and from the practitioner's standpoint this is to be considered impossible where perfectly steady fixation is demanded.

In addition to visual field testing and blind spot plotting the instrument is also adapted for the determination of stereoscopic vision and for the testing of heterophoria and small squints at the near point.

*Send for descriptive circulars and price list.*

## The White-Haines Optical Co.

Columbus, Ohio

Indianapolis, Ind.  
Springfield, Ill.  
Pittsburgh, Pa.

Huntington, W. Va.  
Lima, Ohio  
Wheeling, W. Va.

URINE  
BLOOD  
SPUTUM  
EFFUSIONS  
STOMACH  
CONTENTS  
WASSERMANN &  
NOGUCHI  
REACTIONS  
GONORRHEAL  
COMPLEMENT  
FIXATION TEST  
BLOOD CHEMISTRY  
PROTEIN  
SENSITIZATION  
TESTS

BASAL METABOLISM  
AUTOGENOUS  
VACCINES  
FAECES  
GENITO-URINARY  
SURGICAL and  
GYNECOLOGICAL  
PATHOLOGY  
DARK FIELD  
ILLUMINATING  
FOR  
SPIROCHETA  
PALLIDA  
MEDICO-LEGAL  
POST MORTEM  
X-RAY

WASSERMANS (daily)  
GONOCOCCUS  
FIXATION  
AUTOGENOUS  
VACCINES  
TISSUES  
SPINAL FLUID  
DARK FIELD FOR  
SPIROCHETES  
BASAL METABOLISM  
BLOOD CHEMISTRY  
PROTEIN SENSITIZATION  
BLOOD TYPING FOR  
TRANSFUSION  
MEDICO-LEGAL

URINE  
BLOOD  
SPUTUM  
STOMACH EXAM'S.  
FAECES  
BACTERIOLOGY  
EXUDATES  
MILK  
WATER  
SEEDS  
FEEDS  
FERTILIZERS  
IRON  
STEEL  
COAL

# LABORATORY

Clinical and Pathological

COLUMBUS, OHIO 370 East Town Street

J. J. Coons, B. S., M. D., D. Sc.  
H. M. Brundage, M. D.  
Dorris Coss, B. S., M. S.  
Ruth Miller, B. S.

PROMPT SERVICE

Immediate Report on Frozen Sections of all Tumors.

# Ft. Wayne Medical Laboratory

Radium, X-Ray, Pathology,  
Serology and Chemistry

Ft. Wayne, Indiana, 327 W. Berry St.  
(One block south of Interurban station)

Pathology and Serology by Dr. B. W. Rhamy  
Radium and X-Ray by  
Dr. E. M. Van Buskirk  
Medical and Industrial Chemistry by  
P. H. Adams, B. S., Ch. E.

*Special Delivery Postage insures prompt delivery*

## Counting the Cost of Public Health

Public health activities of the United States government for the twelve months ending July 1, 1923, will receive approximately one-sixth of the entire federal income, the enormous amount of \$609,271,589.66.

Thirteen appropriation bills, which became laws before the House recessed, carried a total of \$3,747,035,382. These appropriations were made under the budget system, which the Director of Budgets, in a statement sets forth a saving to the government of \$250,134,835.00 during the past year.

The principal grants for public health work follow:

### NAVY APPROPRIATIONS TOTAL \$3,503,000

- (a) Care of lepers, Navy Station, Island of Guam, \$18,000.
- (b) For necessities, Medical Department, \$2,400,000.
- (c) Contingencies, Bureau of Medicine and Surgery, \$435,000.
- (d) Bringing remains of sailors and marines from France, \$65,000.
- (e) Care of naval hospital patients, \$85,000.
- (f) Complete construction naval hospital, San Diego, Cal., \$500,000.

### ARMY APPROPRIATIONS TOTAL \$4,413,880

- (a) Water and Sewers at Military Posts, \$2,000,000.
- (b) Letterman Hospital, California, \$55,000.
- (c) Claims officers, nurses and enlisted men for pay and allowances during world war, \$500,000.
- (d) Construction and Repair of Hospitals, \$529,360.
- (e) Maintenance of Quarters for Hospital stewards, \$10,000.
- (f) Medical and Hospital Department of Army, \$1,000,000.
- (g) Hospital care, Canal Zone garrison, \$40,000.
- (h) Army Medical Museum, \$7500.
- (i) Library, Surgeon General's Office, \$12,000.
- (j) Office of Surgeon General, \$223,280.
- (k) Artificial limbs, trusses, etc., \$36,750.

### DEPARTMENT OF STATE APPROPRIATIONS TOTAL \$15,233.16

- (a) Annual share of U. S. in maintenance of International Sanitary Bureau, \$11,323.16.
- (b) Annual quota of U. S. in support of the International Office of Public Health, \$3,860.
- (c) Annual contribution for support of Somerset Hospital at Cape Town, Africa, \$50.

### DEPARTMENT OF JUSTICE APPROPRIATIONS TOTAL \$265,000

- (a) Enforcement of National Prohibition Act, \$250,000.
- (b) Hospital supplies, medicines at various federal prisons. About \$15,000.

### TREASURY DEPARTMENT APPROPRIATIONS TOTAL \$19,432,924

- (a) For expenses to enforce National Prohibition and Narcotic Acts, \$9,250,000.
- (b) Pay and other expenses, Public Health Service, \$2,196,530.
- (c) Maintenance of Hygienic Laboratory, \$45,000.

# Never Lose the Realization of this:

the fundamental of  
Malpractice Insurance  
is skill and  
experience in the  
defense

There is no counterpart to Medical Protective Service—founded upon over twenty-three years of doing one thing right in the successful handling of over fourteen thousand claims and suits in but a single line of legal endeavor.

*For Medical Protective Service Have  
a Medical Protective Contract.*

**The Medical Protective Co.**  
of  
Fort Wayne, Indiana

## BULLETIN No. 1

*To the Medical Profession:*

This is the first of a series of bulletins to be inserted in this journal. They will acquaint its readers with what we believe to be the value of Paradise Water as an **aid to medical treatment.**

In offering these thoughts to the profession we approach the subject with considerable hesitation. We realize we are speaking to a body of men trained and educated along scientific lines. They therefore have a better understanding of the subjects to be treated, than we, as laymen, could possibly have. On the other hand this body of devoted men is extremely busy in solving the constant problems of daily practice, and therefore, has scant time for research. The majority of the profession is thus forced to rely upon the investigations of the few who devote their entire time to this character of work.

We will not presume to set forth ideas that are ours alone. We will express thoughts that are supported by excellent medical authority and experience. We will endeavor to show why Paradise Water (which is practically C. P., except for content which renders it slightly alkaline) has unusual value in the treatment of disease connected with the kidneys, bladder, and the digestive tract; and correlated disorders of the heart and arterial system, also certain forms of arthritis.

*(To be continued in Bulletin No. 2)*

**PARADISE SPRING COMPANY**  
Brunswick, Maine

**PARADISE WATER**

- (d) Medical Examination of aliens, \$5,627,394.  
 (e) Quarantine service, \$739,000.  
 (f) Prevention of Epidemics, \$400,000.  
 (g) Field Investigation of Diseases, \$300,000.  
 (h) Interstate Quarantine Service, \$25,000.  
 (i) Rural Sanitation, \$50,000.  
 (j) Biologic products and viruses, toxins, etc., \$50,000.  
 (k) Maintenance of Venereal Disease Division, \$400,000 of which sum \$225,000 shall be allotted to states for cooperative work.  
 (l) Repair of Public Health Service hospitals: Oteen, N. C., No. 60, \$100,000; Perryville, Md., No. 42, \$150,000; West Roxbury, Mass., No. 44, \$50,000; Palo Alto, Cal., No. 24, \$50,000.

INDEPENDENT BUREAU APPROPRIATIONS TOTAL  
\$408,642,782.80

- (a) Employees' Compensation Commission, \$123,940.  
 (b) Employees' Compensation Fund, \$2,500,000.  
 (c) Expenses, Salaries, U. S. Veterans Bureau, \$34,970,974.  
 (d) Compensation for ex-service men, \$160,000,000.  
 (e) Medical and Hospital Services, \$64,658,680.  
 (f) Vocational Rehabilitation, \$146,409,188.80.

INTERIOR DEPARTMENT APPROPRIATIONS TOTAL  
\$4,087,915

- (a) Suppressing liquor traffic among Indians, \$30,000.  
 (b) Relieving and preventing disease among Indians, \$370,000.  
 (c) Maintenance Bureau of Education, \$82,860.  
 (d) Investigation of school hygiene, etc., \$50,000.  
 (e) Education in Alaska, \$360,000.  
 (f) Medical relief in Alaska for Eskimos, \$90,000.  
 (g) Investigations of safety of miners, \$378,000.  
 (h) Operation and purchase of mine rescue cars, \$285,000.  
 (i) Operation St. Elizabeth's Hospital for Insane, \$1,000,000; repair to buildings, \$100,000; erection of additional buildings, \$128,500.  
 (j) Columbia Institution for Deaf, \$95,000.  
 (k) Freedmen's Hospital, \$118,555.

COMMERCE DEPARTMENT APPROPRIATIONS

- (a) Bureau of Census, \$1,737,680.

LABOR DEPARTMENT APPROPRIATIONS TOTAL  
\$1,566,040

- (a) Children's Bureau, \$106,040.  
 (b) Investigation of child welfare, \$120,000.  
 (c) Maternity and Infancy Act, \$1,240,000.  
 (d) Women's Bureau, \$100,000.

POSTOFFICE DEPARTMENT APPROPRIATIONS  
(No Public Health items).

AGRICULTURAL DEPARTMENT APPROPRIATIONS  
TOTAL \$3,402,691

- (a) Tuberculosis in animals, \$2,877,600.  
 (b) Inspection of meat, \$981,180.  
 (c) Prevention of sale of adulterated foods, \$671,401.  
 (d) Enforcement of Warehouse Act, \$120,000.  
 (e) Enforcement of Insecticide Act, \$156,510.  
 (f) Operation of Center Market, District of Columbia, \$165,000.

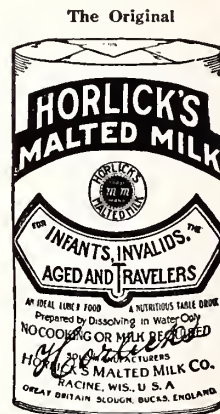
## Very Useful in Digestive Disorders

A reliable food-drink that can be generally tolerated and assimilated sufficiently to maintain strength. Bland and non-irritating in disturbed conditions, ulcers, etc. Partially pre-digested. Easily adapted to individual needs.

Samples prepaid  
upon request.

# HORLICK'S

Racine, Wis.



Avoid Imitations

## Dares Haemoglobinometer

Candle lighted, or Electric lighted.  
 We are accepting orders for prompt delivery.  
 Write for booklet and prices.

## Tycos Office Sphygmomanometer

With 6 inch silvered dial.  
 A distinct advance over the pocket type.  
 Immediate delivery. Price \$37.50.

Surgical Instruments—Dressings,  
 Pharmaceuticals, Biologicals

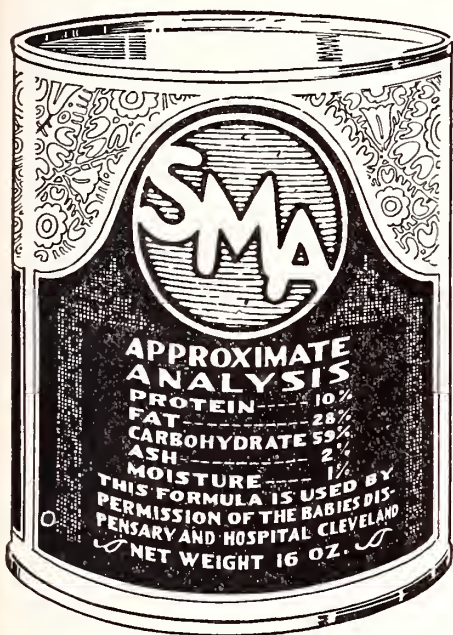
Your orders will receive prompt attention—  
 "You will do better in Toledo."

## The Rupp and Bowman Co.

319 Superior St.  
 TOLEDO, OHIO

Your druggist  
can supply you  
with

**SMA**



## A Food to Keep Babies Well

Adapted to  
Mother's Milk

**I**N order to make S. M. A. easily accessible to all physicians, we have placed a supply in every recognized wholesale drug house in the United States. If your retail druggist does not have S. M. A. you can inform him that his jobber has it in stock, and that he can therefore obtain it for you on very short notice.

S. M. A. is sold only on the order of a physician. Formula by permission of The Babies' Dispensary and Hospital of Cleveland.

The Laboratory Products  
Company

3829 Cedar Ave.

Cleveland, Ohio

### *S. M. A. offers the family physician*

- (1) A simple and satisfying food for babies who are deprived of mother's milk, or who require food in addition to what the mother can supply.
- (2) A food which requires only the addition of boiled water to prepare, whether for the month-old baby or the baby a year old.
- (3) A food which contains the required food elements in proper proportion; and whose clinical records of feeding show an absence of spasmophilia and rickets in any infant fed with it while it was still well.
- (4) A food which makes happy, solid, breast-fed-looking infants, and which insures normal development

(g) Enforcement of Packers and Stockyards Act, \$410,500.

(h) Dehydration of foods, \$20,500.

#### LEGISLATIVE APPROPRIATIONS

(No Public Health items).

FIRST DEFICIENCY TOTAL \$66,728,642.81

(a) Continuing construction of Gallinger Municipal hospital, District of Columbia, \$150,000.

(b) U. S. Veterans Bureau, additional for vocational rehabilitation, \$40,000,000; Medical and Hospital services, \$25,000,000.

(c) Regulating immigration, \$450,000.

(d) Investigation of women in industry, \$1,800.

(e) Employment service welfare \$3,900.

(f) Public Health Service, Interstate Quarantine service, \$466; medical and hospital service for disabled war veterans, \$87,776.81; medical, surgical and hospital services, \$130,000; quarantine service, \$389,000; prevention of epidemics, (emergency) \$1,000.

(g) Support National Home of Disabled Volunteer Soldiers, \$514,700.

SECOND DEFICIENCY TOTAL \$95,475,800.89

(a) Medical charities District of Columbia, \$23,170.45.

(b) Support of indigent insane of St. Elizabeths Hospital, \$148,000.

(c) Employees' Compensation Commission, \$600,000.

(d) U. S. Veterans Bureau: Vocational Rehabilitation, \$73,714,182; medical and hospital services, \$20,287,930.

(e) Administration of Warehouse Act, \$9,015.

(f) Care of insane in territory of Alaska, \$8,800.

(g) Children's Bureau for maternity and infancy welfare, \$490,000 to be apportioned among the various states.

(h) Alterations and repairs to Fort Mackenzie, Wyoming, hospital, \$100,000.

(i) For additional land to Walter Reed General Hospital, \$94,703.44.

#### PHYSICIANS APPOINTED

Fifty-two additional members for the Ohio State University faculty have been announced for the coming year. Among these, the College of Medicine will have: Drs. Robert W. Nosker, assistant professor of ophthalmology; Link Murphy, assistant professor of medicine; Russell G. Means, assistant professor of oto-laryngology; Harry W. Hughes, technical physician; Holway D. Farrar, instructor in surgery; and Harold E. Lowery, laboratory assistant in bacteriology.

#### THE HOSPITAL BUYER

*The Hospital Buyer*, a monthly publication devoted to all phases of hospital purchasing and the business side of hospital administration, made its initial appearance in September. One of the functions of the publishers, The Hospital Buyer Company, Inc., 4739 Ravenswood Avenue, Chicago, will be to furnish information to hospital executives as to sources of supply, prices and conditions of the market for everything used in hospital construction and maintenance.

## Every Physician

Is Interested In

## Physician's Supplies

In dispensing, he requires a great variety in his office—in prescribing he uses the PRESCRIPTION DEPARTMENT that is UP-TO-DATE.

If you are unacquainted with our plan of handling the physician's requirements, you may profit by giving us an opportunity to show you what we can do.

## The Wendt Bristol Co.

47 South High St., Columbus, Ohio

FINE PHARMACEUTICAL SPECIALTIES

## Our Business

is confined exclusively to the manufacture of Strictly High Grade Medicines and Pharmaceuticals for Physicians, Dispensing and Prescribing.



Our Offices and Laboratories are now located in our New Building, 330-336 Oak Street, one square north of Grant Hospital.

NO GOODS SOLD AT RETAIL

## The COLUMBUS PHARMACAL Co.

COLUMBUS, OHIO

**T**HE DEVELOPMENT OF THE CHEMICAL INDUSTRY IN THE UNITED STATES MEANS MUCH TO EVERY ILL PERSON.

IT MEANS EQUALLY AS MUCH TO THOSE WHO WILL EVENTUALLY BECOME ILL.

CHEMICAL EQUATIONS ARE FIXED QUANTITIES. THEY REMAIN THE SAME THE WORLD OVER.

AMERICAN LABORATORIES ARE BEING STABILIZED AND EQUIPPED WHERE CHEMICALS HAVING IDENTICALLY THE SAME FORMULAS AND EQUAL PURITY ARE NOW BEING MADE.

THIS MEANS MUCH, ECONOMICALLY AS WELL AS FINANCIALLY, TO ALL, BECAUSE IT ASSISTS AND ENCOURAGES FURTHER DEVELOPMENT OF AMERICAN CHEMISTRY TO ESCAPE FROM THE FOREIGN, SLAVISH CHEMICAL MONOPOLY, WHICH NOW IS TRYING TO STRANGLE THIS HOME INDUSTRY.

IT IS IMPERATIVE, THAT THE INTEGRITY OF THE AMERICAN CHEMICAL FOUNDATION BE KEPT FREE FROM FOREIGN INTERFERENCE AND DOMINATION.

TO THIS END, PHYSICIANS ARE NOW URGED TO APPEAL TO THEIR GOVERNMENTAL REPRESENTATIVES AT WASHINGTON TO KEEP THE CHEMICAL FOUNDATION AS IT NOW IS—FREE.

DOCTOR, YOUR INFLUENCE CAN HELP SAVE THIS ONE INDUSTRY FOR THE UNITED STATES; PLEASE ACT NOW—TO-DAY!



Columbus,

Ohio

---

*Manufacturers of Refined Pharmaceuticals.*

## Small Advertisements

*For Sale*—Seven-room modern residence and three-room office combined. Also books, instruments and office furniture. General practice well established in desirable location in Columbus. Write C., care *The Journal*.

*For Sale*—Unopposed practice of the late Dr. N. C. Satterlee of Williamsfield, Ohio; also drugs, instruments, books, home and office. For information address Mrs. N. C. Satterlee, Williamsfield, Ohio.

*For Sale*—Residence and office. All conveniences, splendid opportunity for physician wanting suburban home and practice. Improved roads, good schools and churches. Twenty miles from Cleveland on main highway. Correspondence solicited. Dr. John R. Pipes, Avon Lake, Ohio.

*Wanted*—To correspond with a young married physician, recent graduate with hospital experience and looking for permanent location. Must give best of reference as to ability and character. I wish to gradually retire. I have nothing to sell. Address Box 54, Rittman, Ohio.

*Wanted*—A general practitioner of medicine to superintend a sanatorium in Columbus. Must stand well with the medical profession. Address, J. B., care *The Journal*.

*Wanted*—Location in any of the large cities of the state; with or without real estate. Address, E. F., care *The Journal*.

*Wanted*—To buy second-hand, articulated skeleton. State price in replying. Address D. H., care *The Journal*.

*For Sale*—Doctor's practice and property in Ohio. Situated in a pretty city of 6,000 on two main line railroads, with the surrounding towns connected by interurban lines. Schools graded A-1 and educational advantages superior to those usually found in this size city. All fraternal organizations represented. Five large manufacturing plants. Roads good with excellent driving the whole year. Main roads either macadam or brick. Four modern hospitals within a radius of 10 miles, including laboratory and radium facilities. Modern home with hardwood floors, steam heat and garage on paved residential street. Office adjoins residence. Reception room with seating capacity of thirty. Consulting room can be used for all minor surgery. Practice for both practical and surgery. Ability to do major work will greatly increase income. The practice is clean and among the best people. Will sell complete equipment except automobile. Reason for leaving, going to large city to specialize. Would remain with purchaser to establish him. Terms will be arranged for responsible person. W. S. J., care *The Journal*.

*For Sale*—One Spencer microscope—3 objectives; 2 eye pieces; reagents; hand centrifuge, test tubes, slides and covers; bacteriological chart and books of instruction. Used less than a dozen times. Cost \$135.00 cash. Reason for sale, decease of owner. Price \$90.00. Address M. D. M., care *The Journal*.

*Opening for General Practitioner*—In live Ohio village of 1200 population. A doctor, recently deceased, had practiced here for 20 years. New modern offices connected with house built

within the last year. Library and equipment can be bought very cheap. Best location in town. Arrangements for light house keeping can be made. B. W. Sebring, care State Dept. of Agriculture, State House Annex, Columbus, Ohio.

*For Sale*—Good, unopposed practice in southern Ohio, to buyer of drugs and good equipment for \$300. Can rent house and office for \$15 per month. Nearest competition 7-10-16 miles. Use auto all year. Good schools and farming community. Money from start. Reason, sickness. Address S., care *The Journal*.

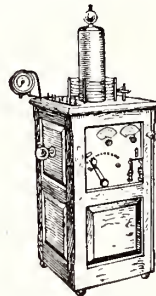
**D**o you believe that the fitting of trusses is a part of the Practice of Medicine? If so, send your patients needing trusses to

## The Columbus Truss & Optical Co.

PARKER W. PHENEGER, M. D., Mgr.

We Specialize in  
Elastic Stockings Made to Measure

Office and Fitting Rooms  
Suite 303-309 Rowlands Bldg., Broad and Third Sts.  
COLUMBUS, OHIO



The "Hogan"  
Successors to McIntosh Battery & Optical Co. Est. 1879  
Main Office and Factory  
McIntosh Bldg., 223-233 N. California Ave., Chicago, Ill.

Do You Desire to Increase the Results in Your Practice?

**READ**

**FREE**—"The Therapeutics of High Frequency," a New and Unique booklet full of valuable information regarding the uses of High Frequency Currents. Methods you can employ to increase RESULTS and build up an Office Practice.

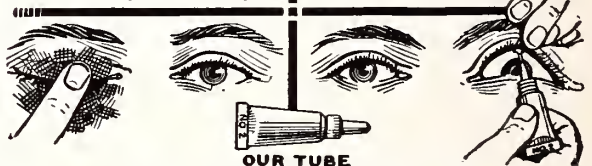
You are welcome to a copy of this brochure as long as the supply lasts. Send today for your copy and full details regarding the

"HOGAN"

HIGH FREQUENCY APPARATUS

McIntosh Electrical Corp.

**THE OLD WAY | THE NEW WAY**



## Better Ocular Therapeutics

Can be obtained by the use of "M-E-S-Co" brand of Ophthalmic Ointments. Reasons: Selected Chemicals, Thorough Trituration, Perfect Incorporation, Sterilized Tubes, Boiled and Strained Petroleum, Excellent Service, No Waste, No Dirty Salve Jar, Right Prices. Write for complete information  
**MANHATTAN EYE SALVE CO., Inc.**  
Louisville, Ky.





*Here's where genuine Atophan is manufactured by a special process completely precluding the possibility of unpleasant empyreumatic admixtures.*

This means a still further improved Atophan for your cases of Rheumatism, Gout, Neuralgia, Neuritis, Sciatica, Lumbago and "Retention" Headaches.

*Ample trial quantity and literature from*

**SCHERING & GLATZ, Inc.**

150-152 Maiden Lane

NEW YORK



Our Manufacturing Laboratories at Bloomfield, N. J.

**SAVE MONEY ON**

**YOUR X-RAY SUPPLIES**

Get Our Price List and Discounts on Quantities Before You Purchase

**HUNDREDS OF DOCTORS FIND WE SAVE THEM FROM 10% TO 25% ON X-RAY LABORATORY COSTS**

**Among the Many Articles Sold Are**

- X-RAY PLATES.** These brands in stock for quick shipment. **PARAGON** Brand, for finest work; **UNIVERSAL** Brand, where price is important.
- X-RAY FILMS.** Duplitzed or Dental—all standard sizes. Eastman, Ilford or X-graph metal backed. Fast or slow emulsion.
- BARIUM SULPHATE.** For stomach work. Finest grade. Low price.
- COOLIDGE X-RAY TUBES.** 5 Styles. 10 or 30 milliamp.—Radiator (small bulb), or broad, medium or fine focus, large bulb. Lead Glass Shields for Radiator type.
- DEVELOPING TANKS.** 4 or 6 compartment stone, will end your dark room troubles. 5 sizes of Enameled Steel Tanks.
- DENTAL FILM MOUNTS.** Black or gray cardboard with celluloid window or all celluloid type, one to eleven film openings. Special list and samples on request. Price includes your name and address.
- DEVELOPER CHEMICALS.** Metol, Hydroquinone, Hypt, etc.
- INTENSIFYING SCREENS.** Patterson TE, or celluloid-backed screens. Reduce exposure to one-fourth or less. Double screens for film. All-metal Cassettes.
- LEADED GLOVES AND APRONS.** (New type glove, lower priced).
- FILING ENVELOPES** with printed X-Ray form. (For used plates). Order direct or through your dealer.

If You Have a Machine Get Your Name on Our Mailing List



**GEO. W. BRADY & CO**

771 So. Western Ave., Chicago

*The HOOD*  
**Improved Heatless HEAD LIGHT**



Fits as comfortably as an old hat and delivers a maximum of clear, shadow-free light just where you want it. The head band is soft, pliable leather, well padded at the forehead and fitted with slide buckle, making it instantly adjustable. The air cooled Mazda bulb eliminates heating, and the light-weight, polished reflector throws the light without shadow. Each head lamp has 7 feet of silk cord, detachable from the head band and made with special connector for quick separation, allowing operator to leave the range of the cord. Light and cord quickly detachable so head band may be conveniently used with head mirror or binocular loupe.



**Frank S. Betz Co**  
**Hammond, Ind.**

Enclosed is \$7.50 for which you may send me your 3C13383 Hood Improved Head Lamp.

Name..... Address.....  
City..... State.....

## Cleveland Health Commissioner Writes Interestingly On Drug Problem

While narcotic law violations have been reported numerous in Cleveland, especially during the World war, few were found traceable to the medical profession, declares Dr. H. L. Rockwood, city health commissioner, in an article, "Narcotic Regulation in Cleveland Today," published in a recent issue of the Cleveland Academy of Medicine's *Bulletin*.

This was so, the author states, despite bundlesome legislation and conflicting regulations propounded by federal, state and municipal governments, many at variance with each other and leaving the field invitingly open for medical misceance.

"During the war," Dr. Rockwood is quoted, "it became evident that the number of addicts in Cleveland was very large and it is regrettable to say that two or three physicians were found to have been trafficking illegally in narcotic drugs. There were, however, many evidences of illicit trafficking in narcotics for which sufficient evidence was not obtained upon which to make prosecutions, but these violations, in the majority of cases, did not involve physicians.

"The lack of medical knowledge sufficiently to discriminate accurately between a legitimate or therapeutic, use of habit-forming drugs, on the

part of those responsible for laws and regulations dealing with the subject, has been the chief source of complaint on the part of the medical profession and the principal reason why certain legislation and regulation has been looked upon as ill-advised and unnecessarily troublesome.

"When the drug addicts were more in evidence in Cleveland, particularly in 1917 and 1918, in order to relieve the situation brought about by the passage of the Harrison law and the limitations put upon private practitioners in handling drug addicts, Cleveland, in common with other large cities, found it necessary to make some provision to handle addicts who were unable to procure their supply of narcotics legitimately.

"This sort of relief, however, failed to take into consideration the personal equation of the addict himself. Most of the addicts who would seek relief through municipal clinics, had little or no moral stamina and it was quite apparent that the supply of morphine furnished by the city was only used to supplement supplies obtained illegally. In a few isolated instances, where cure is claimed, the addict had special moral stamina and probably could have effected his cure without the aid of the clinic.

"The experience of the health office has been

### The Management of an Infant's Diet

In extreme emaciation, which is a characteristic symptom of conditions commonly known as

## Malnutrition, Marasmus or Atrophy

it is difficult to give fat in sufficient amounts to satisfy the nutritive needs; therefore, it is necessary to meet this emergency by substituting some other energy-giving food element. Carbohydrates in the form of maltose and dextrans in the proportion that is found in

## Mellin's Food

are especially adapted to the requirements, for such carbohydrates are readily assimilated and at once furnish heat and energy so greatly needed by these poorly nourished infants.

The method of preparing the diet and suggestions for meeting individual conditions sent to physicians upon request.

Mellin's Food Company,

Boston, Mass.

# LOESER'S INTRAVENOUS SOLUTIONS



ACCEPTED  
BY THE  
COUNCIL

LOESER'S INTRAVENOUS SOLUTION  
OF  
MERCURY OXYCYANIDE, 8 Mgs.

A sterile, stable solution in nonsoluble glass ampoules, 5cc containing 8 mgs. (1/8 grain) of Mercury Oxycyanide.

LOESER'S INTRAVENOUS SOLUTION  
OF  
MERCURY OXYCYANIDE, 12 Mgs.

A sterile, stable solution in nonsoluble glass ampoules, 5cc containing 12 mgs. (1/6 grain) of Mercury Oxycyanide.

We offer these solutions to the medical profession as a means of carrying on intensive mercurial treatment of syphilis.

The objections to the intramuscular method lack of uniform absorption, irritation, induration and abscesses, are overcome by the intravenous administration.

The superiority of these solutions of Mercury Oxycyanide over the intravenous administration of the so-called acid salts of mercury, bichloride, biniodide, etc., is due to the fact that they are less apt to cause irritation of the veins, a common fault of most soluble mercury compounds.

Clinical Reports, Reprints, Price List and  
"The Journal of Intravenous Therapy"  
Sent to any physician on request.

**New York Intravenous Laboratory**  
100 West 21st Street  
New York, N. Y.

*Producing Ethical Intravenous Solutions  
for the Medical Profession Exclusively.*



sufficient to make several definite statements regarding the narcotic addiction problem in Cleveland.

"Only a small percentage of drug addicts can be controlled by city ordinances alone. The supply of opium and cocain is of world-wide distribution. Such uses of narcotic drugs as may be considered illegal are in no way confined to the city and an ample organization for the purpose of illegal, or underground, traffic in narcotic drugs is known to exist.

"It is obvious that every move made by the government is a blow at the source of relief to which the addict commonly resorts and, when the Cleveland addict is affected by such moves, he promptly comes to the surface and is at once a person in great distress.

"That some relief for such addicts be provided is necessary. They cannot be allowed to go about unchecked in their efforts to appease their cravings."

#### RECOMMENDATIONS

In a summary the article recommends:

1—Harrison license required of all practitioners who use opium or its derivatives, or the derivatives of coca leaves, in their professional work. Fee \$3.00. The license issued to practitioners dates from July 1 to June 30 of the succeeding year and failure to renew license promptly makes the physician subject to penalty.

2—Supply of narcotic drugs mentioned must be kept in a safe manner, preferably under lock.

3—Inventory of such drugs on hand must be filed before July 1 of each year and before the license is issued. Such inventory must bear an affidavit made by a notary public or federal officer and the original of same must be kept on file by the physician for inspection of drug inspectors.

4—Supply of narcotics for personal use of physician may only be secured by using requisition forms furnished by the department of internal revenue and drugs can be issued in filling such forms only by wholesale drug houses.

#### Proposed Legislation Would Reward "Successful Cure"

A measure has been introduced in the House of Representatives at Washington by Congressman Sproul, appropriating the sum of one million dollars, to be paid in ten equal installments to "any individual discovering a successful cure for tuberculosis, cancer, pneumonia, paralysis, epilepsy and dementia praecox."

This measure also contemplates the establishment of a board consisting of the Surgeon General of the Army, the Surgeon General of the Navy and the Surgeon General of the U. S. Public Health Service to investigate any discoveries submitted and authorize payment of the awards. It also empowers the board to recruit an advisory committee composed of specialists to facilitate investigations.

# To Prevent Hydrophobia

Use

## Pasteur Treatment

With a

Potent Product and Prompt Service  
PRICE \$25.00

Order from

**James McIlvaine Phillips, M. D.**

2057 N. High St.

Columbus,

Ohio

### WILLIAM SCHEPPEGRELL, A. M., M. D.

President American Hayfever Prevention Association.  
Chief of Hayfever Clinic, Charity Hospital, New Orleans,

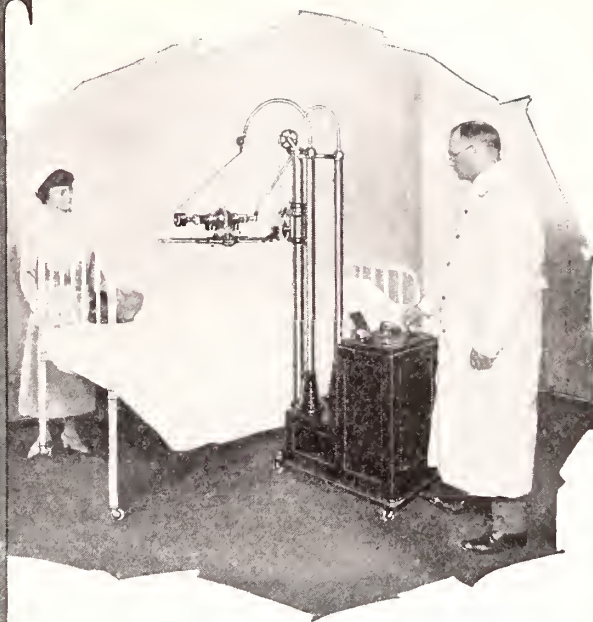
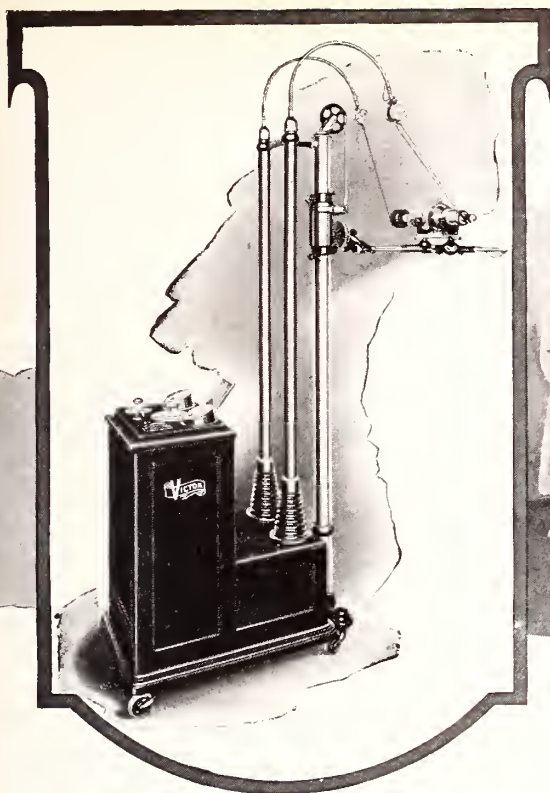
*Says:—*

"IF the patient applies for treatment during an attack of hayfever, the pollen extracts are usually ineffective, and a vaccine should be used, these being injected at intervals of one or two days until the severity of the attack subsides."\*

\*From Dr. William Scheppegrell's new book on  
Hayfever and Asthma,  
Lea & Febiger, Publishers

Bacteriological Laboratories of

**G. H. SHERMAN, M. D.**  
DETROIT, MICH.



## This New Victor X-Ray Outfit Is Radically Different It Is a Stabilized Mobile Unit

### What the Stabilizer Does

When the voltage of the line supply current fluctuates (this condition prevails on practically every line) the Victor-Kearsley Stabilizer, incorporated in this unit, acts *automatically* to hold the milliamperage constant in the Coolidge Tube—the exact milliamperage desired for the radiograph. 100% radiographic results are therefore insured—no “retakes” necessary because of fluctuating line supply.

### Control Features

Auto-transformer allows selection of any penetration desired from 3 to 5 inches, divided into 26 steps—a fineness of graduation that is distinctive in this outfit. The stabilizer permits selection of any milliamperage from 2 to 30, at any setting of the auto-transformer. A chart on the control board helps the operator to obtain instantly any current value.

*The Victor-Kearsley Stabilizer is one of the most important X-Ray developments since the advent of the Coolidge Tube itself. It should not be confused with other devices which tend to stabilize only the current to the filament of the tube. The important advantages of this unit are fully explained in a special bulletin, which we will gladly send you on request.*

### Circuit Breaker Safety Device

In case of “overload” beyond the capacity of the tube (30 Ma. at 5” back-up spark) this device *automatically* shuts off current supply, preventing damage to tube and apparatus. Consider also the importance of this from the standpoint of protection to both operator and patient, in case of accidental contact with the high tension system.

### A Complete X-Ray Unit

Where only limited space is available in the physician's office, the compactness of the Victor Stabilized Mobile X-Ray Unit solves the problem. Mounted on casters and easily moved about, it lends itself to varied demands. It also becomes an extremely valuable addition to any existing hospital equipment.

VICTOR X-RAY CORPORATION, Jackson Blvd. at Robey St., Chicago

Territorial Sales and Service Stations:

COLUMBUS: 145 EAST STATE STREET



## Post-Graduate Work in European Countries

It is now an opportune time for post-graduate work in the clinics of Austria and Germany, according to letter to *The Journal* from Dr. Edward King, of Cincinnati, who says:

"Since returning from Europe, where I visited the principal clinics, I have received inquiries regarding the post-graduate work in Austria and Germany. In order to place the situation in Vienna in a clear light before physicians who are contemplating a trip abroad and furthermore to correct a false impression which is prevalent concerning conditions there, I wish to relate my experiences.

"During a sojourn of three months, I worked in the ear, nose and throat clinics and was able to acquire recent and first-hand information about the existing conditions. It is my conviction that the time is most opportune for post-graduate work.

"The clinics are large and well attended and the number of post-graduate men small in proportion. The professors and faculty are showing every courtesy to Americans. To speak specifically, I might mention that I spent most of my time in the clinics of Professors Alexander, Ruttin, Neumann and Hajek and found relations with the heads of all departments and assistants most pleasant.

"Contrary to reports received early this year

from the American Medical Association of Vienna, the fees are not exorbitant and there is no discrimination against Americans. The American Medical Association having recently elected new officials is receiving full cooperation from the University.

"As the professional men of Vienna are working under the most adverse financial and utterly hopeless economic conditions, it is only fair to make known the true attitude of the faculty of the University."

Dr. E. R. Brush, of Zanesville, and Dr. H. H. Hines, Assistant Professor of Clinical Surgery at the University of Cincinnati College of Medicine, were members of a group of middle western surgeons who, according to recent newspaper reports, were denied permission to witness an unusual operation to be performed by Dr. Sauerbruck, a German surgeon of note, at a clinic in Munich, Bavaria, when they refused to sign a statement agreeing to exert every influence to restore all German doctors to memberships in American medical societies, which were held prior to the war.

*Youngstown*—The wedding of Dr. Imogen Baldwin and Dr. Maurice S. Redmond, both of Pittsburgh, took place in this city, September 2. The bride, a former resident of Youngstown, is a graduate of Johns Hopkins.

# MEAD'S

## UNDERSTANDING

**CONSULT THE DOCTOR FIRST**

**MEAD'S DEXTRI-MALTOSE FOR INFANT FEEDING**

Every now and then a mother with an incomplete knowledge of infant feeding will proceed to feed her baby without the advice of her physician.

The infant will seem to do well for awhile. And then comes trouble, and more trouble. Another failure is chalked up to Misunderstanding.

Infant Feeding can either be a properly managed matter, with success in most cases, or the most miserable failure. Feedings that are adjusted by the physician to suit the individual baby, and directed with knowledge, experience and understanding, are almost certain to succeed. Feedings offered to the baby without the advice of the doctor, are almost certain to fail.

MEAD'S DEXTRI-MALTOSE, with cow's milk and water plus the doctor's written formula, offers the shortest road to UNDERSTANDING.

*Write for Samples and Literature*

**THE MEAD JOHNSON POLICY**

Mead's Infant Diet Materials are advertised only to physicians. No feeding directions accompany trade packages. Information regarding their use reaches the mother only by written instructions from her doctor on his private prescription blank. Literature furnished only to physicians.

**MEAD JOHNSON & COMPANY,**

**Evansville, Indiana**

# MEDICAL ECONOMICS

PUBLIC HEALTH - SOCIAL WELFARE *and* ORGANIZATION PROBLEMS  
WITH EDITORIAL COMMENT *by* D. K. M.

## "Now's the Time"

With the present sudden change in public sentiment due largely to intensive propaganda of various sorts, with numerous proposals already prepared for introduction into the next Ohio legislature, the members of which are to be elected on November 7, the medical profession is vitally concerned with the outcome of this year's election.

Many issues, raised in many instances by various groups of disgruntled individuals whose efforts will be directed to amend or cripple present laws enacted to protect and promote public health, call for concerted action.

Many of these problems and issues have been forecasted from time to time in *The Journal*, including the comprehensive analysis in the last annual report of the Committee on Public Policy and Legislation in the May, 1922, issue.

Obviously the medical profession is not and cannot be a partisan political adjunct; but there is definite reason to carefully scrutinize the qualifications of candidates for public office, particularly those whose function it will be to enact, amend and repeal statutory provisions.

Moreover, those candidates for reelection who have been responsive to the requests and suggestions of the medical profession deserve most favorable consideration; as do those new candidates whose experience, judgment and honesty are well known.

Physicians owe a duty to the public and to themselves to utilize their special knowledge in educational and instructive efforts with candidates. As a unit the medical profession does not and will not expect or demand any official act which cannot be justified on the basis of public interest, but for this reason its influence should be emphatic. Because of its peculiarly close contact with fundamental social problems the medical profession is in the best possible position to find a solution to the various problems as they arise.

It has been stated that the chaotic, conflicting public opinions are rapidly crystalizing into two main groups: those who believe in the greatest possible amount of governmental supervision, and those who believe in the least possible amount of government consistent with safety and progress. The first theory would, of course, eliminate initiative and limit personal responsibility;

the second requires careful balance and adjustment.

We have seen the pendulum swing toward the first theory with its accompanying limitations and restrictions through an excess of "advanced" legislation. This trend is not yet checked.

The medical profession no more than any other group can or should stand in the way of sanely constructive developments. However, physicians, through organization, constitute the means of maintaining balance in the social advance and to prevent a plunge into chaotic experimentation.

There has never been a time when there was any greater need for alert, cohesive, aggressive medical organization. As the recent president of the State Association aptly said in his annual address: "We need organization not to complain, object and resist, but to explain, to direct and to construct. We need it for mutual help and protection of the profession. We need it for the protection and welfare of the people."

## "Religious Healing"

According to accounts from its recent general convention, held in Portland, Oregon, the Protestant Episcopal Church has been formally placed on record in recognition of the ministry of healing. The action of the house of bishops is said to authorize the clergy and lay members, who believe they possess powers of healing, to prepare themselves "by care and prayer and theological and medical study for their proper and safe exercise."

One may wonder just what proportion of "medical study" is contemplated in the "preparation" for such service. On the other hand there is no disposition to question the fact that a reverent, religious physician oftentimes renders best service.

It seems that one Alfred Hickson and his works as a lay healer in the church were the subject of much favorable comment. Hickson is rather well known in this state, having conducted series of meetings in a number of Ohio cities in recent years.

In this connection *The Boston Medical and Surgical Journal* says:

". . . Physicians have been reluctant to enter upon any controversy involving the application of religious faith in the cure of disease through mysticism, for physicians as a class

share with the great majority of mankind a profound respect for true religion and so far as religious teaching and practice are applied to the spiritual and moral nature, extend encouragement and support. But the profession as a body understanding the behavior of those diseases which have a recognized pathology, would resent the impious assumption that the operation of natural laws can be suspended by methods which appeal to the emotions rather than to reason. If it could be shown that the Deity is disposed to suspend the known laws of disease, physicians would forsake their arduous tasks and enter the orders of the Church, but experience has demonstrated that certain diseases are inexorable and do not respond in any great degree to the mental or moral attitude of the sufferer. It is, of course, generally conceded that functional conditions can be modified or effected through changing the mental attitude. If this phase of treatment is recognized and given its proper application, the psychic effects of good counsel and the encouragement extended by a dominating personality have their proper places."

In considering the matter from various angles it seems reasonable to assume that the craving for spiritual satisfaction on the part of ailing, emotional individuals is accountable for the growth of semi-religious quack cults.

A consideration of the psycho-neurotics may account for the vogue of M. Coué and his "cure", the formula for which is the repetition by the patient of the magic words: "Every day in every way I grow better and better." Simple, just like that.

These are M. Coué's laws: "When the will and the imagination are antagonistic, the imagination always wins. In the conflict between the will and the imagination, the force of the imagination is in direct ratio to the square of the will. When the will and the imagination are in agreement, one is multiplied by the other. The imagination can be directed," according to an analysis by the *Journal* of the A. M. A.

M. Coué says that, such being facts, it would seem that nobody should be ill. One doesn't see why he should not be ill if he encounters pathogenic organisms under conditions favorable to their propagation, or if he habitually breaks the rules of hygiene, or if his ancestors have been niggardly or sinister in giving him a good and resistant constitution. "Every illness, whatever it may be, can yield to autosuggestion." Despite such assurance the prudent physician will go on feeding arsenic and mercury to the pale spirchete and its depredations, quinin to the ubiquitous plasmodium, and antitoxin to the terrifying bacillus of Loeffler.

Meanwhile, purveyors of cloudy stuff, like M. Coué, cure persons who comport themselves as if they were ill, and for this we are, and shall continue to be, grateful. But to accept any of his "laws" as established, or as consistent with the established principles of psychology, is quite impossible; such acceptance would conflict with common sense and with the facts of pathology, which are as firmly established as facts can be.

Tragic indeed are some of the results of ad-

herence to "faith" and ignoring of scientific facts. In an Ohio city recently two charming, helpless children may be said to have been the victims of their parents' neglect. Through refusal to permit the administration of diphtheria anti-toxin and reliance upon "Christian Science" these children are believed to have been sacrificed to the "mental error" of their parents. Such sad illustrations are all too frequent.

In the words of one writer:

"The clergy will hold their position of influence so long as they deal with the problems of ethics and religion, but diseased minds, as well as bodies, must in the end be presided over by painstaking and competent physicians. The people must beware of false teachers, even though they are in high places."

#### Another Honor

By example in policy, procedure and program of activities the Ohio State Medical Association many times in the past has set the pace for affiliated associations in other states and for the American Medical Association as well.

The same, farsighted influence exemplified in the State Association's relationship to the public at large and to other professional groups concerned with similar problems, has been made possible to a large degree through the guidance of Dr. J. H. J. Upham, Columbus, chairman of the State Association's standing Committee on Public Policy and Legislation. It will be remembered that his committee has definitely defined the proper function of the state as exemplified through public health administration in its relationship to private medical practice, to the end that the state of Ohio, at least insofar as its official bureaus and departments are concerned, clearly realizes that the treatment of disease is a private rather than a public function.

In recent months there has been considerable discussion over the proper field to be occupied by the American Red Cross in the field of health. The House of Delegates of the American Medical Association at the St. Louis meeting took cognizance of this problem, pursuant to which an advisory committee on health is being organized by the chairman of the American Red Cross of which Dr. Upham has been invited to become a member. The other well known physicians who have been invited to membership on this committee are: Surgeon General Hugh S. Cumming, Dr. Herman M. Biggs, Dr. William H. Welch, Dr. Livingston Farrand, Dr. C. E. A. Winslow, Dr. Franklin H. Martin, Dr. George M. Piersol, Dr. Allen A. Jones, Dr. Frederic B. Lund and Dr. Thomas S. Cullen.

#### Medical Chemicals and the New Federal Tariff

While the continuation of the Selective Embargo upon certain medicinal chemicals and surgical instruments was terminated when the present Congress rejected a proposal to extend the time twelve months or more, provisions were



made, however, to secure a somewhat similar protection through higher tariff rates.

The main objection to the Embargo, which was designed primarily to protect the war-born American chemical industry and to avoid a recurrence of a German monopoly and its attending exorbitant prices, seemed to be based upon the assumption that an embargo was wrong in principle and offered possibilities for the American industry to raise the prices.

After the Embargo met with defeat, the Bursum Amendment to the Fordney Tariff Act was submitted, providing for a ninety per cent. duty based upon American valuation. Twice passed by the Senate, this amendment was finally rejected by the Conference Committee.

When the bill was reported out of the Conference Committee, the Embargo was attached. The House quickly rejected it and substituted a provision for duties of approximately 60 per cent., based upon American valuation, on certain medicinal chemicals and dyes made in this country. This provision was enacted.

With this protection, it was contended that the American chemical industry would secure adequate protection against foreign encroachments and at the same time would be compelled to meet competition from Germany should an attempt be made to charge exorbitant prices.

Before adjournment of the second session of Congress on September 22nd a last-minute effort was made to secure a temporary embargo. The Wadsworth-Tilson resolution was introduced, offering temporary relief to the chemical industry in the form of a 90 day embargo. No action was taken upon this measure.

As finally enacted and signed by the President the tariff bill represents a compromise on the dye and synthetic medicine schedules by establishing a rate of 55 per cent. on intermediates and 60 per cent. on finished products. These rates, however, are to be automatically reduced to 40 and 45 per cent. respectively, after two years. The rates are based upon American valuation and are in addition to a duty of seven cents a pound in each instance.

Rates on chemicals, drugs, medicinal and similar substances, when imported in capsules, pills or similar forms, bear a duty of 25 per cent., which is the same rate established by the two preceding tariff laws.

Biological, chemical and pharmaceutical and surgical instruments are assessed 65 per cent. ad valorem; microscopes, 45 per cent.; and philosophical and scientific instruments made of metal, 40 per cent.

Among the articles on the free list are: anti-toxins, vaccines, viruses, serums, bacterins, barks, cinchona and others from which quinine may be extracted; borax, copper sulphate, cyanide, potassium cyanide, sodium cyanide and cyanide salts, drugs natural and compounded, leeches, nux vomica, phosphates crude and

### Going to Frisco?

For the convenience of Ohio members who will attend the 1923 A. M. A. meeting in San Francisco next June, a special train to be known as "The Ohio State Medical Association Special" is being planned. A committee is now hard at work on this feature and plans will be announced in an early issue of *The Journal*.

apatite, potassium chloride and nitrate, quinine sulphate and all alkaloids and salts of alkaloids of cinchona, radium and salts of and radioactive substitutes, skeletons and other preparations of anatomy, teeth natural.

Drugs, medicines and articles to prevent conception are prohibited.

The action taken by Congress is characterized by the *Journal* of the American Medical Association as "A Victory for Foreign Drugs." "The earnest work of the last six years to make the United States self-sufficient in the matter of synthetic drugs and necessarily the interdependent dyes, the concomitant enthusiasm for the chemical profession stimulated in our universities, and a large amount of capital invested in plants, are about to be sacrificed", the *Journal* declares. "A renewed effort should be made at the December session of Congress to protect the basic key industry so necessary for the conservation of health as well as national security."

### Anti-Vivisection Revival

The Anti-Vivisection forces of America have again marshalled their "depleted ranks" and entered the lists; this time with the announced aim of securing the adoption of laws abolishing the practice of vivisection in the various states of the union.

As a means of furthering this aim, these forces sent all the way to England to secure Dr. Walter R. Hawden, head of the British Union for the Abolition of Vivisection. Since he has arrived, an extensive speaking tour has been arranged.

After a series of addresses in Chicago, Minneapolis, and St. Paul, this one-time sponsor of vivisection and avowed enemy of the Anti-Vivisectionist, left for California, where he "hopes to enlighten," direct and fairly force upon the people of that commonwealth a law that will abolish vivisection.

Two years ago, Californians spoke in no uncertain terms when they defeated a similar measure. Colorado is also facing the same condition, where an anti-vivisection bill is pending. Ohio must be prepared to meet such backward looking legislation.

Several years ago, Dr. Hawden visited Amer-

ica. At that time, those who recognize the value of vivisection to the human race and medical science did not challenge his statements, it is said. Now the doctor announces that he has returned to "answer those proponents who challenged his right to speak for opponents", according to a recent news dispatch.

### What Is Chiropractic?

What is Chiropractic?

The Grand Gazaboo of the Fountain Head News, the official publication of the Palmer aggregation at Davenport, Iowa, knows. He says so in a recent issue of his organ.

After frantically flagging the reader's attention under the caption of "Chiropractic Will Some Day Come into Its Own", he boldly and fearlessly interrogates himself: "What is Chiropractic?" Just like that.

"That is a question of vision", he asserts with utmost haste.

"Here are some of the possible answers:

1. It's a good graft.
2. It's an easy way of making a soft living.
3. It's a method of adjusting backbones to extract money from the sick.
4. It's a method of adjusting the sublaxations of the backbone.
5. It's a method of adjusting the sublaxations of the backbone as the cause of diseases.
6. It's a philosophy, science and art of things natural and the restoration of the same when absent.
7. It's a philosophy, science and art of things natural the adjustment of the vertebral sublaxation of the vertebrae, by hand, for the purpose of releasing the imprisoned mental impulse, that health may be restored to the diseased part."

"And so", he decides after the illuminating definition, "its usefulness would be but a question of interpretation of your vision to service to those needing it."

Ho! Yum-m-m. What's the football score?

### "Free Health" Buncombe

The maelstrom of emotional appeals of the cultists, agitators and propagandists, is gradually encompassing the welfare and well-being of the American people. Toward this whirling vortex with its dank, ugly currents of paternalism and cross-currents of pauperization, the Unheeding and Unconcerned are being irresistibly drawn by the alluring terms of "free health"; bright promises of an El Dorado and the ambrosial feasts that are to be prepared.

A striking word portrait of this trend was tersely and aptly presented by Dr. James A. Gardner, of Buffalo, N. Y., in an address on "Socialistic Tendencies in Medicine", recently given before the General Practitioners' Medical Society, Columbus, the high points of which deserve emphasis and reiteration.

The drift toward paternalism and pauperiza-

tion is strong, he asserts. "Beneficent social workers have been working overtime to give us our Sheppard-Towner maternity bill, which will cost the taxpayers about \$6,000,000 for five years. Also, a bill was introduced for the formation of a national board of health, with a seat in the cabinet providing for federation of all state, municipal, and county health officers, and placing them under the secretary of health at Washington." It provides for a suitable central office for each health division and for regional hospitals and sanatoriums to be supported jointly by the state and federal government, so that adequate free facilities may be provided for all those suffering with infectious diseases, particularly tuberculosis, as well as surgical diseases, in order that these diseases may be cured and eradicated. Only \$63,000,000 is needed to develop this pauperizing idea, according to his analysis.

In the field of medicine an increased number of public hospitals and charitable institutions are found, and there is an ever increasing attempt to build up, under governmental control and support, medical charities in the nature of health centers, diagnostic clinics, bureaus of health insurance, and other like public activities for the purpose of caring for those who supposedly are unable to pay. These medical charitable institutions, however, are not confining their care to needy charitable cases, but increasingly by skillful advertising and other effective means, are bringing under their care those who are able to pay for medical treatment.

"The slogan 'free health', has an alluring sound; but it is false in its concept. The public needs protection; but primarily it needs *education*. If the public were educated and knew what it were receiving there would be no lodge practice or splitting of fees, and chiropractors and other medical isms would disappear. Faith in human nature leads many people to accept ideas from friends or take too seriously what they read. It has always been an amazing anomaly that a man seeks and willingly pays for the highest degree of legal skill to protect his property, while he is willing to barter his life away to mediocrity," Dr. Gardner points out.

Vivid illustrations of the aftermath of the drift toward state medicine were pointed out by the speaker who said that the private physician must compete with the government employe, the latter having offices, equipment and free drugs to aid him in procuring patients. As an illustration he declared that the private physician who cares for venereal diseases is supposed to furnish his competitor, the government, the name and address of his patient."

"Throwing aside all considerations for the medical profession," he concluded, "a very serious outlook confronts us. Without realization of the outcome, a dependent class is being form-

(Continued on page 777)

# Historical Review of Ano-Rectal Diseases: Limitations and Technique of Local Anesthesia in Recto-Colonic Operations\*

By SAMUEL G. GANT, M.D., LL.D., New York City

*Editor's Note.*—Since 1900, about 80 per cent. of Dr. Gant's private and clinic ano-rectal, and a considerable number of abdominal operations have been performed under infiltration anesthesia induced by sterile water, normal salt solution, eucaine, novocaine and other anesthetic agents with satisfactory results. He reports 5,000 operations under local anesthesia without a death, dangerous toxic manifestation or other serious complications. He holds that the scope of infiltration anesthesia has been so greatly extended that physicians, surgeons and proctologists, who do not perfect their technique and employ it largely to the exclusion of general narcosis, do not deserve the patronage of patients afflicted with minor ano-rectal affections.

**B**EFORE PROCEEDING with his oration the writer desires to express his high appreciation to the officers of the Association for the compliment bestowed on him by their invitation to address the members of the Ohio State Medical Association on this occasion.

Certain phases of colo-proctology were chosen for presentation because the indications for and surgical treatment of chronic diarrhea (colitis) are not sufficiently appreciated, and the limitations and technique of performing various anal, rectal and colonic operations under local anesthesia are not fully understood, nor is infiltration anesthesia employed to the extent its merit warrants.

Hoping to arouse renewed interest in these subjects the writer will proceed with their discussion following a brief historical review of ano-rectal diseases.

## PART I.

### HISTORICAL REVIEW OF ANO-RECTAL DISEASES

I doubt if there is any class of diseases that has a more interesting history than recto-colonic affections embracing Hebraic, ancient and modern literature.

One of the first records of rectal disease was made by Moses, the law-giver, (Deuteronomy XXXIII, 27), who, after mentioning the blessings that would accrue to the faithful said: "The Lord will smite thee with the botch of Egypt-*emerods* wherof thou canst not be healed", a disease biblical commentators concede to be hemorrhoids or rectal proidentia. This so frightened the Jews that they were good ever after and escaped the affliction.

In Samuel I, 6, it is related that the Philistines took the Ark from Ebenezer and brought it unto Ashdod; forthwith the Lord smote the men of the cities large and small and they had "*emerods*" (hemorrhoids) in their secret parts. The Ark was removed to Gath and then Ekron and the plague likewise attacked these cities. Forthwith the people sought their high priests and asked what they must do to be relieved of their afflictions, and were instructed to return the

Ark of the Lord to the Israelites, together with trespass offerings consisting of five golden images of the "*emerods*" according to the number of Lords of the Phillistines; commands with which they complied and were immediately healed.

Again in Psalm LXXVIII, 66 it says: "He smote his enemies in their hinder parts; He put them to perpetual reproach" and it is probable that from this source arose the present method used by parents in chastening children. From the time of Samuel, three centuries after Moses, to that of the Grecian era of Hippocrates, more than a thousand years, no further reference is made in literature to "*emerods*" or hemorrhoids.

Hippocrates held that hemorrhage characterized the disease called hemorrhoids and attributed the trouble to varices of the rectal veins, a view in which Galen and Celsus concurred.

The great historian Hume, in writing about King Henry V, who died in 1422, says he was seized with a fistula which surgeons of the time had not the skill to cure.

Shakespeare (1606) made fistula famous in his play "*All's Well That Ends Well*" which was based upon the King having a fistula that the daughter of a physician, for a consideration, wished to cure by a secret remedy inherited from her father. Pliny while discussing fistula says the disease first showed itself during the reign of Tiberius Cesaer, nor did one man in Rome ever complain of this disorder until the Emperor had been attacked by it.

Louis XIV, King of France, suffered from fistula, and after having the court physician experiment with itinerant methods upon a number of his subjects thus afflicted without success, was operated upon and cured by the division method which obtains today. He paid the Royal surgeon, Monsieur Felix and his assistants \$73,500, which, even in these times, would be considered a fairly good fee.

It is said that immediately thereafter many persons, who had fistula and some who did not, flocked to Versailles to be operated on, hoping thereby to attract the attention and sympathy of the King, and during this time fistula became the reigning court disease.

\*Oration in Surgery presented before the General Session of the Ohio State Medical Association, during its Seventy-sixth Annual Meeting, at Cincinnati, May 2-4, 1922.

In olden times many deemed rectal diseases incurable and incurable affections were considered disgraceful, hence patients would not disclose them and this in part accounts for the paucity in the literature of rectal ailments over long periods of time. During the present century, especially the last three decades, proctology began to attract the attention it deserves and rapid progress has been made in the pathology, diagnosis and treatment of ano-rectal affections.

It is a lamentable fact, however, that many surgeons and physicians have not kept pace with time and continue to follow methods of diagnosis and treatment practised in bygone days. Undoubtedly the marked advance made in proctology has been due mainly to Americans specializing in this field of surgery.

Most ancient authorities believed divine power was a necessary adjunct in the treatment of rectal diseases but up-to-date physicians do not. Since the Philistines were cured of hemorrhoids by presenting golden image trespass offerings, the people of some far Eastern countries have continued to make copper, silver or golden images of afflicted parts and leave them at shrines, hoping through their agency to be healed. Many of the laity in this and other countries still think by carrying an *amulet* that they can prevent or ward off rectal and other diseases, and we will find Ohioans carrying buckeyes or horse-chestnuts, and Missourians shriveled-up potatoes, which they consider a sure cure for piles. To be effective however the potato must be dug *when the moon is right* and carried in the left trouser pocket until it becomes hard as stone.

## PART II.

### LIMITATIONS AND TECHNIQUE OF LOCAL ANESTHESIA IN RECTO-COLONIC OPERATIONS

In a series of cases, including anal, rectal, colonic and abdominal operations, different forms of anesthesia are necessary and the operator must choose between *general*, *spinal*, *sacral*, *regional* or *infiltration* anesthesia according to his preference and the requirements of the case.

*General narcosis* induced by nitrous-oxide, gas-oxygen, ethyl-chloride, ether, chloroform or gas-ether has been successfully employed by the writer in cases in which local anesthesia was impractical, but he prefers gas-ether in the majority of lengthy ano-rectal and abdominal operations, because when properly administered it invariably induces complete anesthesia.

General narcosis is *contra-indicated* in approximately 80 per cent. of ano-rectal and many abdominal operations because, (a) it is dangerous unless the anesthetic is administered by an expert; (b) it alarms the patient by rendering him unconscious; (c) it causes post-operative nausea, vomiting and straining; (d) it may aggravate heart, kidney and pulmonary lesions; (e) and necessitates the patient remaining in the hospital or at home, and is a frequent cause

of post-operative ano-rectal hemorrhage owing to the patient throwing himself about, increasing intra-abdominal pressure by vomiting, straining or withdrawing dressings while unconscious.

In the writer's practice alarming bleeding has occurred ten times more frequently following operations performed under *general* than *infiltration* anesthesia and post-operative pain has been encountered more frequently and severely after the former than the latter.

*Spinal Anesthesia*.—Analgesia induced in this way has been effective in many upper and lower abdominal, pelvic, urinary and ano-rectal operations performed by different operators, but the procedure has not attained popularity since (1) anesthesia is incomplete when the needle fails to enter the cord; (2) dosage is insufficient; (3) the solution is improperly prepared, and (4) when the patient has an idiosyncrasy to this form of anesthesia.

With few exceptions surgeons hesitate to employ spinal anesthesia because it has induced sudden death, paralysis, occipital headache, vertigo, backache, respiratory disturbances, neuritis, vesical and rectal incontinence and acetoneuria with discomforting frequency.

The following are the advantages of spinal anesthesia—the patient remains conscious and nausea, vomiting, shock, bronchial irritation, nephritis and gastro-intestinal irritation rarely if ever occur and operations are facilitated through accompanying relaxation of tissues and muscles in the operative field. *Tropacocaine*, *novocaine* or *stovaine*, preferably employed dissolved in the spinal fluid, are the anesthetics of choice.

*Sacral Anesthesia*.—Caudal is not as dangerous nor so frequently followed by distressing complications as spinal anesthesia. Entrance to the sacral canal is easy in some and difficult in other instances. Following anesthetization of outer structures and placing of the patient in the left Sim's or exaggerated knee-chest posture, the needle is forced through the *hiatus-canal* or triangular space at the fork of the spinous processes above the anal sulcus, which gives an elastic touch when pressed upon with the finger. As soon as the canal is entered the needle is carried upward the desired distance and the solution discharged, the dosage being varied according to weight and age of the patient. Sacral anesthesia is not as effective as spinal and requires several minutes longer to obtrude than infiltration analgesia.

*Regional Anesthesia*.—Nerve blocking anesthesia, unless induced by spinal or sacral injections is not suitable for ano-rectal surgery, since controlling nerves are numerous, small and difficult or impossible to locate, and further because infiltration analgesia, universally satisfactory, is more easily and quickly induced.

*Local (Infiltration) Anesthesia*.—Since 1900,

about 80 per cent. of the writer's private and clinic ano-rectal, and a considerable number of abdominal operations have been performed under infiltration anesthesia induced by sterile water, normal salt solution, eucaine, novocaine and other anesthetic agents with satisfactory results. He has operated five thousand times under local anesthesia without a death, dangerous toxic manifestation or other serious complication.

In the beginning, owing to imperfect technique and employment of solutions of different strengths, patients occasionally squirmed or complained of pain and in a few instances general anesthesia was substituted for local analgesia, complications rarely encountered in the last fifteen years, since the present technique has been perfected.

The scope of infiltration anesthesia has been greatly extended and physicians, surgeons and proctologists, who do not perfect their technique and employ it largely to the exclusion of general narcosis, do not deserve the patronage of patients afflicted with minor ano-rectal affections.

Infiltration anesthesia possesses many desirable features but has its limitations. The writer never employs it except when he has ascertained before hand *what is to be done* and discards the method for spinal or gas-ether anesthesia for extensive deep operations, in which an *unknown* amount of cutting may be required.

General anesthesia is also preferred in minor affections complicated by a high or more serious rectal disease, and when tissues are necrotic or there is an ulcer or fistulous opening that prevents retention in and desensitization of the tissues by the anesthetizing solution.

To aid the reader in forming an opinion concerning indications for general and local anesthesia in this class of work the writer has grouped affections most frequently encountered about the terminal bowel as follows:

(a) Ano-rectal diseases *operable* under local anesthesia.

(b) Ano-rectal diseases *inoperable* under local anesthesia.

#### ANO-RECTAL DISEASES OPERABLE UNDER LOCAL ANESTHESIA

Internal protruding, bleeding, capillary, combination; external, cutaneous and thrombotic hemorrhoids; fissure-in-ano, ulcers of the anal canal, single and multiple, superficial, long and short fistulae; procidentia recti (first and second degree), cryptitis, inflamed and hypertrophied papillae, hypertrophied rectal valves, marginal, submucous and ischio-rectal abscesses; polyps, strictures (below the peritoneal attachments), foreign bodies (imbedded beneath the mucosa or skin), constipation incident to sphincter algia, hypertrophy of the levator ani muscle or narrow anal canal, intra-rectal diverticula and cysts, incipient anal epithelioma, peri-anal cysts, tum-

ors and condylomata; fecal impaction, pruritus-ani, sacral dimples, dermoids and fistulae, fecal incontinence, repair of ano-rectal injuries and sequelae to operations for congenital malformations.

The writer has several times performed *exploratory celiotomy, colostomy, appendicostomy, cecostomy, ileostomy, sigmoidopexy, colopexy, uterine suspension* and other abdominal operations including *breaking up of adhesions, straightening Lanes kinks, division of Jackson's membranes and colo-plication* under infiltration anesthesia.

He has also relieved *acute intestinal obstruction* by opening the abdomen and draining the bowel under local anesthesia and has several times performed the *secondary* operations of excising the gut opening the cecum or small intestine or amputating the appendix in connection with *colostomy, cecostomy, ileostomy* or *appendicostomy*.

In some the operation was entirely painless, while in other instances the patient suffered slightly on incision of the fascia, peritoneum or pulling upon the mesentery.

Experiments with infiltration anesthesia has convinced the writer that *general* (gas-ether or gas-oxygen) is preferable to *local* anesthesia for deep and abdominal operations, in which considerable handling of the intestines or viscera is required.

#### ANO-RECTAL DISEASES INOPERABLE UNDER LOCAL ANESTHESIA

*Cancer* (barring beginning anal epithelioma), *extensive peri-rectal and ischio-rectal abscesses, deep burrowing complicated horseshoe, peri-rectal, recto-urethral, recto-vaginal and vesico-rectal fistulae, high polyps, strictures, ulcers, cysts, non-malignant tumors and imbedded foreign bodies; submucous abscesses and fistulae in the upper rectum and any disease or injury requiring amputation or resection of the lower bowel.*

*General* is also preferable to local anesthesia for procedures and plastic operations that require extensive stitching in and about the rectum, except those employed in the radical treatment of fistulae and hemorrhoids; and is desirable when a minor is complicated by more serious rectal affection, lesions that cannot be brought into view for operation, and deep abdominal or operations requiring traction upon the mesentery.

A study of the diseases included in the above lists shows that approximately 80 per cent. of ano-rectal affections are located within easy reach and are capable of being operated upon under local anesthesia.

#### EQUIPMENT, AGENTS AND METHODS

*Posture*.—The exaggerated *knee-chest, lithotomy* or *left Sim's* posture may be employed, but the writer prefers the latter because it is con-

venient for him and comfortable for the patient during short or long operations upon the buttocks, anus or lower rectum.

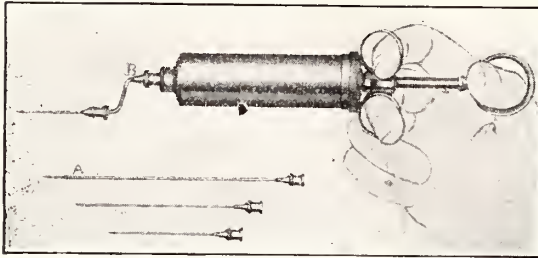


Fig. 1. Large metal syringe, with author's goose-neck attachment, employed in abdominal and ano-rectal local anesthesia operations. A, needle having a shoulder used for injecting hemorrhoids with quinine and urea and for infiltration anesthesia when it is not desirable for the needle point to penetrate the rectal wall; B, goose-neck attachment which enables the operator to keep the needle point in view at all times.

**Syringe.**—A metal syringe, having a Gant goose-neck (Fig. 1), is preferable to a glass syringe which breaks easily or leaks under pressure during skin, fistula and stricture operations, in which tissues are dense. Small needles are objectionable because they readily break or become blocked by corrosion or ingredients in the solution.

**Local Anesthetics.**—Anesthetizing agents save the patient considerable suffering in both the palliative and operative treatment of ano-rectal diseases.

**Palliative Treatment.**—Suffering incident to examination, instrumentation, cauterization and treatment of sensitive individuals may be prevented or minimized by placing a pledget of cotton soaked in a 10 per cent. solution of eucaine, cocaine or novocaine upon lesions in the mucosa or peri-anal skin and letting it rest there for a few moments. These agents do not induce complete anesthesia here as in the throat, but effectively desensitize the part when injected into or beneath the sensitive area in a  $\frac{1}{8}$  of 1 per cent. solution.

Orthoform, alypin, anesthesin and analgin, possessing analgesic and healing properties, markedly diminish pain and muscular irritability incident to walking, sitting, defecation and treatment of local lesions, when employed in a powder, suppository, solution or ointment and deserve a place in the armamentarium of the proctologist.

Eucaine and cocaine solutions are also useful for mitigating and arresting unbearable itching—*pruritus-ani*—when skin is raw.

**Operative Treatment.**—Numerous agents have been employed for ano-rectal operations *viz*: ether-spray, liquid air, ethyl-chloride, eucaine, cocaine, stovaine, novocaine, tropacocaine, sterile water, normal saline solution, quinine and urea, hemesia and apothesine.

**Ether Spray, Ethyl chloride and Liquid Air.**—These agents deaden or prevent cutting pain by freezing and numbing tissues, but are un-

satisfactory because they induce acute initial and post-operative suffering, are often followed by sloughing, and when effective induce only *superficial anesthesia* which limits their employment to light incisions in the mucosa and skin.

**Eucaine, Cocaine, Stovaine, Novocaine and Tropacocaine.**—These agents have their respective adherents and have been successfully employed in varying strengths to produce spinal, para-veterebral, regional and local anesthesia for ano-rectal, pelvic and abdominal operations.

These drugs, particularly cocaine, often produce annoying or alarming toxic manifestations when used in a strong (3 to 10 per cent.) solution; but in a weak solution they are effective and seldom disturb the patient when injected in small amounts. The majority of operators employ from a  $\frac{1}{2}$  of 1 to a 2 per cent. solution, which is stronger than required to produce complete desensitization of tissues.

Extensive experiments made in 1900 convinced me that the anesthetizing action of the solution is due both to the contained chemical and distension of tissues with compression of the nerves; for I observed that infiltration anesthesia failed or was incomplete when part or all the fluid escaped through a needle puncture, necrotic tissue, ulcer or fistulous opening and demonstrated by hundreds of ano-rectal operations, performed under sterile water and normal saline infiltration, that analgesia immediately follows when tissues were distended with the fluid until glassy-white which indicates complete anesthesia.

Repeated experiments with eucaine, cocaine, novocaine, stovaine, tropacocaine and like agents satisfied the writer that eucaine and novocaine are the anesthetics of choice. During the last fifteen years he has operated five thousand times without an accident or failing to obtain complete anesthesia with eucaine  $\frac{1}{2}$  of 1 per cent. solution, and these patients were able to walk from the operating room to their beds and rarely exhibited toxic manifestations irrespective of the amount of anesthetic employed.

The addition of adrenalin (1 to 1000) extends duration of analgesia and lessens hemorrhage during operation, but the writer seldom employs it because blood vessels, temporarily constricted, later relax and bleed freely and he prefers that hemorrhage should take place during operation so that it may be immediately controlled.

**Sterile Water and Normal Salt Solution.**—During the period 1900-1905 I published a series of papers giving the technique of distension anesthesia induced by the injection of sterile water and normal saline solution, and reported several hundred ano-rectal operations successfully performed under these agents. Subsequently sterile water was abandoned for eucaine anesthesia because the initial injection induced slight pain.

**Quinine and Urea Hydrochloride.**—This anesthetic is effective, non-toxic, suitable for long and

short operations and minimizes post-operative pain. The solution when injected causes greater pain than eucaïne or novocaine and takes minutes longer to produce complete analgesia. Quinine and urea is not desirable for skin operations since it causes induration or sloughing of the integument and delays healing. It induces anesthesia when employed in a ¼ to 1 per cent. solution. The writer sometimes employs this agent in the clinic or office when operating on patients desiring to return home.

*Apothesine*, which is practically non-toxic, has been successfully employed in a ½ to 1 per cent. solution, but requires a longer time to induce analgesia than eucaïne or novocaine.

Varying sensibilities of different patients have nothing to do with results obtained, nor does success of the anesthetization depend entirely upon the anesthesia employed, for good or bad results depend on whether or not the anesthetizing agent is retained in the tissues, and a sufficient quantity of the solution is injected to cause a round or linear whitish swelling over the part to be incised.

The amount of sterile water or anesthetic employed varies from a few drops to one or more ounces, depending on resistance of tissues and extent of the operation. For example, four to six drops suffice for the removal of hypertrophied anal papillae, inflamed crypts and small polyps; a half for external cutaneous thrombotic piles and one drachm or more for fissure, medium sized or large internal hemorrhoids (Fig. 2); from half to an ounce or more for fistulectomy, low

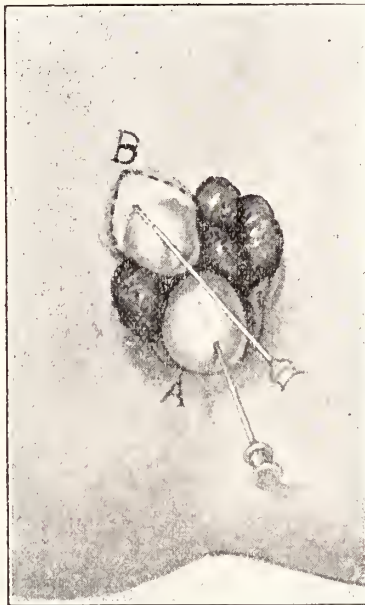


Fig. 2. Writer's technique of anesthetizing hemorrhoids. A, needle is introduced directly into the tumor when entirely covered by mucosa and B, first into the mucous side and then beneath the integument in combination piles; a maneuver that entirely reverts sharp pain caused by the needle when introduced into the skin.  
B. Dotted line indicates V shaped incision employed by the writer when excising integument with the hemorrhoid.

strictures, Gant's pruritus, proidentia-recti operations and divulsion of the sphincter. (Fig. 3).

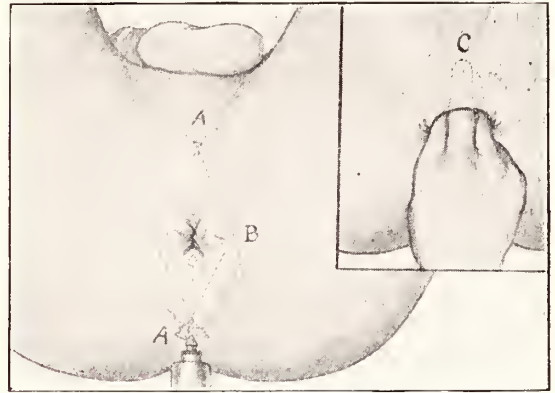


Fig. 3. Technique of anesthetizing superficial and deep structures when the sphincter is divulsed or incised or the anal canal is operated upon, or the skin incised. Position of needles. A, for superficial; B, deep infiltration anesthesia; C, divulsion of sphincter and anal canal with fingers.

Before proceeding the writer tells all patients that the preliminary injection will cause discomfort but that the operation will not, otherwise they squirm at the needle puncture.

In skin operations, after the initial injection consisting of one or two drops is made *intercutaneously forming a bleb*, the solution is slowly deposited sub-cutaneously into the operative field until tissues are distended glassy-white, an invariable indication of analgesia.

To obtain effective anesthesia it is essential that the operator avoid multiple unnecessary needle puncture, fissures, ulcers and fistulous tracts (Fig. 4), otherwise pressure action of the solution upon nerves is lost, owing to escape of the fluid through the openings.

The operator must also work quickly since the solution, when properly prepared and injected, in-

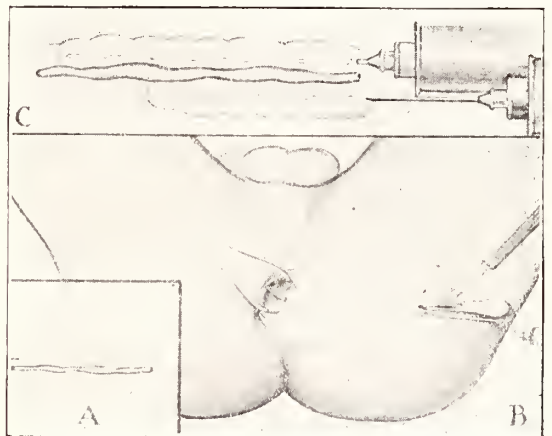


Fig. 4. Technique employed by the writer in local anesthesia for fistula operations. A, infiltrating the tissues; B, dividing structures overlying the sinus; C, method of anesthetizing structures on either side when a fistula is to be excised or split in both directions.

duces anesthesia within a few seconds and analgesia lasts only a few moments.

I have heard surgeons say they objected to infiltration anesthesia in ano-rectal operations because patients squirmed, complained of severe pain or fainting, annoyances rarely encountered by the writer, whose results have been universally satisfactory to the patient and himself. I am certain that unsatisfactory results reported by some operators would not have occurred had they understood the technique of infiltration anesthesia, employed *weak* in preference to *strong* solutions of eucaine or novocaine, and used tact with their patients.

I regret to state that it appears from conversations with some surgeons that they do not employ local anesthesia in this class of work, because they fear their fee would be less than if they employed general narcosis, put the patient in a private room, required him to engage night and day nurses and remain in the hospital for one or more weeks.

To such physicians I would say that both the number of patients and size of fees received from them have materially increased since I began employing *local* in preference to *general* anesthesia.

The writer is fully convinced that should proctologists and surgeons become proficient in the technique and employ local anesthesia to the extent deserved they would be able to perform many ano-rectal operations, now considered impossible except under general narcosis and because of this would quickly eliminate advertising quacks from this field of surgery.

Hemorrhoids are exposed or extruded for infiltration with the aid of a slide speculum or tipping them out with the end of a Gant speculum as the instrument is withdrawn, everting anal margins with fingers, withdrawing them by cupping, administering a small enema and extruding them by pulling on tampons introduced into the rectum through a proctoscope.

In completing the operation if there is copious oozing or spurting vessels, hemorrhage is controlled by a twisted gauze plug inserted through a proctoscope which, when withdrawn, leaves it projecting through the anus.

*Post Operative Treatment.*—Following an average hemorrhoidal or fissure operation and excision of papillae, crypts and polyps, the patient is permitted to leave the hospital in two or three days or when he can comfortably come to the office in a taxi for dressings. These patients are allowed a regular diet and normal stools are sought with fruit or a mild laxative.

Post-operative pain is practically *nil* in *intra-rectal* but is severe in extensive *skin* operations and lasts from half to two hours, unless controlled by morphine administered hypodermically in quarter grain doses as often as required.

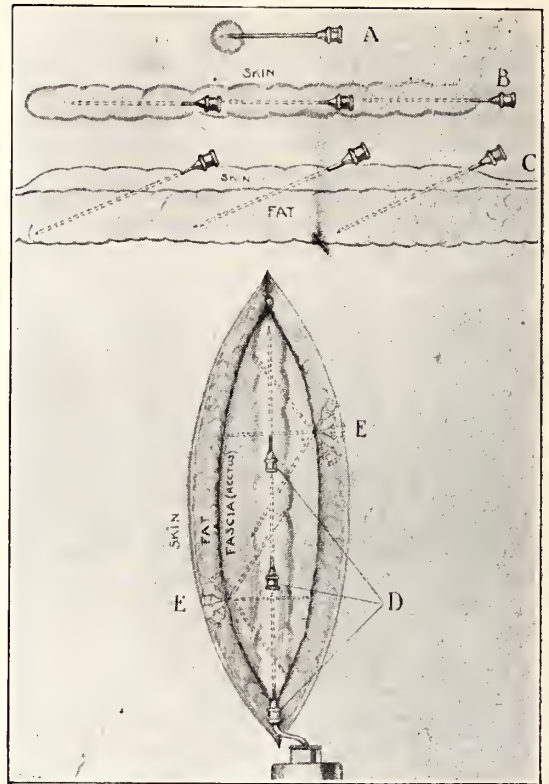


Fig. 5. Abdominal Local Anesthesia. Writer's technique anesthetizing structures layer by layer in abdominal operations, using a syringe fitted with his goose-neck attachment. A, bleb formed by initial injection of anesthetic between tegumentary layers; B, injection of skin along line of incision; C, anesthetization of subcutaneous fat; D, injection of rectus fascia; E, direction taken by needles when the rectus muscle is anesthetized.

#### LOCAL ANESTHESIA IN ABDOMINAL OPERATIONS

Infiltration anesthesia is not so universally satisfactory for abdominal as ano-rectal and surface operations where it is effective. The procedure is contra-indicated in this class of operations unless the operator knows beforehand just what is to be done, and local anesthesia is not suitable for many deep abdominal and pelvic lesions, extraction of tumors when viscera are matted together by adhesions and where there are complicating diseases within the abdomen.

The writer has performed 55 abdominal operations including *appendicostomies*, *cecostomies*, *enterostomies*, *colostomies*, *cecopexies*, *cecoplications*, *colotomy*, *sigmoidopexies* and operations for *Jackson's membranes*, *Lane's kink*, *adhesions* and *angulations*, some of which were performed under sterile water anesthesia and reported in a series of papers published between 1902 and 1905.

The majority of the above named procedures are adaptable to local anesthesia because deep exploration is often unnecessary, pulling upon sensitive mesentery is seldom required and pinching, cutting and suturing of the unanesthetized gut causes little or no pain. Discomfort from the majority of these operations is avoided



by the expert in local anesthesia, who carefully prepares and injects his solution slowly and cautiously, infiltrates each abdominal layer (from skin to peritoneum) *separately*, which usually requires about three minutes each for the skin, subcutaneous structures, muscles, fascia and peritoneum.

The principles in abdominal infiltration are, in the main, the same as those employed in local anesthesia for ano-rectal operations already described and the analgesic action of the anesthetic is due both to distension pressure on nerves and the chemical contained in the solution.

The writer prescribes morphine gr.  $\frac{1}{4}$  and scopolamine gr.  $\frac{1}{200}$  one hour preceding, and repeats the dose 15 minutes before abdominal local anesthesia operations in robust individuals to blunt consciousness and quiet apprehension in nervous patients.

*Technique.*—Careful study of the accompanying illustration (Fig. 5), with its descriptive legend explains the manner in which abdominal local anesthesia is accomplished by the writer and renders further description of the *technique* unnecessary.

Analgesia is more effective when the anesthetic is used liberally and the solution is slowly diffused into the operative field. Satisfactory surgical analgesia is produced with eucaïne 1/8, novocaine  $\frac{1}{2}$  of 1, or apothesine 1 per cent. solution in combination with adrenalin (1-1000), which quickens and lengthens action of the anesthetic, with but little danger of causing toxic manifestations even when the solution is used freely.

Wiener, (*Medical Record*, January 25, 1919), who has successfully performed a considerable number of abdominal operations for different lesions under local anesthesia, employs a 1 per cent. solution of novocaine or apothesine to an ounce of which five or six drops of a 1-1000 solution of epinephrin have been added. He also inserts a small piece of gauze beneath the skin which drains serum into the dressings.

Labat maintains that complete anesthesia of the pelvis and contents can be accomplished through blocking the last three lumbar and five sacral nerves.

(To be continued in the December issue)

## Pleuro-Bronchial and Pleuro-Cutaneous Fistulas\*

J. A. SHERBONDY, M.D., Youngstown

*Editor's Note.*—In Dr. Sherbondy's experience old infected pleural cavities with cutaneous and bronchial fistulas do not require extensive mutilating operations for their permanent cure. Under treatment with Dakin's solution dense fibrous tissue tends to disappear and many large cavities will be nearly obliterated by the time they become bacteriologically clean. All bronchial fistulas should be closed by cauterization at the first operation. When it is necessary to decorticate or liberate the lung, Dr. Sherbondy advises confining the operative procedure to that portion of the visceral pleura forming the cavity wall and avoiding an opening of the general pleural cavity. A secondary closure can be done when the cavity becomes bacteriologically clean as this shortens convalescence.

**O**LD INFECTED empyema cavities with sinuses, communicating either externally or with bronchus, were treated surgically for a long time by methods which had for their basic principle the obliteration of the cavity by collapsing the chest wall to the collapsed lung.

These operations, or series of operations, were often mutilating in the extreme. The progress made in the surgery of these conditions, since Delorme conceived and Fowler, in October, 1893, first carried out an operation, which had for its basic principle the expansion of the collapsed lung to the chest wall by decortication, was slow but in the right direction.

The failure of many of these operations was largely due to the rapid re-formation of fibrous tissue from the continued infection of the cavities and fistulas. The chemical sterilization of wounds by Dakin's solution made possible the DePage-Tuffier technique of sterilization and closure of the cavities and fistulas.

### ETIOLOGICAL CONSIDERATIONS

Pleuro-cutaneous, pleuro-bronchial, broncho-pleuro-cutaneous and broncho-cutaneous fistulas result from acute empyema and its operative treatment, failure to heal having occurred.

In order to understand the etiology of these conditions, (we are not considering here the true chronic empyemas, those due to tuberculosis, syphilis or actinomycosis), I believe we must consider that the acute infection of the plural cavity is caused by a rupture into or extension to the cavity of a subplural abscess. As pointed out by Ashner, "Abscesses complicating lobar pneumonia are likely to be single, large and central. Those complicating lobular and broncho-pneumonia, and those due to septic embolism tend to be multiple, small and peripheral. The broncho-pneumonia following influenza was, especially, prone to develop small peripheral abscesses." These pathological facts explain the frequency of pleuro-bronchial fistulas in empyemas resulting from influenza-pneumonia.

The so-called *chronic state*, or failure to heal,

\*Read before the Surgical Section of the Ohio State Medical Association, during the Seventy-Sixth Annual Meeting, at Cincinnati, May 2-4, 1922.

of these cavities and fistulas we believe to be due to the following conditions:—

1. Poor drainage, either from too early closing of the drainage incision or from a badly located incision that does not produce dependent drainage, resulting in drainage through a long or tortuous sinus. We have frequently noted the last condition where thoracotomy was done too far anteriorly.

2. The presence of pleuro-bronchial fistulas. These fistulas are usually broncho-pleuro-cutaneous; broncho-cutaneous fistulas occur, but are rare.

3. The presence of foreign bodies.

4. Necrosis of the ribs, osteitis or osteomyelitis.

#### DIAGNOSIS

A correct understanding of the size, shape and number of the cavities, their outline and the presence of fistulas is obtained by injecting the cutaneous fistula, after washing the cavity with normal saline solution, with a 25 per cent. solution of barium in olive oil. The injection is made through a catheter with a piston syringe. Stereoscopic X-ray plates are then made and an excellent outline of the cavity and sinuses obtained.

If a bronchial fistula of any size is present the patient will expectorate the solution. In some of the larger bronchial fistulas it will be impossible to obtain an outline of the cavity on account of the solution passing too freely into the bronchi and trachea.

The presence of a bronchial fistula is also indicated if the patient tastes the Dakin's solution during sterilization of the cavity. Coughing is not a positive proof of the presence of a fistula.

#### OPERATIVE TREATMENT

We have done one, two and three stage operations, being guided by the conditions present.

The *one stage* operation consists in exposure and exploration of the cavity with or without liberation of the lung; closure of a bronchial fistula, if present, and preparation for Carrell-Dakin treatment. Spontaneous closure of the cavity taking place after sterilization.

The *two stage* operation consists in an exposure and exploration of the cavity; closure of a bronchial fistula, if present; a liberation of the lung at the second operation. After sterilization the cavity is allowed to close spontaneously.

In the *three stage* operation a secondary closure is done when the cavity becomes surgically clean following the operation for liberation of the lung.—*Method of Tuffier*

The operation done for exposure and exploration of the cavity consists of a resection of the pleuro-cutaneous fistula together with the bony ring about the fistulous opening that has resulted from the primary resection of a rib, or ribs. Usually the rib above is also resected. The incision is carried posteriorly

and enough rib resection is done to give free access to the cavity. If the location of the sinus is such that free access to the cavity is not obtainable by this method, a resection of one rib is done directly over the cavity. Unless we are working in a bacteriologically clean field from previous Carrell-Dakin treatment, no further operative procedures in the absence of bronchial fistula are carried out at this time, six to twelve Dakin tubes are now placed, the cavity packed with plain gauze and the incision closed about the tubes and gauze.

If a bronchial fistula is present it should always be closed at the first operation. The use of Dakin's solution in the presence of a bronchial fistula is difficult. We use the cautery entirely to close these fistulas. After locating the plural opening by the presence of air bubbles during respiration, the tissues about the opening are *cooked* but not burned, by using an iron that is not too hot. The fistulous opening can be entirely closed by this method and the patient will not taste the Dakin's solution before the seventh day and then only occasionally.

The operation for liberation of the lung should be done only after the field has been rendered bacteriologically clean and then only in the patients with large cavities, or those with cavities that become stationary in size during sterilization. The lung is liberated by decorticating or excising the visceral pleura from that portion of the lung which forms the visceral portion of the cavity wall.

The general pleural cavity should not be opened at any time during liberation of this portion of the lung. Carrell-Dakin treatment is continued and the lung rapidly expands or herniates, filling the cavity. Healing is completed by spontaneous or secondary closure.

We have found that large cavities with a thickened visceral pleura that binds the lung firmly down, will often disappear under Carrell-Dakin treatment. Some of these cavities will be nearly obliterated by the time they become sterile. We have done a number of secondary closures with excellent results. If there is any reaction following this operation it is advisable to open the incision immediately and institute Carrell-Dakin treatment. If the staphylococcus aureus has been persistent, secondary closure is a doubtful procedure. A secondary closure shortens convalescence.

Foreign bodies should be removed. Rib necrosis is treated by resection and Carrell-Dakin treatment of the wound.

#### CARRELL-DAKIN TREATMENT

Twenty-four hours after operation Dakin's solution is instilled through the tubes in small amounts, 30 to 50 cc. at 2 hour intervals, so that in 48 hours the gauze packing will ordinarily come away painlessly and without bleeding. Then the Dakin tubes with a catheter eye are inserted

with another tube just long enough to reach inside the cavity for drainage. At the end of three or four days irrigation is done daily until washings return clear. If washings do not come away clear, sodium oleate soap (6 per cent. Castile soap well melted) can be used several days in succession instead of the Dakin's solution. In all dressings the usual Carrell-Dakin technique is employed, extra care being taken to keep the skin free from irritation. In very sensitive skins and on the back zinc oxide ointment is used instead of vaseline.

In some of the fistula cases from the seventh to tenth day the hypochlorite solution goes through causing the patient to cough. These patients will complain that they can taste the solution, ordinarily this lasts only a few days. The quantity of hypochlorite should be decreased. On a number of occasions the soap has been used instead of the Dakin's solution.

As the cavity becomes sterile, the drainage becomes more clear and slimy, the granulations smooth and pink, shorter and a fewer number of the tubes are used and the exit tube is done away with. When sterility is reached a secondary closure can be done but in most instances our experience has been that it is unnecessary.

#### PRE-OPERATIVE TREATMENT

As these patients are usually poorly nourished and often dehydrated, besides being septic, it is necessary to urge a forced diet of easily digesti-

ble food and plenty of fluids, both as liquid nourishment and water. If desired, fluid can be further increased by giving saline by bowel and under the skin, and by so doing you are often surprised by the immediate general improvement. Proper elimination should be seen to.

These patients also are nervous and sleep poorly, so some kind of a sedative is, therefore, indicated.

#### ANESTHESIA

Light gas-oxygen anesthesia with local blocking is used in all first and second stage operations. Local anesthesia is not suited for these operations on account of the presence of heavy scar tissues. All secondary closures are done under local anesthesia.

In from a week to ten days in the non-fistulous cases, later in these, bottle blowing is started, and as soon as patients are out of bed calisthenics are begun with the increase of expansion and deep breathing in view.

#### SUMMARY

1. Old infected pleural cavities with cutaneous and Bronchial fistulas do not require extensive mutilating operations for their permanent cure.
2. Under treatment with Dakin's solution dense fibrous tissue tends to disappear.
3. Many large cavities will be nearly obliterated by the time they become bacteriologically clean.
4. All bronchial fistulas should be closed by cauterization at the first operation.
5. When it is necessary to decorticate or liberate the lung, confine the operative procedure to that portion of the visceral pleura forming the cavity wall. Do not open the general pleural cavity.
6. A secondary closure can be done when the cavity becomes bacteriologically clean. It shortens convalescence.

#### NEW AND NONOFFICIAL REMEDIES

During August and September the following articles were accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies: G. W. Carrick Co.—Corpus Luteum—G. W. Co. Gradwohl Laboratories—Sterile Solution of Mercury Oxycyanide—Gradwohl. Lederle Antitoxin Laboratories—Pollen Antigens—Lederle; Solution Epinephrine—Lederle. New York Intravenous Laboratory—Loeser's Intravenous Solution of Mercury; Oxycyanide. Parke, Davis and Co.—Antipneumococcic Serum (Polyvalent). Winthrop Chemical Co.—Luminal Sodium Tablets 1½ grains. H. A. Metz Laboratories—Novocain and L-Suprarenin Tablets "H"; Novocain Solution, 1 per cent; Novocaine Base; Novocain Nitrate; Pyramidon Tablets. United States Radium Corporation—Ampules Radium Chloride 2 cc.—U. S. Radium Corp. (Radium element, 5 micrograms); Ampules Radium Chloride 2 cc.—U. S. Radium Corp. (Radium Element, 10 micrograms); Ampules Radium Chloride 2 cc.—U. S. Radium Corp. (Radium Element, 25 micrograms). Winthrop Chemical Company—Fereo-Sajodin.

Hypodermic Tablets No. 50—Mercuric Succinimide—Mulford, 0.012 Gm. (1/5 grain) contains mercuric succinimide (see New and Non-

official Remedies, 1922, p. 194) 0.012 Gm. (1/5 grain). H. K. Mulford Co., Philadelphia.

Mercurialized Serum No. 2—Mulford—For Intraspinal Use. Each package contains the equivalent of 0.0026 Gm. (1/25 grain) of mercuric chloride in 30 cc. of horse serum. For a discussion of the actions, uses and dosage of mercurialized serum (see New and Nonofficial Remedies, 1922, p. 189). H. K. Mulford Co., Philadelphia.

Corpus Luteum—G. W. C. Co.—The fresh substance from the corpora lutea of the hog, dried, freed from fat, and powdered. For a discussion of the actions and uses of corpus luteum, see New and Nonofficial Remedies, 1922, p. 208, under "Ovary". The product is also marketed in the form of tablets Corpus Luteum, G. W. C. Co., 2 grains. G. W. Carrick Co., New York.

Epinephrin-Lederle.—A brand of epinephrin—N. N. R. made from the suprarenal glands. For the actions, uses and dosage of epinephrin, see New and Nonofficial Remedies, 1922, p. 108. Epinephrin-Lederle is sold in the form of Solution Epinephrin-Lederle, containing epinephrine sulphite equivalent to 1 part of epinephrin in 1,000 parts of physiological solution of sodium chloride, preserved by a small quantity of sulphurous acid and saturated with carbon dioxide. Lederle Antitoxin Laboratories, New York.

# Observations on the Rational Use of Digitalis Especially in Auricular Fibrillation\*

By RICHARD DEXTER, M.D., Cleveland

*Editor's Note.*—Dr. Dexter endeavors to make clear what digitalis can be expected to do in the failing heart, and especially in auricular fibrillation. He emphasizes the necessity of employing a potent preparation of the drug in sufficient dosage and reiterates the advice of Withering—"Let the medicine be continued until it either acts on the kidneys, the stomach, the pulse or the bowels; let it be stopped upon the first appearance of any of these effects." Dr. Dexter appends case reports and charts to show that when these principles are strictly adhered to satisfactory results can be confidently expected.

**D**URING THE past fifteen years the knowledge of the physiology and pathology of the heart has advanced steadily and rapidly. The fundamental studies of James MacKenzie and of Thomas Lewis have opened the way for many valuable observations until today the whole subject of cardiac function both normal and diseased is well understood. With the more accurate methods of study given by the numerous instruments of precision it has been possible more satisfactorily to investigate the action of drugs on the normal and on the pathological heart and these precise methods of study have added greatly to our knowledge of the action of digitalis. I shall present the accepted views in regard to the action of digitalis on the circulatory apparatus, and point out certain matters in regard to the dosage and methods of administration which are essential to the successful exhibition of this most important drug.

## ACTION OF DIGITALIS ON THE HEART

The investigations of Cushny<sup>1</sup> and his associates<sup>2</sup> have shown that the slowing of the heart due to digitalis is accomplished in two ways; (a) by a central stimulation of the vagus centre in the medulla, which either reduces the heart rate as a whole, by depression of the rate of impulse formation, or by depression of auricular-ventricular conduction which suffices to produce a partial or complete heart block; (b) by a direct action of the drug on the muscle of the heart, which causes a prolongation of the conduction time with a resultant slowing of the ventricles. Cohn<sup>3</sup> and White and Sattler<sup>4</sup> have shown also that even in normal hearts under the influence of digitalis there is a constant and distinct increase in the conduction time. Gottlieb and Magnus<sup>5</sup> have shown in the perfused heart removed from the body that digitalis could increase the volume output of the ventricles, and also could increase the force of the ventricular systole. Other evidences of the direct effect of digitalis on the myocardium have been supplied by Cohn, Frazer, and Jamieson<sup>6</sup>, Wedd<sup>7</sup> and others. We may definitely accept, therefore, that digitalis in therapeutic doses may slow the heart, either through its action on the medulla, or di-

rectly on the heart muscle, and further that by the latter action the force and magnitude of ventricular contraction may be increased.

These results of the action of digitalis on the heart are described by Eggleston<sup>8</sup> as follows: "*Reduction in the rate of the heart or that of its ventricles is accompanied by a lengthening of the diastole or resting phase of the ventricles, while the duration of the systolic phase is but little altered. Lengthening of the diastole allows a larger volume of blood to flow into the ventricles and gives time for a more complete recovery of their contractile power. The force and volume output of the systole are thus increased, and since more blood is thrown into the aorta and diastole is prolonged the coronary circulation is increased, the nutrition of the ventricular muscle is improved and internal respiration is more perfect in the ventricles.*"

There is still a belief that digitalis is contra-indicated in heart failure when accompanied by high blood pressure. The general consensus of opinion, based on clinical observations, is that digitalis exerts a negligible constricting effect on the peripheral blood vessels, which opinion is borne out by the work of Eggleston<sup>8</sup>, who showed that neither digitalis nor digitoxin had any direct effect on the blood vessels of man. Clinically it is not uncommon to see a greater or less diminution in both systolic and diastolic blood pressure in such cases after the administration of digitalis.

## INDICATIONS FOR THE USE OF DIGITALIS

From what has been said of the action of digitalis in therapeutic doses, it can be seen that the drug is indicated in all cases of failing heart muscle and contra-indicated in none. Of course there are numerous factors in connection with each case of heart failure, which will influence the extent to which digitalis therapy can alleviate the condition, so that success can not be expected in all cases. While digitalis is of great value in many cases of failing heart in which the pulse is regular, as shown by Christian<sup>9</sup> and Pratt<sup>11</sup>, still the condition in which the most constant and most gratifying results may be expected is *auricular fibrillation*. In auricular fibrillation, the ventricle is overworked by the numerous abortive contractions coming to it from the fibrillating auricle. These abortive ven-

\*Read before the Medical Section of the Ohio State Medical Association, during the Seventy-Sixth Annual Meeting, at Cincinnati, May 2-4, 1922.

tricular contractions send little blood to the ventricle itself, so that the ventricle is not only overworked but undernourished. In this condition the administration of digitalis blocks a large number of the smaller contractions on their way to the ventricle, and increases the force of the muscular contractions, with the result that the ventricular contractions are slower and stronger. This restores the peripheral circulation, and improves the nutrition of the heart itself.

#### DOSAGE AND METHOD OF ADMINISTRATION

In a large proportion of cases, failure to get the desired result from digitalis therapy is due either to insufficient dosage or to the use of a weak or inert preparation of the drug. The words of William Withering<sup>12</sup>, written in 1785 in regard to the use of digitalis, hold good today. He said "*Let the medicine be continued until it either acts on the kidneys, the stomach, the pulse or the bowels; let it be stopped upon the first appearance of any of these effects*". In other words the drug should be given in amounts sufficient to exert its full and desired effect on the heart muscle, and should be stopped on the appearance of the first signs of intoxication. In 1910, James MacKenzie<sup>13</sup> pointed out the importance of using digitalis to its physiologic effect, since which time a number of observers have suggested methods by which this result could be obtained. Eggleston<sup>14</sup>, in 1916, described the method of administration which now bears his name as the *Eggleston Treatment* or the *Body-weight Method*. In this method of administration the activity of a given preparation of the drug is established by the cat method described by Hatcher and Brody<sup>15</sup> in which a cat unit equals "the amount of the dry drug in millegrams which is required to kill 1 Kg. of cat when a solution is slowly and continuously injected into a vein". It has been found that the average total amount of digitalis for oral administration in man is 0.15 of one cat unit for each pound of body weight.\* Eggleston<sup>15</sup> points out that high grade specimens of digitalis may be considered to have an average activity of 100 mgm. to the cat unit. Basing one's calculations on this, the average total dose for a patient weighing 150 pounds would be 2.25 gms. of the powdered leaf and 22.5 cc. of the tincture. In urgent cases one-half to one-third of the total estimated amount of the drug is given at the first dose; six hours later one-fifth to one-quarter of the total is given, and after that if more of the drug is needed, one-tenth of the total amount may be repeated until maximal digitalization is assured. In less urgent cases only one-quarter of the total calculated amount is given at each of the first two doses six hours apart, then one-eighth to one-tenth is given every six hours until the desired result is ob-

tained. In this method care must be exerted to find out whether the patient has had any previous digitalis treatment, and symptoms of minor digitalis intoxication must be watched for. Properly checked this treatment has no dangers, and gives excellent results (White and Morris<sup>17</sup>).

Another method, which has been used by numerous workers, is the administration of single large doses of digitalis varying from 15 cc. to 25 cc. of the tincture. The effect of the drug may be expected to appear in from two to five hours. This method is described by Robinson<sup>18</sup>. Wedd<sup>7</sup> used a daily dose of from 8 to 12 cc. of the tincture, usually 10 cc. continued until definite evidence of digitalis action was noted. Pratt<sup>11</sup>, while not advocating such large doses as the other observers mentioned, urges the exhibition of an active preparation to its *physiologic effect*. Neither of these methods of administration is applicable to all cases, neither should be used to the exclusion of the others, but the underlying principle on which they are all based, *namely*, to digitalize the patient within a short period of time is essential to successful digitalis therapy. It is well to remember that all patients do not absorb digitalis equally well from the alimentary tract, as Wedd<sup>7</sup> has pointed out, which fact may have some effect on the success of the digitalis therapy.

The indications that the patient has had enough digitalis are those of the so-called *minor intoxication*; they are anorexia, nausea, and vomiting, marked slowing of the pulse to 60 beats or less per minute, and the appearance of premature contractions, or of *digitalis coupling*, a condition due to a premature contraction following each regular beat of the heart. These symptoms should be carefully watched for, and the administration of the drug should be stopped on the appearance of any of them.

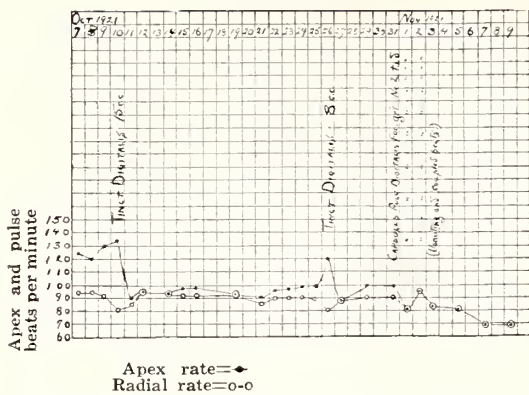
#### PREPARATIONS OF THE DRUG

The general consensus of opinion is that the powdered digitalis leaf and the tincture of digitalis, so they be fresh and active, will give entirely satisfactory results, an opinion in which I most heartily concur. The numerous proprietary preparations to my mind have no advantage over a good powdered leaf or a good tincture. Preparations proclaimed as *non nauseating* are nonsensical; if they are *non nauseating* they are probably inert.

A point that should be emphasized is the futility of ordering the tincture in drop doses, in the belief that a drop is equivalent to a minim. I have myself found that it took about 30 drops more or less, to equal 15 minims or 1 cc., so that if 15 drops are ordered with the idea that the patient will get one cubic centimetre of the tincture, the result will be disappointing to say the least. The use of an accurate measuring glass for the administration of the tincture

\*For the Formulas on which the dosage is to be estimated the reader is referred to Eggleston's articles in *The Arch. Int. Med.*, 1916, Vol. xvi, p. 1; and *The Jour. A. M. A.*, 1920, Vol. lxxiv, p. 733.

CHART I



of digitalis, is, therefore, a *sine qua non*. The powdered leaf loses its potency very little and, therefore, is more reliable than the tincture. Even the good standard tinctures, if kept too long, will become inert and lead to disappointment. I believe that when digitalis has been given in an amount which should result in a therapeutic effect, and none such appears, that the preparation in use should at once be suspected of lack of potency.

The problem of varying potency is a difficult one for those who have no pharmacological laboratory at hand, to standardize and supply active preparations. For nearly two years now, I have employed the tincture and the capsules of the powdered leaf put out by Upsher Smith Inc., St. Paul, Minnesota, and I have found these preparations to have a constant and high grade of potency, especially the capsules of the powdered leaf. These preparations can be obtained from any high grade pharmacist.

ILLUSTRATIVE CASE REPORTS

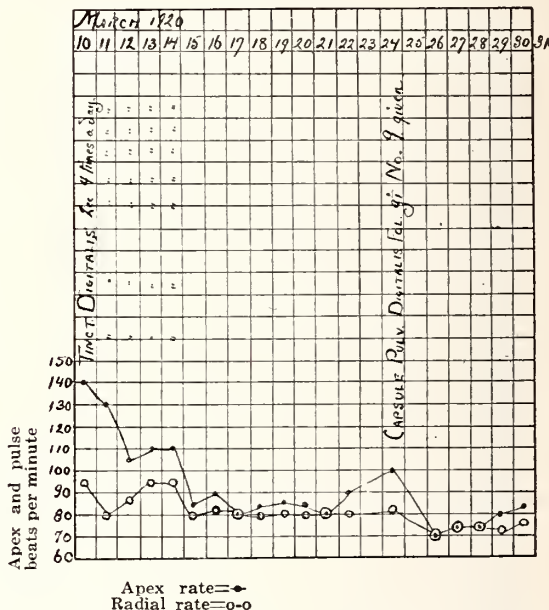
I wish to cite briefly three cases, chosen from a number which I have observed during the past two years, which illustrate the results of the administration of digitalis to cases of auricular fibrillation with failing hearts.

*Case 1.* (See Chart I).—A married woman, 52 years of age, was admitted to the Medical Service of St. Alexis Hospital, October 7, 1921. The patient gave a typical history of Basedow's disease sixteen years before, which was greatly benefited by an operation on the thyroid gland. The patient had swelling of the feet and shortness of breath on exertion for about three years which had steadily increased until the patient was obliged to take to her bed on account of shortness of breath and weakness.

*Examination* showed a well developed and nourished woman, with considerable cyanosis and dyspnoea. There was oedema of the legs and feet. The lungs at the bases showed evidences of some oedema. The vessels of the neck pulsated visibly, and the veins were prominent. The heart was greatly enlarged to the left and to the right, and there was much activity over the area of the right ventricle. There were no

murmurs, the pulmonic second sound was very loud, and the sounds were grossly irregular and very rapid. The radial pulses were grossly irregular and of small volume. The blood pressure, as well as could be made out on account of the irregularity, was 190 systolic and 145 diastolic. The heart rate counted at the apex

CHART II



was 126 beats per minute. The radial pulse rate was 95, giving a pulse deficit of 31 beats per minute.

*Diagnosis.*—Myocarditis with auricular fibrillation and arterial hypertonus.

*Treatment.*—The patient was rested and well purged for three days without improvement in the condition, and was then given 15 cc. of a potent tincture of digitalis at one dose. The next day the pulse deficit was abolished and the distress was alleviated. The effects of the first dose lasted for 12 days, and then symptoms began to recur. A dose of 8 cc. of the tincture was then given, the effect of which lasted for five days. Then 2 one grain capsules of the powdered digitalis leaf were given every six hours, until symptoms of minor digitalis intoxication developed (18 grains were taken). Shortly after this the patient was discharged and has been taking the capsules of the powdered leaf, 2 each day for seven days, one week in every three. She reports that she is comfortable and can do her house work.

*Comment.*—This case well illustrates the excellent effect of repeated single large doses of digitalis, when the patient is under constant observation.

*Case 2.* (See Chart II).—Woman, 56 years old, domestic, admitted to the Medical Service of St. Alexis Hospital, March 10, 1920. Patient had had attacks of acute tonsillitis seven years

ago and three years ago, the latter attack was associated with pain and swelling of the joints of the knees, ankles, and hands, accompanied by fever, and by much dyspnoea and palpitation of the heart.

*Examination* showed an elderly woman, very dyspnoeic, pale and somewhat cyanotic. The lungs showed signs of considerable moisture. The heart was enlarged to left and to right. There was a loud systolic murmur at the apex transmitted to the axilla. The sounds were grossly irregular. The pulse was very irregular and of small volume. The rate at the apex was 130 beats per minute. The radial pulse rate was 99, a pulse deficit of 31 beats. The wrist, knee, and ankle joints were swollen red and tender. The temperature was 101° F.

*Diagnosis.*—Acute articular rheumatism, mitral insufficiency and auricular fibrillation.

Tincture of digitalis 32 cc. was given in doses of 2 cc. four times a day over a period of four days, with great improvement in the symptoms, and with the practical abolition of the pulse deficit. The digitalis effect lasted eight days, and then nine grains of the powdered leaf was adminis-

developed gross irregularity of the pulse associated with signs of acute cardiac failure. She has been under my observation for a period of 16 months. The heart is enlarged to the left, and somewhat to the right. There is at present constantly an arterial hypertonus and probably a mild grade of chronic interstitial nephritis. When first seen large doses of digitalis were given, but these had to be abandoned on account of the great amount of nausea and vomiting which they caused. It was evident that there was a distinct idiosyncrasy for digitalis. After trying several methods of administering digitalis, it has been found that the best way to keep the heart under the influence of digitalis is to give 2 one grain capsules of the powdered leaf a day until 8 capsules have been taken. After such an amount slight nausea always intervenes, but the pulse deficit is abolished and the circulation is sufficient to the patient's needs. The digitalis action in this case usually appears after 4 grains of the drug have been taken, and lasts from 8 to 10 days after the course has been completed.

*Comment.*—This case emphasizes the point that when an idiosyncrasy for the drug exists, good results may be obtained from moderate amounts of the drug, given in interrupted courses. This patient has been under this method of treatment for more than 16 months. The chart simply gives the results on the pulse deficit of two of these interrupted courses.

SUMMARY

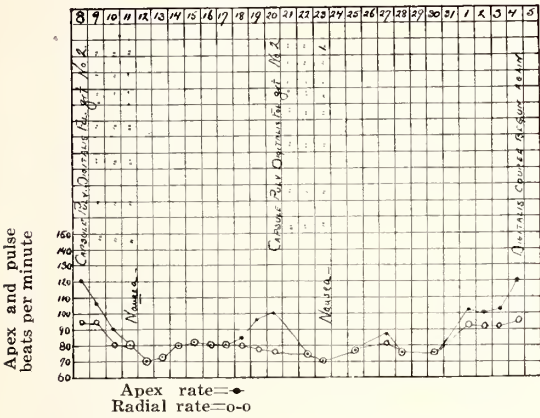
I have endeavored to make clear what can be expected from the use of digitalis in the failing heart, and especially in auricular fibrillation, and to emphasize the necessity of the employment of sufficient doses of a potent preparation of the drug. When these principles are strictly adhered to, satisfactory results can be confidently expected.

2417 PROSPECT AVENUE.

REFERENCES

1. Cushny: Jour. Pharm. and Exp. Therap., 1918, Vol. ii, p. 103.
2. Cushny, Morris and Silberberg: Heart, 1912-13, Vol. iv, p. 33.
3. Cohn, A. E.: Jour. A. M. A., 1915, Vol. lxxiv, p. 1527.
4. White and Sattler: Jour. Exp. Med., 1916, Vol. xxxiii, p. 613.
5. Gottlieb and Magnus: Arch. f. Exp. Path. u. Pharm., 1904, Vol. ii, p. 30.
6. Cohn, Frazer and Jamieson: Jour. Exp. Med., 1915, Vol. xxi, p. 593.
7. Wedd, A. M.: John's Hopkins Med. Bull., 1919, Vol. xxx, p. 131.
8. Eggleston, C.: Am. J. Med. Sci., 1920, Vol. clx, p. 625.
9. Eggleston, C.: Jour. A. M. A., 1917, Vol. lxxix, p. 951.
10. Christian, H. A.: Am. J. Med. Sci., 1919, Vol. clvii, p. 602.
11. Pratt, J. H.: Jour. A. M. A., 1918, Vol. lxxi, p. 618.
12. Withering, William: An Account of the Foxglove and Some of its Medical Uses. Birmingham, 1785.
13. MacKenzie, J.: Heart, 1910-11, Vol. ii, p. 273.
14. Eggleston, C.: Arch. Int. Med., 1916, Vol. xvi, p. 1.
15. Hatcher, R. A. and Brody, J. G.: Am. Jour. Pharm., 1910, lxxxii, p. 360.
16. Eggleston, C.: Jour. A. M. A., 1920, Vol. lxxx, p. 733.
17. White, S. M. and Morris, R. E.: Arch. Int. Med., 1916, Vol. xvi, p. 1.
18. Robinson, G. C.: Am. J. Med. Sci., 1920, Vol. vlix, p. 121.

CHART III



tered during a period of 24 hours. Hereafter this amount of the drug was given when indicated by the reappearance of symptoms or by a pulse deficit of over ten beats. After discharge from the hospital, the patient took 4 grains of the powdered leaf once a week, which enabled her to be very comfortable and to be up and go about most of her duties. Six months after discharge she died suddenly of acute cardiac dilatation with oedema of the lungs.

*Comment.*—This case illustrates the use of a large initial dose of digitalis, followed by the administration of good sized interrupted doses. Smaller doses at more frequent intervals were sufficient to keep up a very good amount of circulatory efficiency until the sudden giving way of heart muscle.

*Case 3. (See Chart III).*—Woman, 50 years old, who had had an arterial hypertonus for years. Otherwise her health had been fair. In July, 1920, while at a health resort the patient

## Problems of the Present Obstetrical Situation\*

W. W. BRAND, M.D., Toledo

*Editor's Note.*—One of the greatest problems in the obstetrical situation today, according to Dr. Brand, is safeguarding our foreign-born population by proper and reasonable regulations to improve and limit the practice of midwives to attendance only upon normal, or so-called physiological labors. It would be a great step in advance if Ohio would enact regulations similar to the New York State Code, with the additional Sanitary Code regulations, which limit the midwife's practice to uncomplicated vertex presentations and give a list of ten conditions, the occurrence of any of which makes it obligatory on the midwife to summon a physician. There are also 7 specified conditions occurring after labor when a physician must be summoned.

**S**TANDING BEFORE the members of this most important Section of Obstetrics and Pediatrics as the recipient of the greatest honor you can bestow upon any member, I can only express my humble appreciation, with the sincere hope that I may partially, at least, meet your expectations, but I am afraid you are the victims of poor judgment. As Da Costa once said: "I am so afraid of being regarded as an imposter that I am as miserable as a man who takes at one time boils, a toothache, a bad cold and religion." "You are going to partake of a repast as unsubstantial as the Moon Men in Lucien's History, that is, you are going to dine off the odor of roast frogs leg and drink air squeezed into goblets." If I can impart a thought over which you can ponder or meditate, even though as ethereal as the repast of the Moon Men, I will be content.

### GENERAL CONSIDERATIONS

Within the past few years hardly a medical, public health or child-welfare publication, not forgetting many lay publications, could be perused without encountering an exhaustive treatise on maternal and foetal mortality and morbidity.

It is needless to say that the tongues and pens of the philanthropic world have been exceedingly active, and their activity has resulted in a comprehensive analysis of existing conditions. It is not necessary to quote statistics, for all know them, but it is quite proper to emphasize the oft repeated statement, *that the maternal and foetal mortality rate has not been materially reduced in the past twenty years.* The potential victims of child-bearing are appealing to the medical profession to stop the toll that is yearly so exactly demanded. The enormity of the task so easily placed upon the shoulders of the obstetric division of the medical profession can hardly be conceived.

Last year, your Chairman, Dr. Fullerton, presented to you a most comprehensive review of the many and diverse activities of the various professional and social agencies, striving to solve this problem. How laborious and discouraging the work of organization and foundation build-

ing upon which the super-structure of a perfectly working, coordinated, welfare organization, will operate to bring about the desired results, the Almighty only knows.

### HISTORICAL DEVELOPMENT OF THE MID-WIFE PROBLEM

To appreciate the difficulties of over-coming one of the important factors retarding our progress, we must for a moment look backward. "The art of midwifery is coeval with the history of mankind." (King). "That woman bringeth forth her children in sorrow" appears to be a law of the function of reproduction imposed upon the women of all tribes and countries and times. Sympathy was tendered woman in childbirth and apprehension for her welfare stimulated the first crude efforts of the art practiced by sympathetic women to whom Moses refers as midwives, and classed them as a distinctive body among the Jews." The apparent simplicity of physiological labor in the early days has been aptly described by Southey in his Tale of Paraguay:

"But human help she needed none,  
A few short throes with scarce a cry;  
Upon the bank she laid her son,  
Then slid into the stream and bathed, and all  
was done."

It is reasonable to assume that pathologic labors were encountered in the earliest days. The writings of Hippocrates, Celsus and Soranus are illuminating and midwifery appears to have been attended with considerable skill. Until the Renaissance, midwives were almost the sole practitioners of the art, most jealously safeguarding their practice, and clinging to their superstitions. With the advent of the founders of modern obstetrics Pare, Clement, Mauriceau, Chamberlen and Smellie, there began a most bitter and violent struggle for supremacy. The bitterness and jealousy of the superstitious midwife, could not stay the gradual, steady progress of scientific obstetrics, but in the two hundred odd years following, the midwife has not been eliminated from the field of obstetrics and probably will not be in our time.

### RECENT REGULATIONS

The customs of our foreign-born population cannot be overthrown as long as immigration

\*Chairman's Address presented before the Section on Obstetrics and Pediatrics, of the Ohio State Medical Association, during the Seventy-Sixth Annual Meeting, at Cincinnati, May 2-4, 1922.



continues, but we can and must safeguard these peoples by proper and reasonable regulations to improve and limit the practice of midwives, to attendance only upon normal, or so-called physiological labors. It would be a great step in advance if Ohio would enact regulations similar to the New York State Code, with the additional regulations enacted by the Commissioner of Health of New York City under the authority of the Sanitary Code, which limits the midwife's practice to uncomplicated vertex presentations and gives a list of ten conditions, the occurrence of any of which makes it obligatory on the midwife to summon a physician. There are also seven specified conditions occurring after labor when a physician must be summoned. This is the only law I know which specifies certain definite conditions in *the child*, after birth, the occurrence of which obliges the midwife to summon a physician.

#### THE SHEPPARD-TOWNER MATERNITY ACT

With the enactment of the Sheppard-Towner Maternity Act and recent appropriation for its operation; endorsement and acceptance of the Act with Federal financial aid by the Governor of our state, we have, I sincerely hope, the first concrete intelligent movement, for a thorough and efficient revision of maternity and child-welfare regulations, and if I may presume to suggest that these regulations include an educational feature, carefully planned, to educate the people to an appreciation of better obstetrics. *Ante-natal care*, with emphasis on the advantages of diagnosis, so that faulty conditions may, if possible, be corrected. That the intra-natal, or *delivery period*, is a major surgical operation, with two patients instead of one, demanding not only surgical cleanliness, but surgical surroundings and accessories, plus surgical skill, in other words hospitalization. Efficient *post-natal observation*, so that the results of operative procedure, if any, may be noted, or further corrective treatment instituted when necessary.

How much the Sheppard-Towner Act will accomplish, and how well, will depend upon its administration. We should all support this measure and give the administrative officials our whole-hearted services, whether in conference or in application; if successful, a work well performed, if a failure, after a fair trial, amend or repeal.

#### CONCLUSION

In conclusion, I hope you will pardon me for reminding you that the time has come for us to take account of ourselves. We *must progress* to a higher standard of obstetric practice, if we are to lead the way for others. For the welfare of womankind and her unborn children the efficient regulation of midwives, the education of the people to demand better obstetrics and the acceptance of the qualifications of an ob-

stetrician as depicted by William Smellie in 1756, would materially aid us to attain our Ideal:—

"Those who intend to practice midwifery, ought first of all to make themselves masters of anatomy, and acquire a competent knowledge of surgery and physic; because of their connections with the obstetrical art, if not always, at least in many cases. He ought to take the best opportunities he can of being well instructed, and of practicing under a master, before he attempts to deliver himself. In order to acquire a more perfect idea of the art, he ought to perform with his own hands upon the proper machines, continue to convey a just notion of all the difficulties to be met with in every kind of labor, by which means he will learn how to use the forceps and crochet with more dexterity, be accustomed to the turning of children and consequently be more capable of acquitting himself in troublesome cases that may happen to him when he comes to practice among women. He should also embrace every occasion of being present at real labors; and, indeed, of acquiring every qualification that may be necessary or convenient for him in the future exercise of his profession. But, over and above the advantages of education, he ought to be endowed with a natural sagacity, resolution and prudence; together with that humanity which adorns the owner, and never fails of being agreeable to the distressed patient; in consequence of this virtue, he will assist the poor as well as the rich, laboring always with charity and compassion. He ought to act and speak with the utmost delicacy of decorum and never violate the trust reposed in him, so as not to harbor the least immoral or indecent design, but demean himself in all respects suitable to the dignity of his profession."

316 COLTON BLDG.

---



---

#### NEW AND NONOFFICIAL REMEDIES

Brometone Capsules, 5 grains.—Each capsule contains brometone (see New and Nonofficial Remedies, 1922, p. 75), 5 grains. Parke, Davis and Co., Detroit.

Adrenalin Tablets No. 2—Each contains adrenalin (see New and Nonofficial Remedies, 1922, p. 109), 0.00033 Gm. (1/200 grain), as borate, yielding a 1:1000 solution when dissolved in 5 minims of water. Parke, Davis and Co., Detroit.

Hydrodermic Tablets Adrenalin and Cocain Rx B. (Cylindrical). Each obtains cocaine hydrochlorid, 0.005 Gm. (1/12 grain) and adrenalin (see New and Nonofficial Remedies, 1922, p. 109), 0.00005 Gm. (1/1,200 grain) Pakre, Davis and Co., Detroit.

Pyramidon Tablets, 5 grains.—Each tablet contains pyramidon (see New and Nonofficial Remedies, 1922, p. 251), 5 grains. H. A. Metz Laboratories, Inc., New York.

# The Wassermann Reaction in Non-Syphilitic Patients: What It Conveys\*

C. J. BROEMAN, M.D., Cincinnati

Assistant Director Department of Dermatology and Syphilis, Cincinnati General Hospital, Medical Department, University of Cincinnati, Radium Therapist, Seton Hospital, etc.

*Editor's Note.*—While Dr. Broeman is firmly convinced that the Wassermann reaction is still the greatest aid the clinician has in dealing with syphilis, its limitations must never be lost sight of for an instant and the technique of the laboratory must always be carefully watched and controlled in every possible way by the observations and experience of the clinician. Carefully gathered clinical data will never yield its position as the best and surest means of diagnosis. It should be the aim of every one sincerely interested in obtaining exactitude in laboratory results to make every effort to detect inaccuracies and to devise means of checking and eradicating them.

LITERATURE CONCERNING the Wassermann reaction is now very extensive.

We find the test discussed from every conceivable point of view and regarded in all degrees of opinion, from complete faith in its every indication to absolute disbelief in any of its findings. One single phase of the question seems to have received but scant attention, and that is the observations and results which have been obtained from the application of the Wassermann test to patients, who can positively be demonstrated never to have had syphilis. Apparently only a very small number of reports of reactions in non-syphilitic patients has ever been published. This seems the more remarkable, when we consider that it is now a routine, in many institutions and with a large number of physicians in the regular course of their private practice, to have a Wassermann test made upon every patient applying for treatment, so that many extensive case lists must be available to show the results which were obtained from Wassermann tests made upon individuals clinically free from all syphilitic infection.

I have, therefore, concluded that the presentation of a series of such cases, occurring in my private practice might not be without interest to that part of the medical profession especially concerned with the demonstrations of the Wassermann reaction. As I have already stated<sup>1</sup>, I believe the value of this test is very great, but unless its results are considered in relation to all other diagnostic and clinical factors, the heredity, personal history and physical symptoms, it is of comparatively little worth and the physician who pins his faith to it alone will inevitably live to regret his credulity.

## DISCREPANCIES IN THE WASSERMANN REACTION

Because my attention has been so repeatedly drawn to the inconsistency and unreliability which the results of the Wassermann reaction can on occasion exhibit, I some time ago adopted the practice of sending specimens from each individual upon whom it was desired to have the test made, to three different laboratories and

whenever it could be done have had repeated tests made under the same conditions, thus giving as much latitude as possible for comparison in those instances in which the findings of the different laboratories failed to agree. Each of the three laboratories make two tests, giving six tests for each individual. Re-examinations to determine the effects of treatment have also been done in the same manner.

The results of this routine of blood examination have at times been very surprising, not to say baffling and disappointing. Not only have the three laboratories repeatedly failed to agree, but when they have agreed their findings were in some instances absolutely refuted by clinical evidence. The results of one series of Wassermann tests, I have already made public<sup>2</sup>. The series I am about to report is made up of cases selected from one hundred and fifty known and proved non-syphilitic patients upon each of whom six separate and distinct laboratory tests were made. Of these one hundred and fifty cases, one hundred and twenty-four received reports of a negative serum reaction from each one of the three laboratories to which blood specimens were submitted. The findings upon the remaining failed to agree, and it is this series of twenty-six cases which forms the subject of the present paper.

In order to emphasize the discrepancies in this series, I wish to state that recently in a study upon a similar series of patients (190), all of whom were positively known to be infected with syphilis from incontrovertible evidence outside the Wassermann findings, we had thirty-seven patients (19 per cent.) in whom the results of this test presented some marked variations.

Two specimens (one per cent.), were reported as giving a four plus positive Hecht-Weinberg, all the other tests upon these two specimens being negative. There were also returned six (three per cent.) two plus Hecht-Weinberg reports, all others being negative. Of the thirty-seven syphilitic patients whose reports showed discrepancies, 5.4 per cent. showed all tests negative except a four plus Hecht-Weinberg; 13.5 per cent. showed strongly positive cholesterinized antigens with the other laboratory findings negative. Of this series also 5.4 per

\*Read before the Section on Dermatology, Proctology and Genito-Urinary Surgery of the Ohio State Medical Association, during the Seventy-Sixth Annual Meeting, at Cincinnati, May 2-4, 1922.

cent. showed a three or four plus Hecht-Weinberg, while the Wassermann was only one plus.

The remaining one hundred and fifty-three known syphilitic patients were either under treatment or had been treated and their tests showed the following variations:

*Laboratory A* reported 1.3 per cent. with four plus and 3.9 per cent. with two plus Hecht-Weinberg tests, all other tests being negative.

*Laboratory B* reported 15 per cent. with four plus and 5.8 per cent. with two plus cholesterinized antigens.

*Laboratory C* reported 6.5 per cent. with four plus cholesterinized antigens.

*Laboratory A* reported 2.6 per cent. with four plus Hecht-Weinberg while the Wassermann was only one plus.

Of the combined reports of *Laboratories B* and *C* 1.3 per cent. showed one plus alcoholic antigens with 3.9 per cent. three plus cholesterinized antigens.

The comparison of the results summarized in the foregoing paragraph with those obtained in my known non-syphilitic patients is enlightening in the extreme. A brief tabulation of the twenty-six cases in which other than negative findings were made is given:

Case No.	TABLE			Remarks
	Lab. A	Lab. B.	Lab. C.	
1.	Wass. + + + + H. W. + + + +	Alc. — Chol. —	Alc. + + + + Chol. + + + +	No history nor symptoms of syphilis. Husband had three negative Wassermann reactions and negative history. (12-30-21).
2.	Wass. — H. W. —	Alc. — Chol. —	Alc. + + + + Chol. + + + +	Tuberculosis varicosis cutis of the upper lip. Negative history and no symptoms present.
3.	Wass. — H. W. + + + +	Alc. — Chol. —	Alc. + + + + Chol. + + + +	Same as case No. 2. Note the false positive Hecht-Weinberg and a continued false positive in Laboratory C.
4.	Wass. — H. W. + + + +	Alc. — Chol. + + + +	Alc. — Chol. —	Negative history, no symptoms present. Patient has been under observation for two years.
5.	Wass. — H. W. —	Alc. — Chol. + + + +	Alc. — Chol. —	Negative history, no symptoms present. Patient had a negative Wassermann about two years ago and has been under observation off and on for two years without showing any clinical symptoms of syphilis.
6.	Wass. — H. W. —	Alc. — Chol. —	Alc. — Chol. + + + +	Negative history and no clinical symptoms, patient has a frank case of psoriasis which at one time was treated for syphilis without improvement.
7.	Wass. — H. W. + + + +	Alc. — Chol. + +	Alc. — Chol. —	Negative history and no clinical symptoms, under observation for two years.
8.	Wass. — H. W. —	Alc. — Chol. —	Alc. + + Chol. + +	Negative history and no symptoms present. Diagnosis, leukoplakia of the buccal mucous membrane.
9.	Wass. — H. W. —	Alc. — Chol. + + + +	Alc. — Chol. —	Negative history and no clinical symptoms.
10.	Wass. — H. W. —	Alc. — Chol. + + + +	Alc. — Chol. —	Negative history and no clinical symptoms.
11.	Wass. + + H. W. + + + +	Alc. — Chol. + + + +	Alc. — Chol. —	Negative history and no clinical symptoms.
12.	Wass. — H. W. —	Alc. — Chol. + + + +	Alc. — Chol. —	Negative history and no clinical symptoms present; provocative Wassermann to three different laboratories.
13.	Wass. — H. W. —	Alc. + + Chol. + +	Alc. — Chol. + +	Negative history and no clinical symptoms.
14.	Wass. — H. W. —	Alc. — Chol. —	Alc. + + Chol. + +	Negative history and no clinical symptoms. Two previous Wassermans negative to three different laboratories.
15.	Wass. — H. W. —	Alc. — Chol. —	Alc. + + Chol. + +	Negative history and no clinical symptoms.
16.	Wass. — H. W. —	Alc. — Chol. —	Alc. — Chol. + +	Negative history and no clinical symptoms. Diagnosis, carcinoma of the lower abdominal wall.
17.	Wass. + + + + H. W. + + + +	Alc. — Chol. + + + +	Alc. — Chol. + + + +	Negative history and no clinical symptoms. Diagnosis, tuberculide of the lower limbs.
18.	Wass. + H. W. + + + +	Alc. — Chol. —	Alc. — Chol. —	Negative history and no clinical symptoms.
19.	Wass. + + + + H. W. + + + +	Alc. — Chol. + + + +	Alc. — Chol. + + + +	Same as Case 17. Watched for one year without being able to make a diagnosis of syphilis. Therapeutic test negative.
20.	Wass. — H. W. —	Alc. — Chol. + + + +	Alc. + + + + Chol. + + + +	Same as case No. 11.
21.	Wass. — H. W. —	Alc. — Chol. + +	Alc. — Chol. —	Negative history and no clinical symptoms. Diagnosis, tuberculosis varicosis cutis of tip of nose.
22.	Wass. — H. W. —	Alc. — Chol. —	Alc. + + + + Chol. + + + +	Same as case No. 11.

Case No.	Lab. A	Lab. B.	Lab. C.	Remarks
23.	Wass. — H. W. —	Alc. — Chol. ++	Alc. + Chol. ++	Negative history and no clinical symptoms.
24.	Wass. — H. W. —	Alc. — Chol. —	Alc. ++ Chol. ++	Negative history and no clinical symptoms. Diagnosis, traumatic leg ulcer.
25.	Wass. ++ H. W. ++++	Alc. — Chol. —	Alc. ++++ Chol. ++++	Same as case No. 1. No intermediate treatment. (1-5-22).
26.	Wass. — H. W. —	Alc. — Chol. ++	Alc. — Chol. —	Same as case No. 1. No intermediate treatment. (1-24-22).

## KEY TO TABLE

Wass.	Wassermann
H. W.	Hecht-Weinberg or Hecht-Gradwohl.
Alc.	Alcoholic antigen.
Chol.	Cholesterinized antigen.

## DISCUSSION OF RESULTS

The patients listed in this table have in most cases been under my direct personal care for periods varying from one to three years, and are every one *known and proved to be non-syphilitic*. They have been under treatment for conditions other than syphilis, and at no time during this treatment or while under my observation, has any one of them shown the slightest clinical evidence of syphilis. In several instances, I was obliged to resort to some pretext in order to obtain the Wassermann for the purpose of comparative study.

We are here presented with a series of one hundred and fifty individuals, who may be considered as justly representative of the patients presenting themselves for diagnosis in ordinary dermatological practice, every one of whom had been proved by evidence beyond dispute to be free from syphilitic infection, yet the laboratory findings from three independent sources reported no less than 17-1/3 per cent. of these patients to be more or less syphilitic. Anyone who stops to give the matter serious consideration will at once realize that this is a distressingly large percentage of error. As Solomon has remarked concerning a similar study, "*no matter how small the percentage of error may be, if it affects any given individual, it is a one hundred per cent. error for that individual, and, therefore, it is the duty of the clinician to protect him as far as possible.*"<sup>3</sup> Five per cent. of these non-syphilitic bloods reacted strongly positive to the Hecht-Weinberg test. The same number of patients (five per cent.) were positive to the cholesterinized antigen, while negative to all other tests.

The comparison is obvious. The incidence of a positive reaction to the Hecht-Weinberg was the same (five per cent.) in the treated and known syphilitics as in the proved non-syphilitic. The test of cholesterinized antigen made a somewhat better showing, being positive in thirteen per cent. in the syphilitic as against five per cent. in the uninfected.

A consideration of such results as are shown by the cases here reported can hardly fail to impress one with the uncertainty of obtaining reliable diagnostic assistance from the Wasser-

mann reaction. Of what avail are all the delicate manifestations of this test, if they are capable of giving positive results in non-syphilitic patients? In a case of suspected syphilis which presents great difficulty in diagnosis, when we obtain a positive result after the employment of the ice-box test, the cholesterinized antigen reaction, or the Hecht-Weinberg modification, we are likely to attribute it to the refinements of technique which have been used in making the serum test. But how are we to know whether the diagnosis has been confirmed or not when the use of these same modifications upon the blood of individuals clinically free from syphilis gives exactly the same results? Or, again, merely because a patient is known to have had syphilis, or even is under treatment for the disease, what right have we to assume that he needs more treatment, when the modified Wassermann test applied to his serum gives a positive result, while that of the usual Wassermann reaction with the alcoholic antigen fixation is negative?

Let us for a moment suppose that in ten per cent. of our non-syphilitic patients the employment of the modified Wassermann reaction gives a positive result; or in ten per cent. of our patients who are known to be syphilitic—whether under treatment or not—we also get positive results. Under these circumstances can we take it for granted that the known syphilitics are still uncured and in need of further treatment? Would it not be perfectly fair to assume that this percentage is no more than the *normal run* of false positives for which we must allow in the use of the modified Wassermann?

The reliability of the Wassermann as a positive diagnostic measure for the detection of syphilis has been questioned by a number of very competent observers<sup>4, 5, 6</sup>. As Henry M. Ray<sup>7</sup> has put it, "The manifold and overwhelming significance of a Wassermann report in its hygienic, economic and social phases, makes it imperative that the clinician have a comprehensive knowledge of the factors that enter into the interpretation of the report. To a certain extent, these factors are not generally applicable, since they vary according to the serological methods, so that a knowledge of the particular laboratory

consulted, its standards and technique, is essential. It is the duty of the clinician to know the possibilities of error in the particular laboratory employed."

#### CONCLUSIONS

While I am firmly convinced that the Wassermann reaction is still the greatest aid we have in dealing with syphilis, we must never for an instant lose sight of its limitations, and the technique of the laboratory must always be carefully watched and controlled in every possible way by the observations and experience of the clinician. Laboratory tests are all very well, but I feel sure that carefully gathered clinical data will never yield its position as the best and surest means of diagnosis. No physician should wholly condemn the Wassermann reaction because it fails to confirm his diagnosis in one or two cases. We cannot generalize from a single instance in this matter, more than in any other. It is only after a large series of cases has been

carefully controlled and completely studied, that we should permit ourselves to draw conclusions or alter markedly our views. It should be the aim of everyone sincerely interested in obtaining exactitude in laboratory results to make every effort to detect inaccuracies and to devise means of checking and eradicating them whenever possible.

4 WEST SEVENTH STREET.

#### REFERENCES

1. Broeman, C. J.: A Thorough History an Important Factor in Syphilis. *Am. J. Syphilis*, Vol. 5, p. 565, Oct., 1921.
2. Broeman, C. J.: The Wassermann Reaction from the Clinician's Point of View. *Am. J. Syphilis*, 1922.
3. Solomon, H. C.: Agreement in Results of the Wassermann Reaction. *Jour. A. M. A.*, Vol. 72, p. 788, March, 20, 1920.
4. Ottenberg, R.: Reliability of the Wassermann Reaction. *Arch. Int. Med.*, Vol. 19, p. 457, April, 1917.
5. Symmers, D.: The Value of the Wassermann Reaction. *Jour. A. M. A.*, Vol. 70, p. 279, Feb. 2, 1918.
6. Pinard: Negative Wassermann with Active Syphilis. *Bull. et mém. Soc. d'Hôp. de Paris*, Vol. 44, p. 682, Dec. 31, 1921.
7. Ray, H. M.: The Wassermann Reaction: Reasons for Discrepancies. *Am. J. Syphilis*, Vol. 5, p. 320, April, 1921.

## The Treatment of Chorea by Intravenous Injections of a Pure Protein\*

E. G. HORTON, B. S., M.D., Columbus

*Editor's Note.*—From his reported and other as yet unreported cases, it would seem to Dr. Horton that a clinically pure protein may be used intravenously with as great success in the treatment of chorea as auto-serum or horse serum, and with greater convenience. The results obtained by Dr. Horton he considers as probably due to foreign protein alone and the use of protein has been most effective in those cases of chorea giving a rheumatic or tonsillar history. Whether the presence of an eosinophilia will aid in eliminating cases that will not respond to this form of treatment requires further study.

ONE FEELS no little temerity in addressing a medical audience on a time-worn subject like chorea, where so much has been said and written with the greatest variance in conclusions on the part of clinicians, pathologists and bacteriologists; but there always lingers a hope that in the near future, from a viewpoint obtained by virtue of a previous observation, some one may find the key and reveal to us the secrets of chorea. Accordingly any contribution may prove to be worthy.

#### ETIOLOGICAL CONSIDERATIONS

No improvement has been made on Sydenham's original description of chorea, and the symptoms are too well known to need reviewing here. Statements of some phases of etiology and treatment may be of greater interest and value to you. Doubtless all agree that chorea should be classed as a nervous disorder, but beyond that there is the widest range of opinions. Kowalewsky early claimed chorea was of syphilitic origin and he has been supported by Milian<sup>1</sup>, Foti<sup>2</sup> and others. Foti, in 17 cases of chorea, found unmistakable evidence of syphilis in 13, probable evidence in 3, and absence of

evidence in only 1 case. He considered a showing of 94 per cent. of the cases revealing evidences of syphilis as very significant. Against the syphilitic origin of chorea we find the work of Comby<sup>3</sup>, Guillian<sup>4</sup>, Babonneix<sup>4</sup>, Grabois<sup>5</sup>, and more recently that of Koplik<sup>6</sup>, Morse and Floyd<sup>7</sup>, and also of Abt and Levinson<sup>8</sup>, the last observers reporting on 226 cases. The weight of evidence is against syphilis as a causative factor.

Bacteriologically there is likewise an evident discrepancy in findings. Westphall, Wassermann, and Makoff<sup>9</sup> isolated a diplococcus from the spinal fluid; Reichhardt<sup>10</sup> obtained a staphylococcus; Preobrazhensky<sup>11</sup> a streptococcus; Poynton and Paine<sup>12</sup> a diplococcus; Donath<sup>13</sup> a staphylococcus py. aureus and staphylococcus py. albus; Collins<sup>14</sup> a diplococcus; Richards<sup>15</sup> and also La Feta<sup>15</sup>, the streptococcus viridans. Not a few observers have failed to obtain any micro-organism from their choreic cases. While not agreeing on any one organism, it seems most workers do lean toward some micro-organism or group of micro-organisms as occupying some casual relation to chorea.

Since See and Roger suggested a close relation between chorea and rheumatism, or the infectious diseases, most writers have concurred in that belief. Morse and Floyd<sup>7</sup> make this

\*Read before the Section on Obstetrics and Pediatrics of the Ohio State Medical Association, during its Seventy-Sixth Annual Meeting, at Cincinnati, May 2-4, 1922.

statement: "Our results . . . seem to show that if chorea is caused by a micro-organism, the source of infection is ordinarily in the tonsils or teeth. They tend to confirm the belief that there is an intimate relation between chorea, rheumatism, and endocarditis." Allow me here also to quote from Tumpeer<sup>17</sup>, who wrote to the point: "For the most part rheumatism is credited with preparing the soil for the production of chorea. Cheadle early called the attention of medical men to the relation of tonsillitis, endocarditis, rheumatism and chorea." Since his time the conception has remained. Hirt states his position this way: "Chorea is the result of a toxic agent, which, affecting the cortex, produces chorea and affecting the joints causes rheumatism." Wollenberg terms it a meta-rheumatic affection. Duckworth calls it rheumatism of the brain; and Huebner regards chorea as the rheumatic equivalent. Still believes that the post-scarlatinal cases of chorea belong to the rheumatic group because in his experience such cases are usually accompanied by other manifestations of ordinary rheumatism.

The prominence of the rheumatic factor leads to a consideration of the tonsil both as a source of rheumatic infection and as a portal of entry. Dunn states that there is strong reason for believing that chorea is one of the manifestations of tonsillar infection while Chapin and Pisek remark that hypertrophied tonsils are associated with the disease. Graham suggests that the organisms gain entrance through the tonsil. Jochmann states that the tonsils frequently contain plugs of gaseous material in the lacunae and that this is the seat of the chronic infection. When these foci are removed he maintains that the disease clears up. Morse and Floyd found diseased tonsils in 42 per cent. of cases. Abt and Levinson reviewed 135 cases of which 35 per cent. "gave a history of tonsillitis."

#### METHODS OF TREATMENT

When we come to treatment the range of opinions is almost boundless. Some of the drugs advocated have been the zinc salts, potassium iodate, cimicifuga, silver nitrate, bromides, anti-pyrin, trional, veronal, luminal, chloretone, urotropin, hyoscine, chloral, codeine, ergot and strychnine, while most physicians have put their faith in the salicylates or in arsenic in the form of sodium cacodylate or Fowler's solution, the last named being held by many as the routine specific. In addition, isolation, absolute rest, and hot baths are included. In marked opposition to the popular belief for rest and isolation as essentials the work of The Burke Foundation, at White Plains, N. Y., in the convalescence of chorea should be mentioned. Irving<sup>18</sup>, in reporting this work says, "it was required in order to be admitted, that patients be able to walk and to feed themselves at the table." Remarkable progress was obtained under conditions of active outdoor management including rest, play and work. Dancing, hiking, skating, coasting, snow-

balling, field-day events (limited for each patient) tennis, short golf, weaving, hay-raking, and toy-making all under strict supervision, were found helpful, and the patients were not delayed in time of recovery, but were bettered in condition, and their mental morale in the presence of others was greatly improved.

The slow and oftentimes unsatisfactory results of drugs *per orum* has led to attempts for a quicker and more satisfying procedure for patient, parent, and physician.

The Marinescu treatment, with its large doses was modified by Pastore<sup>19</sup>, who gave fractional doses of magnesium sulphate solution daily for five days with good results in several cases. He used a 25 per cent. solution, giving from .1 to 1.5 cc. with 2 or 3 later doses at intervals of 4 days.

*Auto-Serum.*—Much credit must be given Goodman<sup>20</sup> for what seems today to be the most promising quick procedure. Reasoning that the introduction of immune bodies into close contact with chord and brain might work, he began investigating the intraspinal injections of auto-serum. He took blood from the patient's vein, centrifugalized it, pipetted off the serum and kept it on ice until used. About 20 cc. of spinal fluid were withdrawn by lumbar puncture and replaced with 15 cc. of auto-serum at blood heat. The results were startling in speed and effect. Of 30 cases so treated by from one to four injections only 2 were unimproved, while 1 was slightly improved, 7 markedly so and 20 were cured. Results were obtained in 2 or 3 days after treatment. Previous to treatment absolute rest in bed should be required with freedom from medication.

Porter<sup>21</sup> says, "It is well recognized, due to the published work of Mott, Leri, Orofici, Flexner and Mehrtens, supported by other unpublished work, that the injection of foreign protein does break down the defensive power of the choroid and allow substances which ordinarily do not pass to move from the blood into the central nervous system. . . . One of Goodman's patients, who had been receiving chloral and codeine, went into deep coma which lasted for 36 hours after the first injection. . . . There is reason to believe that this result was due to an increased choroidal permeability produced by the proteins injected into the spinal canal."

Brown, Smith, and Phillips<sup>22</sup> with auto-serum treated 23 cases that had failed to respond to medical treatment previously. Four had been treated for over a year and the others for an average of six and a half weeks. An average amount of serum used was 17 cc. and from 1 to 5 injections were given. One case had a severe reaction from the first treatment and did not return; 4 others were improved and 18 cured, the periods of observation extending over a year. Porter<sup>21</sup>, reports on 7 cases treated by intrathecal injection of horse serum with 1 failure, 1 brief relapse 2 months later and 5 cures with no recurrence in the rather limited time interven-

ing between the treatments and his report. It is worthy of note that Porter's one case not showing an improvement was the only one in his list failing to show a rheumatic or tonsillar history. This suggests the same thought provided by some of my own work, *viz.*, that the injection of foreign protein is perhaps valuable only in rheumatic or tonsillar cases.

Again, the work of Macalister<sup>28</sup>, and of Berger<sup>29</sup>, leads one to suspect that the absence of eosinophilia in choreic cases may serve to point out those that will best respond to treatment by the injection of foreign protein.

#### PURE PROTEIN

There are some delays and difficulties in the use of an auto-serum, and it occurred to me that perhaps a chemical preparation that could be on hand in advance would be desirable, if efficient. Such a chemical preparation had been prepared by my esteemed friend Clyde Brooks, A. B. Ph. D., M. D., at that time Professor of Physiology, College of Medicine, Ohio State University, and now Dean of the School of Medicine, and Professor of Physiology and Pharmacology, University of Alabama. I quote Dr. Brooks' description of this so-called secondary proteose or pure protein: "It is a protein prepared from ox-blood fibrin by peptic and hydrochloric acid digestion, the products of this digestion being fractionated by precipitation with ammonium sulphate, the first fractions being rejected and the lower ones being used. The protein is prepared in a dry state and kept in hermetically sealed glass ampoules. These ampoules are sterilized by heat. When used, the dry sterile powdered protein is dissolved in sterile 0.9 per cent. sodium chloride solution and used at once by intravenous injection with aseptic technique. In some cases intra-muscular injections were made." It is quite apparent that we have in proteose a convenient preparation always at hand and ready for use.

Knowing of the successful use of this preparation by Brooks and Stanton<sup>30</sup>, (published later) in the treatment of rheumatic cases, and having used it myself for that purpose, the question arose in my mind as to how it would work in chorea. As no unpleasant reaction had as yet been observed I began its use in chorea with varying results because the cases were not selected with reference to rheumatic or tonsillar history. I desire to report to you the results in two cases with rheumatic histories.

#### ILLUSTRATIVE CASE REPORTS

Case 1.—M. B., referred by Dr. W—. Female, aged 29; pregnant, primipara; severe scarlet fever at age of 8; rheumatism and unable to walk for two months; had a mild mitral regurgitation; when referred had a typical severe case of chorea; she could not walk alone, could not feed herself at times, and gave the most distressing facial distortions it has ever been my lot to see. She was given 12 mgms. of secondary proteose intravenously with the result that she

could walk, talk, and eat comfortably. The second and third doses were given at intervals of four days. Fifteen days after the first treatment not a sign of nervousness could be observed. Pregnancy was passed through with an uneventful delivery and no recurrence for 7 months when she was lost track of by us.

Case 2.—P. P—, girl, aged 10; had had tonsillitis until tonsils were removed; had a loud systolic murmur transmitted to axilla; when case was referred to me she presented the picture of an extreme choreic with no control over the bodily functions, only occasionally and with greatest difficulty being able to give a distorted *yes* or *no*; had to be kept under a restraining sheet. She was given 12 mgms. secondary proteose intravenously. The dose was repeated two days later. The head nurse was taken ill the morning of the first treatment and was off duty for three days being present when I entered the hospital the fourth morning. Note her reply to the inquiry, "How are the children?" "A miracle has been performed on the third floor. You remember I was taken sick just after P— received her first intravenous, and was away three days. Imagine my surprise when I walked up to her bed this morning and she began to talk to me in full sentences, and three days ago she could not say *yes* or *no* decently; and now she can feed herself." A slight nervousness came back some two months later, but promptly disappeared.

#### CONCLUSIONS

1. From the reported and other as yet unreported cases, it would seem that a chemically pure protein may be used intravenously with as great success as auto-serum or horse serum, and with greater convenience.
2. The results obtained are probably due to foreign protein alone.
3. The use of protein is most effective (and perhaps only so) in those cases of chorea giving a rheumatic or tonsillar history.
4. Whether the presence of an eosinophilia will aid in eliminating cases that will not respond to this form of treatment requires further study.

#### BIBLIOGRAPHY

1. Bull. et mem. Soc. med. d hop de Par., Vol. 37, p. 368, 1914.
2. *Pediatrics*, Naples, Sept., 1919.
3. Bull. et mem. Soc. med. d hop de Par., Vol. 39, p. 238, 1915.
4. *Ibid.*, Vol. 34, p. 671, 1912.
5. These de Paris No. 298, 1913.
6. *Arch. Ped.*, August, 1915.
7. *Am. Jour. Dis. Ch.*, Vol. 12, p. 61, 1916.
8. *Jour. A. M. A.*, Vol. 27, p. 1342, 1916.
9. *Berlin klin. wechnsch.*, Vol. 36, p. 638, 1899.
10. *Deut. Arch. Klin. Med.*, Vol. 72, p. 508, 1901.
11. *Filatov, Dis. Ch.*, p. 364, 1904.
12. *Lancet*, Vol. 2, p. 1760, 1905.
13. *Ztschr. f. d. es Neur. n Psychiat.*, Vol. 4, p. 91, 1910.
14. *Brit. Med. J.*, Vol. 1, p. 220, 1913.
15. *Jour. A. M. A.*, Vol. 62, p. 110, 1914.
16. *Arch. Ped.*, Vol. 32, p. 135, 1915.
17. *Arch. Ped.*, Vol. 37, p. 717, 1920.
18. *Arch. Ped.*, Vol. 39, p. 159, 1922.
19. *La Pediatría*, Oct., 1918.
20. *Arch. Ped.*, Vol. 33, p. 649, 1916.
21. *Am. Jour. Dis. Ch.*, Vol. 16, p. 109, 1918.
22. *Canad. Med. Asso. Jour.*, Jan., 1919.
23. *Brit. Med. J.*, Vol. 2, p. 514, 1909.
24. *Am. Jour. Dis. Ch.*, Vol. 21, p. 477, 1921.
25. *N. Y. Med. Jour.*, March 15, 1919.

# The Influence of Hospital Standardization On Preventive Medicine\* •

C. D. SELBY, M.D., Toledo

*Editor's Note.*—Honest effort to conform with minimum standards results in better diagnoses, which result in better treatment, which beget better results, which inspire the confidence of patients in physicians. This confidence of patients arouses public confidence in the profession which creates earlier opportunities for the recognition of disease, better opportunities for the arrest and cure of disease or preventive medicine, thus concluding the happy cycle drawn by Dr. Selby.

THE EXPRESSION *hospital standardization* is associated with the movement initiated and popularized by the American College of Surgeons for the purpose of bettering surgery. Those hospitals which desire to be recognized as having met the *minimum standards*, as they are called, must have an organized staff composed of men of known ability and pledged against the division of fees. The staff must meet at least monthly, and review the clinical experience of the members. It is responsible for the policies governing the professional work of the hospital. Accurate records must be kept of the history, physical examination, laboratory findings, working diagnosis, operative procedures, progress of the patient and physical condition at the time of discharge. There must be ample laboratory facilities of all kinds. In other words, a hospital desiring recognition must effect a competent staff organization, provide itself with adequate facilities and insist on a routine that will insure an application of the principles of scientific research to the care of patients.

Earnest endeavor to comply with these standards have a most beneficent influence. Case histories show marked improvement; an investigative spirit appears; diagnoses become more accurate; physicians cooperate as never before; patients get more satisfactory attention, and consequently have a greater appreciation of the merits of medical and surgical service.

These are the first effects. The later effects are earlier opportunities for diagnosis and more favorable conditions for the prevention of disease, as later to be defined. The remarks that follow are based on observations noted in hospitals that have met the standards.

## SUPERVISION OF CASE RECORDS

Case records are the criteria of service. Their supervision is an extremely important function of the staff. It is customary to appoint a committee out of the staff and charge it with that duty. This committee reviews all records. Those which are incomplete are referred back to the attending physicians. Those which teach a lesson or emphasize a point are abstracted and

presented to the staff for discussion, as illustrated by the following:—

*Case 1.*—A child was brought into the hospital for the treatment of a condition characterized by fluctuating masses in both inguinal regions, abdominal distention, vomiting and obstinate constipation. Incarcerated hernia with obstruction was diagnosed. The masses were opened and in each was found an abscess. The record committee invited the surgeon to abstract his case at the next staff meeting. He did so, and a member called his attention to the fact that there was no mention of a white blood count. The surgeon acknowledged his omission, confessed to a hasty conclusion and ended with a plea for more thorough case studies.

*Case 2.*—A woman had a mass in the right upper abdomen. A surgeon diagnosed gall bladder disease. He operated, found an inoperable mass in the liver, and closed up. Evidences of syphilis were found at the autopsy. The case was abstracted for the staff. No Wassermann test had been made. The surgeon agreed that had he ordered a Wassermann test, he would probably not have submitted his patient to a needless operation. The lesson was obvious to all.

The record committee is also charged with the duty of tabulating and analyzing the professional work of the hospital each month. It reports its findings to the staff, with emphasis on the points desired to stress, such as the percentage of mortality and the causes of death, the ratio of autopsies, as well as post-operative and other complications.

*Case 3.*—The record committee of a standardized hospital made such a report, and drew attention to the number of post-operative infections. A member suggested that the cold water supply might have been the source of contamination. The pathologist was asked to investigate. He found reasonable evidence to support the theory. Arrangements were made for the culturing of the supply each afternoon after sterilization, so that a report could be made each morning before the operating hour. This procedure was followed by improvement.

## FEWER EXPLORATORY OPERATIONS

The virtual elimination of the so-called *exploratory operation* is an early result of conscientious efforts to meet the minimum stand-

\*Read before the Section on Hygiene and Sanitary Science in Joint Session with the Ohio Association of Industrial Physicians, during the Seventy-Sixth Annual Meeting of the Ohio State Medical Association, at Cincinnati, May 2-4, 1922.



ards, and as time goes on fewer and fewer mistakes occur in diagnosis.

*Case 4.*—A surgeon made a provisional diagnosis of cancer of the pylorus and as a routine measure ordered a roentgenologic study of the digestive tract. This brought to light an obstruction of the esophagus, probably of a cancerous character, which the use of radium has ameliorated. Had the surgeon acted on the strength of his own unsupported opinion, he would have opened up the abdomen and of course, would have found nothing.

*Other Instances.*—There is a constantly increasing tendency to ask for consultation. Cooperation in the care of patients is more apparent. *For example*, a patient was being attended for a severe infection of a hand. The routine urinalysis revealed a glycosuria. An internist was requested to assume charge of that phase of the case. Incidentally, the arrest of the diabetes and the instruction of the patient in methods for its control might be said to be an application of the principle of preventive medicine. So also with respect to the arrest of a nephritis that appeared in connection with the removal of badly infected tonsils. Then again, there was the young lady who consulted a surgeon for the relief of an exophthalmic goiter. He referred her to the medical side for metabolism determinations. During the course of the study, very badly infected tonsils were found. An otolaryngologist was called into conference and it was decided to remove the tonsils—not the goiter. This was done, and a spectacular recovery followed. The collaboration of surgeon and roentgenologist in the treatment of cancer is now a common practice. On the whole, the staff physicians of recognized hospitals are of all physicians the most inclined to work in harmony.

#### CLINICAL RESEARCH IS ENCOURAGED

It is only natural that this constant striving to learn the truth with respect to the condition of each individual patient should arouse a desire to pursue more general researches. And that is what actually happens. Reference is not made particularly to laboratory researches, but rather to investigations of a clinical nature. For instance, an analysis of the diagnoses as they came down to the record room of a standardized hospital developed the fact that ectopic pregnancy was very often wrongly diagnosed and the collateral fact that other pelvic and abdominal disturbances were frequently thought to be ectopic pregnancy. A study is now being made of these cases in the hope that data may be obtained which will enable the physicians of that hospital to minimize the error.

Although the remarks thus far have concerned chiefly the surgical side of hospital service, the improvement is obviously not limited thereto. An equal betterment has appeared in the medical

side and in other departments as well. Of course there has been no sudden nor miraculous change, but the spirit of scientific investigation is gradually and certainly displacing the hasty, slipshod methods of former years, when hospitals were slurringly spoken of by internists as surgical boarding houses. The spirit is cumulative, or rather infectious. It spreads and permeates the entire personnel of the hospital. Those who were wont to voice opposition to innovations, in times past, by saying, "They can't be done", now make constructive suggestions themselves. They offer improvements in technique and equipment, methods or means to make the hospital and the service it renders a little better. In time this spirit gets to the people, the patients, and the hospital is looked upon as a place where immature action is discouraged, where the services are based upon earnest investigation and mature judgment. Such an institution begets and keeps the confidence of the public. Physicians do not have to apologize for it when asking patients to go there, and conversely the fact of a physician's membership on the staff of such a hospital is in itself an endorsement of his professional ability.

*Case 5.*—The truth of this is reflected in the attitude of a woman who entered a standardized hospital for her third operation, the others having been done in that hospital before it was recognized. She called for the superior and this is what she said, "I have already had two operations and neither one accomplished anything. As I look back, and mind you, Sister, I do not criticize any one, I think my condition was not studied as it should have been. This time they tell me I have a stone in the kidney, and I believe them because I have been examined several times and have had a number of laboratory tests and X-ray examinations. I go to this operation with a feeling that the doctors know exactly what is wrong and exactly what to do to relieve me."

The service of these hospitals is becoming more and more attractive to the public. Patients frequently enter them for diagnostic studies. The purely medical service is building up and the wide disparity between the medical and surgical cases is gradually lessening. These hospitals are being used by a vastly wider range of cases than ever before.

#### CONTROL OF DISEASE IS PREVENTION

Viewed in the light of the broad and modern conception, preventive medicine is defined as that application of medical science which has for its object the control of diseases, not only in its spread from person to person, as in the communicable diseases, but in its development within the individual as well. The early diagnosis and arrest of a nephritis, *for example*, is regarded as an accomplishment of preventive medicine; also the early excision of a cancer, and so forth. In other words, the retardation of disease, either inter- or intra-corporeal, or its

arrest, or its cure, is considered as preventive medicine.

The highest type of prevention is that which anticipates disease and undertakes to avoid it. That is the ideal toward which the profession is striving and is particularly true of departments of health. It is an ideal, however, that can not be obtained at the present time for two reasons; (1) our knowledge of the cause of disease and methods for its eradication is not sufficient in the medical profession itself, and (2) too much depends upon individual, personal action on the part of the great and relatively uninformed public.

The human body is an exceedingly complicated organism whose functions and operation are quite beyond the comprehension of the mass of the people. The average person makes little or no effort to understand it or to learn what is necessary to preserve health. On the contrary, it is customary to think of these matters only when the body ceases to function in the ordinary manner. When this happens there is a proneness to experiment with home remedies, or the services of one who claims much in the way of ability to cure may be sought, or perhaps a physician may be consulted.

#### PREVENTION IS DEPENDENT ON EARLY DIAGNOSIS

The problem of the prevention of disease requires, therefore, two elemental actions: (1) the encouragement of people to seek physical examination by competent physicians so that diseases may be detected in their arrestable stages, and (2) the development of diagnostic ability in the profession to the point that physicians will more generally recognize diseases in their early stages. It is assumed that physicians who are able to recognize diseased conditions will, by the same token, be able to prescribe appropriately for the relief of those conditions.

The question is, has hospital standardization had any influence on these two actions? Has it (1) caused physicians to be more painstaking in their investigations of individual cases; (2) has it caused them to make researches into the etiology, manifestations and treatment of diseases, and thereby (3) has it caused people to have a greater degree of confidence in the profession and to avail themselves of its ability? If so then the answer can be said to be in the affirmative.

There is positively no doubt but that conscientious conformity with the *minimum standards* elevates medicine to a higher level, placing physicians in a much better position to apply the principles of preventive medicine, as already defined. Furthermore the enhancement of public confidence, which eventuates from the elevation of medicine, inspires people to an earlier solicitation of professional service and, therefore, an earlier discovery of remediable con-

ditions and the possible arrest of those not remediable. This is likewise an application of the principles of prevention. There is then no doubt about the ultimate influence of hospital standardization on preventive medicine. It is not a direct influence and the effect is not immediate, but in the time to come it will be more and more pronounced and probably more far reaching than can possibly be conceived at present.

#### HOSPITALS AS SCHOOLS OF PUBLIC INSTRUCTION

The accomplishments of the tuberculosis hospitals of today give us an intimation of the possibilities that lie in this direction. Such hospitals serve not only as institutions for the arrest of tuberculosis, but as schools for the instruction of these who are afflicted, teaching them how to care for themselves and how to safeguard others.

Is it also not possible for general hospitals to become schools of instruction to teach those, who have such diseases as diabetes, nephritis and other conditions, the arrest of which is contingent more upon hygiene than medication, just how to live and conduct themselves in order to promote their personal comfort and prolong their lives? There are real opportunities in this direction. Is it not possible to give some instruction to everybody who goes into a hospital? If this were done 8,000,000 people would be reached every year in the 8,000 hospitals we now have.

This opportunity to reach the people would be greatly enhanced if the rural districts were to be adequately provided with good hospitals. As a matter of fact, the tendency is already here. The problem of rural medical service is compelling notice, and certain authorities are of the belief that the properly situated and equipped rural hospital is the solution. Be that as it may, the rural communities are demanding better opportunities of all kinds, better schools and better roads. It is not at all unlikely that they may demand more and better hospitals.

In the opinion of the writer, this movement and others of kindred nature, which improve the service the medical profession is able to render in the behalf of humanity, are the best means of refuting the extravagant claims of chiropractic and others of that class. This opinion is supported by the facts, the thoroughly proved facts, that merit is eventually recognized, that chicanery is sooner or later exposed, and that values, like water, always tend to find their proper level. On the basis of these facts, the policy of the medical profession, collectively and individually, is clear cut. That policy is to strive unceasingly and unselfishly in the interest of humanity, seeking always to render the best possible service in the prevention of disease and the alleviation of physical suffering.

## SUMMARY

1. Honest efforts to conform with the minimum standards result in better diagnoses.
2. Better diagnoses result in better treatment.
3. Better treatment begets better results.
4. Better results inspire the confidence of patients in physicians.

5. The confidence of patients arouses public confidence in the profession.
6. Public confidence in the profession creates earlier opportunities for the recognition of disease.
7. Earlier opportunities for the recognition of disease occasion better opportunities for the arrest, or cure of disease.
8. And the arrest or cure of disease is preventive medicine.

## Tachycardias of Neurotic Origin\*

CHARLES E. KIELY, M.D., Cincinnati

*Editor's Note.*—The syndrome known as "soldier's heart" was described by Da Costa soon after the Civil War. A great number of men in the World War were incapacitated by the same syndrome and many claims for compensation based on this disability are now being presented to the Government. Those in rehabilitation work, like Dr. Kiely find that examination and therapeutic tests fail to confirm endocrinological theories of the causative factors in the condition. Cardiologists also consistently fail to find organic heart diseases. Mentally these patients are typical neurotic and suggestive therapy has been found as successful as any other.

**T**ACHYCARDIA without evidence of physical disease is not uncommon in neurological practice, but has become of exceptional importance in the work of the Veterans' Bureau. Fairness in awarding disability due to military service and a conscientious desire to protect patients from invalidism, which, though sincere, may be purely mental, have made the problem worthy of this report.

### DIAGNOSTIC CLASSIFICATION

I shall first define the type of tachycardia meant. It will of course, be understood at the outset that tachycardia accompanying valvular or myocardial disease, frank infections such as tuberculosis and obvious hyperthyroidism, are excluded. These patients have come to me after general physical examination in the clinic of the bureau, and are referred because no organic cause for the tachycardia has been found. Many have also been passed on by the cardiologist of the unit. A very large proportion are sent with a tentative diagnosis of *simple goitre* but the relation of this disease to the syndrome in question must form a later important part of the discussion.

*The type of tachycardia seen is paroxysmal, the patient regularly reports the episodes are induced by physical or emotional strain, there is precordial pain, dyspnoea, and a sensation of great weakness, particularly in the legs.* Nearly all cases complain of these symptoms. Less regularly we hear of dizziness, pain referred to the lower molars and panicky fear; actual fainting was claimed in only two cases and was never confirmed in any. The episode has varied from a few minutes duration to a few hours. The vast majority really showed a tachycardia during examination—say ninety to one hundred beats a minute and the exertion of hopping fifty times on one foot quickened it to 120 or 140. Few showed signs of the distress and dyspnoea claimed when thus actually observed. None showed sig-

nificant vasomotor symptoms, none ever fainted. Actual test, therefore, has almost without exception contradicted the history. Only one of these patients is known to have died, but I have been unable to learn the circumstances and cannot even say whether his death was accompanied by cardiac symptoms. Several cases while under my care were shown to have tuberculosis. They were, therefore, transferred to special services for this disease and are not included in this series.

### STUDIES IN NEURO-TACHYCARDIA

In classifying these patients diagnostically, I thought at once of the name "Soldier's Heart." Paroxysmal tachycardia is the more scientific term and under this name the condition was described by Bouveret<sup>1</sup> in 1887. His paper, which contains original cases and digests of German and English reports, describes paroxysms similarly induced and accompanied by similar symptoms but the tachycardia is much more severe, of days and even weeks duration and not infrequently terminates fatally by syncope. Most of his cases showed a remarkably sudden recovery—expulsion of gas from the stomach or some such insignificant event bringing down to normal in seconds a pulse which had run in the hundreds for weeks. Several patients were able to abort their attacks by deep breathing and by pressing the vagus in the neck. The pulse rate in Bouveret's cases is astounding—sometimes 200 or even 300 per minute. He does not record whether these were measured with the fingers or by instruments. Cardiologists will tell you that after 160 beats digital estimation is quite inaccurate and some form of sphygmograph becomes necessary for accuracy. But in the main his cases resemble ours. Some few are, however, plainly myocardial and so proved by autopsy. He considers the possibility of hyperthyroidism and with what diagnostic means his day provides rejects it. He admits the failure of cardiac medication, particularly digitalis, and goes no farther with his conclusions than to express an opinion that the disease is due to the innervation of the heart.

\*Read before the Section on Nervous and Mental Diseases of the Ohio State Medical Association, during the Seventy-Sixth Annual Meeting, at Cincinnati, May 2-4, 1922.

There is no greater scientific virtue—to limit theory to the warranted conclusions of the facts at your command. Much useless scribbling in medical journals would be saved if more of us were as honest.

#### VAGOTONIA AND SYMPATHETICONIA

I do not care to attempt a review of the literature on this subject but pass now to the therapeutic problem that presented itself early in our work with the Veterans' Bureau more than two years ago. My attention was attracted promptly by the research of Wilson and Carroll<sup>2</sup> published under the title "The Nervous Heart." These men were members, respectively of the British and American Commissions on Neuro-Tachycardia. Their research is a 127 page duodecimo volume and it is impossible here to enter into all the finer controversies which it begets, but only to consider it broadly and particularly by the pragmatic criterion of results. Their theory is based on the previous work of Carroll—an assistant to Mackenzie and to Lewis—and which has been published under the rather sensational title of "The Hearts of Men," implying and asserting that humans are equipped not with one of these organs as vulgarly supposed, but four, the three supernumerary organs being the arterioles of the lungs, splanchnic distribution and the skin. Circulation is dependent on the systoles and diastoles of these vessels as well as of the heart. Taking these theories for granted, Wilson and Carroll launch into their discussion of neuro-tachycardia with the postulate that this condition is primarily due to vagus hyperirritability—a *vagus pull*. This is based on their observations that these patients showed a slowing of pulse rate on deep inspiration. The vagus pull they believe to originate from the toxins of infectious disease, particularly trench fever and acute rheumatic infection, but to their credit they stress again and again the power of emotional factors.

For instance,—

"The capacity of the patient now depends on the extent of the irritability of his vagus depressor system, on the power of response of his sympathetic system and on a host of external conditions, which we call collectively 'circumstances' (an example of these latter was, during the war, the desire of many men to avoid returning to the firing line)." Not one of these three factors can be separated from the others, and most of the mistakes made in regard to functional heart conditions have arisen because an attempt to separate them has been made. Thus, if the condition of the vagus mechanism alone be considered, the cases are apt to be treated from a neurological point of view, or even from a purely cardiologist point of view. The neurologist is, however, always painfully aware that there are signs and symptoms which lie outside the strict picture, and he is not able to refute the claims of the cardi-

ologist on the one hand or the psychotherapist on the other. Nor can the cardiologist refute his claims.

On the other hand, attempts to regard the condition as due to *sympathetic exhaustion* end, as a rule, in disaster, because it is easy to show that in many of these cases the sympathetic system is not exhausted. For example, the man who appears ready to collapse on the drill ground may often be seen later running without distress, or walking out cheerfully with his sweetheart. It is just here, as we have attempted to show earlier, that external circumstances have their bearing on the problem as they have their bearing on all human problems. Nevertheless, those who seek the complete explanation in the mental field are likely to miss a true understanding."

Later they cite cases to show that when tachycardia had abated under treatment, bad news, stoppage of leave, or orders to return to front line duty brought it back. A specific and interesting case is the patient who carried a bucket of coal up stairs without distress, was informed that he was now ready to return to combatant duty and an instant after carried the same coal the same distance practically at the expense of vaso-motor collapse. Carroll and Wilson give, therefore, just weight to psychic factors.

Returning now to the theory as developed by them, they assert this vagus pull is compensated by sympathetic response—the sympathetic causing augmented out-put, greater systolic contraction, diastolic relaxation and with this acceleration of rate. With somewhat greater vagus pull, acceleration is dispensed with and compensation made by augmentation only,—the pulse, remaining slow; with a still greater vagus pull acceleration is resumed and we are in the stage of pathological tachycardia. The authors likewise presume, as a result of experiments with drugs, that both the vagal and sympathetic systems are hyper-irritable in these cases. Treatment should, therefore, be directed at limiting the vagus pull and they found in fact, that these patients tolerated large doses of atropine and were relieved of their tachycardia as long as they were under its influence. The other rational procedure would be to make the response adequate. Adrenalin would do this but its action is notoriously fleeting. The fact that thyroid enhances adrenalin action 300 to 400-fold was hit upon and these patients were found to take as high as 6 grains a day with a cessation of tachycardia.

There are some objections to the theory advanced. That vagus tone is increased because inspiration slows the heart is doubtful. This phenomenon is quite common in any young person.

Not sufficiently definite evidence is presented to prove hyper-excitability of the true sympathetic. Patients are said to have reacted "more violently" to "a dose of adrenalin intravenously." The size of the dose is not mentioned. With a drug of such definite action the reaction could

have been concretely shown by such criteria as rise of blood pressure, blood sugar, and other controls. Further, the result of administering apocodein is as loosely recorded. "The patients reacted violently, the controls did not." Now apocodein is a drug, which according Biedel<sup>1</sup> is a perfect antidote for adrenalin the activator of the sympathetic. If we presume that an overacting vagus is opposing an overacting sympathetic in this disease, then a larger not a smaller dose of the drug would be required to knock out the sympathetic and the result would be shown by excessive vagus action. Whether or not this was the case is not stated. Also Wilson and Carroll fail to answer the observation by Cotton, Rapport and Lewis<sup>5</sup> that equivalent doses of atropine showed no different effects in controls than in neuro-tachycardias. Wilson and Carroll offer for contravention that the doses were too large,—so large that the vagus depressor mechanism was inhibited and so, part of the mechanism necessary to the accomplishment of augmentation removed. They go on, "It appeared to us, therefore, that the proper test was to give a smaller amount to convert our hyper-excitable vagus depressor into a vagus depressor of normal excitability still capable of reacting well to stimuli by increasing diastole, yet no longer so active as to render augmentation insufficient to meet the needs, but accordingly gave 1/200 grain intravenously to five cases with "Disordered Heart Action." The critic cannot but ask for the evidence that 1/200 grain does exactly that thing and none is offered beyond the fact that the outcome of the experiment suited the preconceived theory, which is of course begging the question. Moreover, the real force of Lewis' contention is missed as in this experiment with the smaller dose, results are not compared with controls. Lastly the theory must be judged by the results of its therapy. The writers offer a general report of success but fail to enumerate cases or to tabulate. No failures are mentioned.

#### ENDOCRINE RELATIONS

In my own series, 20 cases were treated with thyroid extract. It was frequently gratifying to see tachycardia and its attending symptoms disappear. This applies to 11 cases but in 9 no appreciable change could be noted or the whole syndrome was definitely aggravated. Even when success is obtained in controlling tachycardia there still remains a valid objection to the theory. Thyroid extract has of course grave influences on metabolism. Are we justified in producing hyperthyroidism to cure tachycardia? When an honest trial fails to definitely ameliorate the symptoms so powerful an agent cannot be conscientiously continued. Is it possible that Wilson and Carroll made the old genial medical error of regarding themselves as good physiologists and pharmacologists and failed to recognize their success as psycho-therapists. I am afraid they have. Listen

to some paragraphs from their principles of treatment:

"Evidently the first duty of the physician will be to relieve his patient of 'depressing' circumstances—that is to say, of external and also of mental factors tending to increase vagus depression irritability. One of the chief of these factors will almost invariably be found to be fear of 'heart disease'. Victims of functional heart conditions are painfully aware of their symptoms and take a grave view of them. They are too frequently encouraged in this attitude by their medical advisers, who may have detected a systolic murmur or an extrasystole or other supposed danger sign. The patient learns that his heart is 'weak' and at once begins to take an interest in this organ; he begins to rest himself, to avoid effort, to resent calls upon his activities. If his doctor supports him, he becomes an invalid forthwith. . . .

"The first thing to do with this man is to disabuse his mind of the idea that his heart is diseased, and as a general rule this can only be done by affording him a rational explanation of his symptoms. Mere assurances are useless, for in all probability he has other medical opinions to place against these optimistic views. He jumps to the conclusion that he is merely being 'let down easily'. The physician should be quite candid and quite explicit. The writers begin as a rule by calling the patient's attention to his generally flabby state,—the flabby state of his muscles, of his abdominal muscles in particular. They mention casually that the heart also is a muscle and must be expected to share in the general flabbiness. They then explain how the blood supply of the muscles and brain is conditioned by the abdominal musculature as well as by the heart itself, and suggest that the giddy sensations which bulk so large in the patient's fear are due to accumulation of blood in the abdomen at the expense of the brain. The idea of heart disease is thus merged in the idea of general lack of tone, and thus it is comparatively easy to indicate the toxic nature of the condition—"the system is poisoned,' the heart merely suffers along with other members. If the patient is interested in motors he may be told that it is not the engine which is at fault, but the spark, the timing. 'The nerves to the muscles and heart are poisoned.' (The use of the term nervousness or neurasthenia should be avoided, as this at once arouses antagonism).

"So soon as the patient grasps the idea that he is the victim of a poisoned nervous system and that herein lies the cause of his sensations, he will ask if tonics cannot be given him, and the names of much-advertised proprietary preparations will rise to his mind. He must be told that not all but only certain of his nerves are affected, and that indiscriminate taking of tonics may be harmful. His position is like that of a 'machine running with the brakes on.' The prob-

lem to be solved in his case is how to take the brakes off.

"He will then be in a fit state of mind to realize that fear of his own condition is one of the worst enemies he has to fight, and this realization will go far to dispel his fear and so to restore his mind to equilibrium and to its moral activity.

"The immediate result will be a question as to how much effort may be undertaken with safety. The answer should at once be given, 'As much as you care to make.' There is no danger in effort; the danger lies in rest. An arm kept in a sling wastes; and the same applies to a heart. Hearts, like other muscles, become more useful by exercise and training. And thus also perhaps may the poison be worked out of the 'system.'

"The patient will now adopt a new view of life and of his condition, and thus a huge burden will be removed from his shoulders. Graduated exercises of one kind or another may now be ordered, or, better still, the playing of games enjoined, or the enjoyment of sports like fishing or shooting recommended. This as a preliminary to return to work. The object should be declared to be 'to develop and strengthen the flabby muscles and so counteract and dispel the poison.' A further object, which need not be insisted upon, because the less the patient thinks about it the better, is to occupy the mind and prevent brooding."

*And now hear the concluding paragraph and in particular the concluding sentence of the book: "To uproot him and transplant him to the country is a mistake. The mental upheaval occasioned is likely to be attended by so much distress and anxiety that any good obtained is discounted in advance. Moreover, the stimulus of an accustomed mode of life is valuable; friendships are valuable; ambitions are valuable. Drastic change of occupation usually means a loss of all three.*

"The writers do not forbid their patients to smoke, nor yet to take alcohol. They believe that the irritation caused by these prohibitions is much more harmful than the pleasures themselves. They do not diet their patients, though the advice given by Sir James Mackenzie in some cases—to abstain from butter and fats—has proved very helpful in their experience. Once again, interference with established habit appears to them to be fraught with danger. The less the patient is encouraged to think of himself as an invalid the more rapid and complete is his recovery likely to be."

#### PSYCHO-THERAPEUTIC HANDLING OF PATIENTS

Have you ever read a more splendid psychotherapeutic talk of the really rational kind? Observe the avoidance of the snappish "forget-it-all" that sends so many neurotics in despairing search of successive series of doctors. Ob-

serve the constructive rational explanation in the patients own words, made clear by analogies which he can understand. And all this from a "cardiologist!"

My actual experience with these patients thrust the functional factor insistently forward. Three per cent. ascribed the condition to physical strain. The cause was quite vague in 52 per cent. It soon became evident that no considerable proportion, (only 20 per cent.) had a history of infection sufficiently recent to constitute a source of toxæmia. Onsets frankly psychic were found in 25 per cent. My colleagues Drs. Friedlander and Freyhoff made a most valuable contribution to this subject in their intensive study<sup>8</sup> of 50 cases at Camp Sherman during the war. I am indebted to them greatly and wish here to refer to the claims of onset made by their patients: 94 per cent. claimed that their symptoms antedated military service, while 93 per cent. of my series claimed to have enjoyed perfect health before induction, 15 per cent. of these alleging onset after discharge. If you recall that during hostilities escape from service was more likely the longer the condition had existed and that with my patients compensation depended on establishing on onset during service, you will, I feel sure, agree that subconscious wishes might play a rôle.

The histories are frequently quite unreliable. It is my practice in examining cases to get as specific a date of onset as possible to switch off to other matters and return once or twice more to the date of onset. As is frequently the case this is put at sometime after return to civil life. I then ask how the claimant can blame it on his military service if it began after that terminated. This often leads to a claim that it began in service and a brazen and blustering denial of the original statement made and reiterated not 300 seconds before. Less mendacious claimants hold the belief that tachycardia, appearing, say in August, 1919, was due to battle strain in November, 1918, or hikes or wet billets in January or March. Sixty-six per cent. of these men carry discharges recording good physical condition on separation from the army. Those who claim symptoms while in service must needs explain the discrepancy. Many say they hid their condition because they did not wish to delay discharge and this is undoubtedly often true but many odd excuses appear. Some deny having had any discharge examination; some say "Well you know what kind of doctors they had in the army", but a favorite explanation is that "it was nearly dark and the sergeant put down anything." During one period last year this excuse was so frequent I was beginning to wonder if the whole army had not been discharged between 5:15 and 5:30 P. M. Some who had been discharged for tachycardia existing prior to enlistment sought to contravert the printed record. Not a few had been quite unaware of their

tachycardia until a thoughtless examiner allowed them to hear a cardiac diagnosis and a phobic vicious circle began, that is, fear produced tachycardia, tachycardia convinced the victim more surely of heart disease, increased conviction, meant increased tachycardia and so on ad infinitum.

I feel, therefore, that the history and the onset very frequently give strong evidence of functional rather than organic disease.

Histories parallel with the man and his bucket of coals were not uncommon. One man, who was undoubtedly quite sincere, believed himself quite incapacitated for the occupation of machinist, but was quite able to dance. Another who insisted on giving up clerical work as too fatiguing, played baseball every Sunday in good weather. Another whose tachycardia began after a narrow escape from injury by a locomotive tender swinging from a crane improved under treatment but relapsed when he lost his job through labor disputes. We hospitalized many cases to obtain more lengthy pulse records and found quite often that the pulse taken in the routine of the ward was not exceptional but when taken by me at ward rounds, was astoundingly accelerated.

Avoidance of adequate examination or actual avoidance of treatment was common. Neglect of treatment can be asserted of 33 per cent. Three claimants flatly refused hospitalization, twelve never presented the authority furnished, twenty-seven never returned to the office or only a few times. Various specious excuses for not taking the medication were offered. In several cases we became suspicious that we were being deceived. Salicylates administered by mouth give a characteristic coloration of the urine. I find that if three grains be taken this reaction will appear in an hour and persist for three or four. Dosage and office visits were suitably arranged. Some cases repeatedly failed to show this test after definite declaration that the medication had been taken as ordered. For persistent evasion of a cure the following case is unique.

#### ILLUSTRATIVE CASE REPORT

*Case Report.*—O. S. 31, married, was referred for examination January 22, 1920. Chief complaints: rapid heart, queer feeling in the precordium, whole left side numb, short winded. The onset of the condition was placed at August, 1918, two months after induction and was gradual, no cause being ascribed by the patient. The last infection was typhoid in 1907, eleven years before induction. He was discharged on S. C. D. for neuro-circulatory-asthenia. Organic neurological examination was negative; cardiac examination negative except for acceleration. The pulse sitting was 120, after hopping fifty times on one foot, 160, after resting three minutes, sitting 132. He was assured he did not have "heart disease" and told with medication he

would be well in four or five weeks and was ordered to return weekly, only enough medicine being supplied to cover that period. He did not return for thirteen days and had not taken the medicine because it hurt his stomach. He returned on time the next week. He had not taken the medicine because he had a cold. He did not return for two weeks, and claimed to have taken the one week's supply of medicine. His next appearance was May 10th, that is ten weeks later. Had taken no medication. His excuse at this time was epic. At his first examination, he asserted, the examiner had said he would be well in a month and as he was not he had concluded the examiner did not care to see him again! All medication and instruction were renewed. He returned two days late the following week. Had taken the medication only twice a day because the instructions were "after meals" and he only ate a lunch at midnight! Pulse rates at this examination were 120, 132 and 128. He was warned that failure to cooperate in future would lead to withdrawal of compensation which he had been drawing ever since discharge. He returned a day early the following week. He admitted he was working full time. On the appointed day of the following week he phoned at 2 P. M. asking if he could omit his visit as he had to make a train at the suburb of L—— to go on a week's vacation. On questioning he admitted the train did not leave for three and one-quarter hours and could be gotten at a station not twenty minutes walk from his home.

His tactics were brought to the attention of the Bureau and he was warned by higher authorities. The vacation excused him from the next weekly visit. He returned on June 15. There was no change in the pulse rate. Salol was added to his capsule. He returned faithfully every week for six weeks. On the third and fifth of these visits his urine failed to show a salol reaction. On one occasion he adduced as an evidence of disease that the wrinkles on his abdomen got red. His pulse showed no change though he admitted it slowed after taking the capsule. He admitted an improvement in his subjective complaints. He was last seen July 28, 1920, after which date he discontinued visits without any authorization and has never been seen by me up to the present time.

*Case 2.*—In support of the contention that many of these cases quite consciously avoided treatment, I wish to cite that of C. D., originally examined October 30, 1920. Diagnosis neuro-circulatory asthenia. Ordered to return weekly. Did not return for four weeks and then only on insistent orders. He made three regular visits at none of which his urine showed a salol reaction. On December 4, I gave him an order for admission to hospital. Three days later he wrote a note saying he had gonorrhoea and that he knew he would be put in a venereal ward, which he could not afford to have done as he was en-

gaged. He promised to go to the hospital when cured of his gonorrhoea. Nothing was heard of him for six months when he returned again only on orders. He admitted he was working full time and again refused hospitalization because he could not leave his business. This was the last heard of him.

*Case 3.*—Finally I mention A. H., who was given the routine talk on the functional nature of his complaint. He departed apparently gratified but some few hours later wrote a letter to Washington accusing me of swearing at him and calling him a dog in the manger. He also cited by name three physicians whom he claimed had diagnosed his condition as organic heart disease. One is known to me,—a man of the highest personal and professional standing, and I have his assurance that the statement was false,—his diagnosis was the same as mine. The second physician is quite unknown to me, and the third is notorious and makes living as a medical perjurer in damage suits. I did not consult him.

Therapy has frequently confirmed the functional theory. I treated a series of cases with three drops of albolene after meals, choosing this as the most inert thing I knew. They improved as rapidly as any others.

#### POSSIBLE RELATION TO THYROID DISEASE?

Lastly we have investigated these patients for possible thyroid disease. Many show some tremor of the outstretched hands and a degree of prominence of the eye-balls worth serious consideration. Loss of weight and gastro-intestinal disturbance is lacking, as a rule, and the thyroid is rarely prominent. A series sent for radiograph to detect sub-sternal goitre were all negative. In the last year we have had facilities for basal metabolism tests. I am indebted to Dr. Raphael Isaacs and Dr. Holacken of the Cincinnati General Hospital for their execution. I wish to acknowledge my debt as this has been done quite gratuitously for the Veterans' Bureau purely out of scientific interest. Of the twenty cases listed only two have shown a basal metabolism over 115. Those of you, who have had experience with this test in neurotics, know how much they tend to spoil the test by rapid breathing, frequently forcing one to disregard the result. I feel, therefore, that the failure in this series to run above the accepted maximum is excellent evidence that these tachycardias are not due to hyper-thyroidism. Sixteen cases regarded as functional proved to be so though most came to my office diagnosed "simple goitre." Two sent to hospital by me with that diagnosis showed normal metabolism and were revised.

#### CONCLUSIONS

The conclusions warranted by the study of this series are:—1. The explanation offered by Carroll and Wilson is open to several theoretical

objections and their therapy in practice is only sometimes successful, at others useless or even harmful. Even when successful there is grave doubt of the advisability of using thyroid because of its other effects on metabolism.

2. Focal infections have not proved to be the cause.

3. There is positive evidence that hyper-thyroidism is absent.

4. There is strong evidence that the condition is functional, mainly the frequency of psychic causes for onset, the discrepancy in the effects of pleasant and unpleasant effort, the variation in pulse when taken by different individuals, the evasion of treatment often subconscious but at other times quite deliberate.

Since there is plainly a motive, the desire for monetary or equivalent advantage, and since the rate of the heart is not a matter of volition, I submit that these cases should be classified as hysterical.

Future study of these cases imposes one plain obligation to determine if possible which case will or will not improve with thyroid—whether this difference depends on the metabolism, whether the harm of thyroid medication is too great to justify its use? Another point of rather academic interest concerns a symptom not yet mentioned. Many of these pulses show a most startling slowing when the patient bends forward. This of course involves more muscular effort than standing erect and therefore would seem a paradox. It was first noted by Lardin in 1887'. I have appealed to an otologist to study the semi-circular canal responses in these patients.

The treatment of those cases frankly functional has not been entirely satisfactory. I have consistently informed these patients they had not an organic heart disease. I have encouraged them to resume or continue their regular occupation and have in the great majority of cases officially recommended refusal of monetary compensation or other forms of aid as the best method of convincing these patients that they are not seriously sick. Unfortunately these recommendations have been frequently ignored and ridiculous degrees of disability awarded to men who are carrying out their pre-war occupation at full time. Vocational Training has often proved equally fatal. The average man draws more compensation while in training. Many men who get \$135 a month are training for jobs that will bring them less than half that sum when put out to work. The lack of incentive to recovery is obvious—a fatal mistake of course with neurotics, and it is an old experience to see a man relapse as soon as the end of training approached. He is too often allowed a leave and on return picks out some new form of training and is safe for months or years more.

I have known trainees to change from auto-mechanics to watch-repairing over night. Some



have trained for as high as five different occupations and prolonged their training to two years. This situation strangles much of our effort to cure this neurosis. Those of you who had war-experience know how much military discipline contributed to the re-habilitation of neurotics with much greater psychic burdens to be faced on recovery. In a paper read before you three years ago I was able to report that 96 per cent. of my A. E. F. cases of hysteria were in the course of a few months at the longest, fit for battle duty. Compare the very small success in this series, where men must only face at worst industrious effort to earn a living. Another too frequent error, and one reflecting less discredit on the patient, is putting him or allowing him to put himself at training far beyond his mental powers. One man in this series developed his neurosis because he was sent to the State University to learn soil chemistry when his preliminary education amounted to three common school grades plus the rough equivalent of three more gained by himself at home some twenty years previously.

My conclusion as to the neurotic origin of these tachycardias is supported by other observers.

Friedlander and Freyhoff (*loc. cit.*) presume these patients to be constitutional neurotics and definitely state that removal of focal infections only helps by removing additional burdens. They settled the tobacco question by studying pulse rate before and after smoking. They reach similar conclusions for alcohol. They stress too, the happy results of uprooting sincere convictions of cardiac disease. They showed that 44 per cent. were beneath adult mentality. This point is to me of greater importance. I have long had an impression as yet unsupported by definite evidence that most neurotics of all kinds are mentally subnormal.

Abrahams<sup>8</sup> finds a history of psychic trauma invariable. He has seen no benefit from endocrine medication. He points out the rarity of this syndrome in men actually wounded—a familiar finding in so-called shell-shock and an argument for the psychic origin of both. Men actually wounded had no need of a psychoneurosis. He points out how any treatment but that aimed at a neurosis only fixes the symptoms.

Hurst<sup>9</sup> ascribes as causes, pain and horrifying experiences but also toxæmia from wounds and smoking. He believes more in thyroid over-activity.

Gallavardin<sup>10</sup> reports but two cases of organic heart disease in 150 patients. He believes that the stress of war only brought these cases to attention, but did not cause them. He feels that a constitutional nervous condition pre-existed and infections played a considerable role in aggravating the symptoms. In contravention of Wilson and Carroll he finds the blood pressure regularly raised.

Brasch<sup>11</sup> never found valvular lesions but always neurotic temperament.

Finally I wish to criticize a post-bellum report of Huddleson and Bailey<sup>12</sup>. They regard all of these cases as due to thyroid changes but their observations were made only in an ambulatory clinic. In two years' experience my office has been the ambulatory clinic and I can see how the error could arise. Adequate hospital observation and facilities for radiographic, chemical and other examinations,—above all basal metabolism,—have enabled me to see that with inconsiderable exceptions these tachycardias are emotional and should therefore be classified as hysterical.

628 ELM STREET.

#### REFERENCES

1. Bouveret, L.: *Rev. de med.*, 1889, Vol. lx, p. 753.
2. Wilson, R. M. and Carroll, J. H.: *The Nervous Heart*. Oxford Press, London, 1919.
3. Wilson, R. M.: *The Hearts of Man*.
4. Biedl, A.: *The Internal Secretory Organs*. Wm. Wood & Co., New York, 1913.
5. Cotton, T. F., Rapport, D. S., and Lewis, T.: *After Effects of Exercise on Pulse Rate and Systolic Blood Pressure in Cases of Irritable Heart*. Lond., 1916-17, p. 269.
6. Friedlander, A. and Freyhoff, W. L.: *Intensive Study of Fifty Cases of Neuro-Circulatory-Asthenia*. *Archives of Internal Med.*, Dec., 1918, Vol. xxii, p. 693.
7. Lardin, J.: *L'union medical*, August 21, 1875.
8. Abrahams, Adolphe: *Soldier's Heart*. *Lancet*, Lond., March 24, 1817, p. 442.
9. Hurst, Arthur: *Classification of War Neurosis*. *Guy's Hosp. Gaz.*, Lond., Vol. 31, p. 109, March 24, 1917.
10. Gallavardin, L.: *Soldiers with Disordered Action of the Heart*. *Arch. des maladies du coeur*, Paris, Vol. 10, p. 408-33, Sept., 1917.
11. Brasch, R.: *Heart Neurosis with Skin Hypereasthesia*. *Munch. med. Wochens.*, Vol. 62, p. 693, May 18, 1915.
12. Huddleson, J. H. and Bailey, M. P.: *The Incidence of Dysthyroidism as an Ex-service Disability*.

#### PROPAGANDA FOR REFORM

*Heliotherapy*.—The action of far ultraviolet light on normal tissue and the action of near ultraviolet light under certain pathologic conditions have been investigated enough to show that there are well defined effects due to light, closely related to the physiologic results of exposure to radium and the roentgen rays. Recently, Kramer, Casparis and Howland have again demonstrated the healing of the rachitic process in the bones of rachitic children through systematic exposure to the rays from the mercury vapor quartz lamp. The healing of the bones occurred at about the same time that it does after the administration of cod liver oil. The work of Finsen in the treatment of lupus vulgaris emphasizes the importance of considering a diversity of forms of radiant energy in skin affections. In tuberculosis, especially surgical tuberculosis heliotherapy has long had advocates. Light of short wave length, which is known to have marked bactericidal effects, may not be without salutary influence in the treatment of wounds. Artificial lights, if glass covered, are therefore harmless and therapeutically weak. Sunlight rarely contains enough far ultraviolet rays to produce injury. Consequently, heliotherapy that demands highly potent effects must look to artificial sources of radiation. The quartz mercury arc and bare metallic arcs are known to belong in the potent class, and, it is to be remembered, may be extremely injurious, so that the eyes should be protected from them. (*Jour. A. M. A.*, Sept. 2, 1922, p. 827).

# The Early Diagnosis of Cancer of the Stomach\*

By JONATHAN FORMAN, M.D., Columbus

*Editor's Note.*—The menace of cancer is too great for us to neglect the elderly patients with gastric symptoms. These patients demand at once our most careful observations and systematic study. Dr. Forman believes that an early diagnosis of cancer of the stomach can be made only by the balanced use of all tried methods with the intelligent cooperation of the patient. The important thing, which we must get clearly in the public understanding, is the difficulty and uncertainty of the diagnostic problem. We must still educate our patients to the necessity of check examinations, for the percentage of confirmed presumptive diagnoses will be the largest when examinations are checked and re-checked, and when the laboratory findings are not regarded as static, but are correlated and interpreted as signs of an ever developing and changing process. When the clinical history, the physical findings, the laboratory data, and results of the X-ray examination are combined in this way, they form a net through which few cancers of the stomach can escape.

WE ALL KNOW that nine out of every ten patients, coming to the physician with stomach trouble, do not have a gastric lesion. Most of us have appreciated, all too well, the fact that the gastro-intestinal tract reacts to a great many extraneous influences and that the majority of stomach troubles will get well in a reasonable time if left alone. This over-emphasis of the functional diseases has led to too great optimism on our part. The result is that, although seventy-five per cent. of gastric cancer occurs in the anatomical zone of operability, less than fifty per cent. come to the surgeon in such a state that he can even take a chance and operate upon them. The physician must be more alert in this matter. If he is not, the public will solve this problem by taking all of its stomach troubles directly to the surgeon.

## THE PROBLEM OF STOMACH CANCER

The Medical Profession has been given the burden of instructing the public in cancer. The profession has gone, therefore, to the laity and told them of the curability of cancer when recognized early. It has spoken hopefully about a condition of which the public thought disparagingly. It has tried to teach the people the early symptoms of cancer and has urged them to come to the physician at once with their lumps, ulcers, menstrual irregularities, foci of irritation and dyspepsias. There is no question about our ability to render a life-saving service in the accessible regions, skin, lip, breast and cervix uteri. But can we make good in cancer of the digestive tract?

When we realize that nearly one-third of all cancers occur in the stomach, we at once see the importance of this subject in relation to the *Control of Cancer*. Since the importance of early recognition has been impressed upon us it would seem wise to take stock of our equipment and to evaluate the diagnostic tools of our profession for the task at hand.

## PREDISPOSING FACTORS

Like cancer elsewhere, about the cause of cancer of the stomach we know nothing; but about its origin and nature we know a great deal.

There is not space in this paper to go into the histogenesis and pathological classification of gastric carcinoma. It may be well, however, in passing to say a word about the *predisposing factors* of gastric cancer. About these we do know something, although there appears to be a decided tendency for the learned to deduce, that the misfortune of the victim of gastric cancer is due to the fact that the patient has partaken of something of which the author disapproves, or of something prepared in the way upon which he frowns. So we find alcohol, sour wines alone, hot rice, hot drinks, hot foods, meats and so forth blamed until one is driven to be exceedingly cautious about accepting the views of even the best authorities. Nowhere in the realm of human conduct are personal fads and opinions set forth with so much persuasion and apparent authority as in matters of diet.

*The average age incidence of cancer of the stomach is sixty-one years.* While the disease is distinctly one of old age, it is rather frequently seen in the fourth and fifth decades. No age is exempt. The literature contains reports of all ages from congenital adeno-carcinoma in the pylorus of a five weeks old infant to those in extreme old age. Such evidence as we have, makes it appear possible to assume in a certain percentage of cases, a *tissue predisposition*. The role of inheritance, however, in the production of gastric cancer is badly in need of accurate study.

R. Schmidt divides the victims of cancer of the stomach into two groups. The *first* are well-nourished individuals, whose parents are long-lived and whose digestion has always been good. These develop the disease in adult life, usually late. The *second* group are poorly nourished individuals of a phthisical habit with a low pilosity, who suffer from epistaxis, achylia or gastric cancer. These develop the disease early.

## RELATION TO GASTRIC ULCER

Most observers have failed to find any significant history of *traumatism* in their experience, unless we take into account the cases following gastric ulcer. This brings us to a consideration of the relationship of gastric ulcer to gastric

cancer. Since the discussion of this mooted question will serve to bring out many of the other facts which we have concerning the nature and clinical course of gastric cancer, we shall go into it rather fully.

In the literature, we find estimations of the proportion of carcinoma developing from gastric ulcer as from nothing to seventy-five per cent. There is no doubt that such a transformation may occur in a gastric ulcer. One of the best analysis of the data involved in this question is that made by Ewing. It may be abstracted and summarized as follows:—

### I. Statistical Data.

1. The older observers proved pretty substantially that gastric ulcer was very much more frequent in females than in males, while gastric cancer was equally or more frequent in males.
2. The seats of election of cancer and ulcer do not favor the frequent origin of one from the other. Ulcer occurs most often on the lesser curvature. This site presents only about one-third as many cancers as ulcers. The commonest seat of cancer of the stomach is the pylorus and in this location there are about one-fifth as many ulcers as cancers.
3. There is no parallel in other organs but on the contrary in the lip, the tongue, the tonsil, the esophagus, rectum, larynx, cervix uteri, and in X-ray dermatitis there is always first carcinoma and then ulceration. On the other hand peptic ulcer is an unparalleled condition and may be followed by unusual results.

### II. Clinical Data.

1. Medically treated ulcers are cured in only about forty per cent. of cases, still only about two per cent. develop into cancer while under observation, a percentage so small that it may be coincidental.
2. The number of cases developing carcinoma after gastric-enterostomy is not appreciably larger than after resection of the ulcer.

### III. Anatomical Data.

#### A. Gross

1. The gross anatomy of cancer engrafted upon ulcer is usually characteristic. The deep, sharply cut excavations, over-hanging proximal edge, firm fibrous base, and often the extension of the cicatrix to the surrounding organ, are satisfactory evidence of the long existence of a peptic ulcer. The carcinoma appears at one or more points, causing induration and fixation of the edge. Rather frequently outlying islands of polypoid adenoma or adeno-carcinoma are observed. *This picture must be demanded of all acceptable cases.*
2. Ulcerating cancers may closely simulate peptic ulcers with secondary malignant changes.
3. Cancer and ulcer have been definitely proved to occur independently in the same stomach.

#### B. Histologic

1. The great majority of ulcerating lesions of the stomach fall clearly into one of two classes, the class of ulcerating cancers or into the class of simple peptic ulcers.
2. With certain peptic ulcers a large part of the gastric mucosa is the seat of glandular hypertrophy, with atypical changes in isolated glands and some disarrangement of the glands through the growth of the interstitial tissues.
3. Deep excavations may occur in portions of established cancer, especially in the pyloric region, where powerful muscular contraction tends to cause hernias of infiltrated and weakened muscle tissues.
4. Gastric digestion may strip a primary cancer down to the muscularis or deeper, leaving no trace of carcinoma over most of the base but only a peripheral ring of tumor tissue which is protected by the mucosa.
5. When the base of an ulcer is uniformly infiltrated with carcinoma, especially of diffuse or atypical small alveolar type, the condition is difficult to reconcile with an origin

from the edges of the ulcer. Stromeyer studied this relationship in Aschoff's Laboratory. He found in the great majority of instances that the cancerous proliferation extended deeply into the indurated wall from the base of the ulcer and only for a few millimeters at the sides. Now if the cancer developed secondary to the ulcer, one would expect to find that it had taken its origin from some point in the mucus membranes of the ulcer margin. A malignant focus, located beside the ulcer or even encroaching upon it somewhat, could then be easily understood as indicated above, but why should it select the dense scarred floor for its site and infiltrate along the lines of greatest resistance?

6. The occurrence of atypical epithelial proliferation in the glands on the edges of the ulcer is not sufficient evidence that the lesion is going on to cancer.

So that we are compelled to take a conservative attitude with Ewing and, on the basis of the above data and our own pathological experience, conclude that the cancerous transformation of peptic ulcer is rather infrequent and probably does not exceed the incidence of five per cent. originally established.

#### THE CLASSIC PICTURE OF GASTRIC CARCINOMA

We are all familiar with the classic picture of gastric carcinoma. A patient in the fourth decade of life (or older) with a pasty or light yellowish tinge, who has always been well and possessed of an "iron stomach", has suddenly lost his appetite, especially for meats. He comes complaining of acid eructation, nausea, and vomiting with a pain in the gastric region and distress increased by the taking of food. He has areas of referred tenderness, in front between the umbilicus and the left nipple, and behind from the fifth to twelfth thoracic spine. He drinks large quantities of water. He has lost some weight and presents a prominent epigastrium with marked resistance under the right costal border, near the midline. There is a mass in a large flaccid stomach or in a small firm one. There is slight edema of the internal malleoli. There is some degree of anemia present. We find an achylia, occult blood, and the evidence of retention of the motor meal upon analysis of the stomach contents. There is occult blood in the stool and the X-ray examination shows a filling defect. This is unquestionably the victim of a gastric cancer, and we physicians have nothing to offer, and surgery, with the best of good fortune, can give only temporary relief.

Just what then are the most reliable signs and symptoms or laboratory findings that will aid us in making a diagnosis sufficiently early to be of service? We must grant at once that there are none at our command that will invariably signify carcinoma. There are a number of valuable ones that will help if we use them well and neglect them not. As has been shown above we will have a large margin of cases in which to improve our diagnostic skill through increased alertness and the employment of systematic investigation of the elderly patient with dyspepsia.

The general obscurity of a gastric lesion com-

pels us to make our most careful and systematic case studies in patients with stomach complaints. Here of all places should we make use of systematic and simultaneous application of all diagnostic procedures. We must not be content to try something now, another test later and missing in both a trial of something else when the patient continues to show a lack of improvement. The case must be looked upon as a scientific problem demanding the application of scientific method as well as procedures and not optimistic delay.

#### EARLY DIAGNOSIS

Every satisfactory gastro-intestinal diagnosis rests as some one has said, like a stool, upon four legs, *viz.* (1) History. (2) Physical Examination. (3) X-ray studies, and (4) Laboratory findings.

#### THE HISTORY

*History.*—*The appetite is usually diminished early. Especially is there developed a distaste for meats.* It must be remembered, however, that a medullary carcinoma or an ulcerating scirrhous carcinoma, is not inconsistent with an excellent appetite. The thirst also is usually increased in contra-distinction to the patient with a neurosis, who as a rule drinks but little water. By some the cause of the thirst is assigned to the anemia.

*One of the earlier signs of cancer is acid eructations usually noiseless, with or without odor.* These are not the eructations frequently seen at the end of a meal due to the relaxation of cardiac sphincter. They come later, and are the result of fermentation which is dependent upon hypo-acidity and gastric insufficiency. It is to be remembered that the sourness is due to organic acids. Sour eructations in late adult life should never be ascribed to hyper-acidity until definitely proved so by direct investigation. *Vomiting* is the last state of regurgitation and comes late in the disease. It may not occur at all. It is associated with those carcinomas involving the pylorus. With cancer involving other parts of the stomach, there may be no vomiting at all—only nausea and slight regurgitation.

While *pain* accompanies cancer of the stomach in a fairly large number of cases, it is often absent. It is a part of the struggle to empty the stomach. *Intermittent attacks of pain, accompanied by a look of distress and a rigid stomach forcing itself above the level of the abdomen, which stops after eructation with relaxation of the stomach, are suggestive symptoms of early cancer at the pylorus.* The importance of these attacks is because they are associated with a stage where no marked dilatation of the organ has as yet occurred, while nutrition is but slightly impaired and the hydrochloric acid persists. The pain becomes less marked as the growth progresses and the stomach is forced to adapt itself. Among the suggestive signs and symp-

toms having reference to other organs which can be utilized in the early diagnosis of gastric cancer are: *atrophic changes in the tongue, decayed teeth, constipation or constipation alternated with diarrhea.*

*Physical Findings.*—The physical findings of the typical advanced case of cancer of the stomach have already been given and need not be repeated. *Palpable tumors* in the epigastrium occur late in the course of the disease and must not be expected. The *anemia* with its physical sign also is not an early symptom but is significant when present. *Loss of weight is a most constant feature of the disease. More important is the sudden loss of strength for no apparent reason except what the patient believes to be a slight gastro-enteric disturbance.*

The signs and symptoms given are those of cancer of the pyloric region. Fortunately since this is the zone of operability, we do find the tumor producing symptoms sufficient to attract attention early enough to warrant operative interference.

In carcinoma of the cardia, the subjective symptoms are usually absent early. Difficulty in deglutition resulting from occlusion of the esophagus is often one of the first signs.

*X-ray Examination.*—To Cannon and Williams belongs the credit of making the first practical use of bismuth sub-nitrate in quantities which allowed the clinical examination of the human stomach. The routine of the examination usually practiced today, which was first introduced by Haudeck and modified by Carman, is to furnish the patient with 100 grams of barium sulphate suspended in cream of wheat, corn starch or acacia in lieu of breakfast. The objections to buttermilk, which has been generally used as medium are, (1) it is acid in reaction; (2) it contains fat; (3) it holds the contrast salt in curds and in a very firm suspension; and (4) it is very repulsive to many patients.

The Roentgen ray findings in cancer of the stomach are more or less characteristic, though certain types of cancer, due largely to their situation, are difficult of detection. *Fluoroscopic examination* of the chest and the observation of the passage of the barium through the esophagus should never be neglected. Only by the combined method of study by fluoroscopy and radiography can the constant changes in outline, which occur with peristalsis, be properly interpreted into the consummate picture. A radiographic film, or several, may show a filling defect suggestive of pathology, whereas one moment during a screen examination under palpation may produce a normal filling and thus rule out the suspected evidence. The radiographic films are necessary to show up constant filling defects and areas of peristaltic absence with more conclusiveness than the eye can detect them on the screen. Furthermore, a picture serves as a record for comparison in future study and observation of the same case.

Irregularities, in the form of the gastric silhouette due to wall growth, constitute the indispensable signs necessary for a positive diagnosis of carcinoma. They are the cardinal signs of medullary carcinoma of the stomach. Any growth which projects into the stomach cavity will indent the outline of the opaque stomach contents; also any ulcerated process which erodes the inner surface of the stomach or which forms scar tissue will cause protusions from the silhouette or contractures of the outlines. This is the meaning of the term "filling defects."

The *filling defect*, however, must be differentiated from spastic contraction of the stomach wall, pressure upon the stomach by extra-gastric tumors of the spleen, liver pancreas, colon, omentum, or from pressure of gas in the colon. The irregular appearance frequently seen in the upper end of the cardiac portion from gas is easily differentiated by manipulation. The apparent filling caused by extra-gastric tumors are distinguished by watching the peristaltic waves. In the filling defect of gastric cancer there is an absence of persistalsis in the involved area. The *pseudo-filling defects due to spasm*, may be overcome by manipulation but the use of belladonna is the better and surer plan. The defect of cancer is permanent, frequently of an irregular or moth eaten appearance, and remains in the same location and position. Tenderness may be noted in the region and occasionally antipersistalsis. Carman has classified the indirect X-ray evidence of cancer of the stomach in the order of their importance as follows:

1. *Abnormality of pyloric function.*
  - a. Gaping of the pylorus due to—
    - i. Infiltration of the pyloric ring.
    - ii. Loss of the pyloric closing reflex.
  - b. Obstruction of the pylorus.  
This occurs in about sixty per cent. of cases and gives a six hour residue.
2. *Abnormal peristalsis.*  
None of the following are indicative of cancer only of a pathologic process—
  - a. Absence of peristaltic waves from the involved area due to a local loss of muscular contractibility.
  - b. Weak peristalsis—common.
  - c. Violent peristalsis, (sometimes with pyloric obstruction).
  - d. Anti-peristalsis, (sometimes with pyloric obstruction).
  - e. Irregular peristalsis.
3. *Abnormal motility.*
  - a. Rapid emptying, (non-obstructive cases).
4. *Lessened mobility—in accessible stomachs due to extension into adjacent structures.*
5. *Lessened flexibility—a valuable sign in schirrus carcinoma.*
6. *Persistent local spasm.*
7. *Abnormal size or capacity.*
  - a. Shrinking due to projection of the mass into the lumen or a contraction of the wall as seen in schirrus cancers.
  - b. Dilatation with obstruction.
8. *Displacements.*  
To the left with pyloric obstruction.  
Upwards and to the left with schirrus carcinomas.

One is never justified in giving a negative diagnosis unless one has also examined the patient in the prone position to exclude carcinoma of the cardia, a condition easily overlooked. With a history suggestive of abdominal malignancy and a negative stomach one should never fail to examine the colon by means of a barium enema.

*Laboratory Findings.*—The development of the X-ray, in the last two decades, has occurred so rapidly and been pushed so actively by the manufacturer of the equipment, that this method of investigation has come to over-shadow all other methods. There is no question but that it yields more information in the presence of anatomical pathology than any of the others. Dr. Henry A. Christian is quoted in this connection (*Jour. A. M. A.*, 1922, Vol. 78, p. 1988):

"I feel that it should be emphasized to the general practitioner that, by taking a careful history, making a thorough general examination and using the stomach tube intelligently, he can obtain most of the needed data for a diagnosis without recourse to the roentgen ray, and that it is better to have no roentgen ray examination than a poor one."

There has been a growing tendency to underestimate the value of the stomach tube in the diagnosis of diseases of the gastro-intestinal tract. When this procedure is mentioned in connection with the subject of this paper, most of us at once think of the absence of free hydrochloric acid as a pathognomic sign either to praise or condemn it.

It is true that an acidity is found comparatively frequently in gastric carcinoma and so in every case in which HCl is absent cancer may be logically suspected. In such cases, it becomes our duty at once to rule out: pernicious anemia, well-marked arteriosclerosis, chronic diarrhea and of course the large series of younger patients in which achylia gastrica is benign in origin.

*Personally, we have come to attach a great deal of importance to our finding in the fasting contents of the stomach.* A large amount of residuum with evidence of retention of food particles from the motor meal given twelve hours before is very good evidence, of one of the following:—

1. *Muscle defects.*
  - i. Atony with which there is slight delay but never twelve hours.
  - ii. Dilatation with persistent food retention.
2. *Obstruction.*
  - i. Intra-gastric Obstruction—
    - a. Neoplasms in one-half of all cases of gastric cancer.
    - b. Gastric Ulcer.
    - c. Duodenal Ulcers.
    - d. Gastric Syphilis.
    - e. Benign tumor at the pylorus.
    - f. Hypertrophic pylorus.
  - ii. *Extra-gastric Obstruction.*
    - a. Neoplasms of which the most frequent is a cancer at the head of the pancreas.
    - b. Adhesions and bands from the gall bladder to the first part of the duodenum.
    - c. Inflammatory masses involving the pylorus.

Lactic acid is apt to be found in any condition associated with the stagnation of the gastric contents as a result of motor insufficiency, provided the amount of free HCl is low. *An excess of lactic acid in the fasting contents, however, should be considered suggestive of cancer.*

Blood is found in the fasting contents in many conditions. It forms a part of the picture in about eighty per cent. of gastric carcinomas. *Gastric mucus* is often produced by the gastritis

associated with malignancy in this organ. Only very rarely is one able to detect a dividing cancer cell upon the microscopical examination of the sediment of the fasting contents.

We much prefer the fractional gastric analysis to the older method of a single sample taken at random. From our experience we have come to classify our Fractional Gastric Curves into seven types. Of these, two make us suspect cancer the more strongly, *viz.*:—

*Type IV.*—Total acid is moderately low with a very regular HCl reaching 0 in one or more intervals during two hour period or only appearing in one or two samples. Seen in:—

- a. Chronic inflammation of long standing.
- b. Focal infection with systemic reaction including tuberculosis and iues.
- c. Malignancy.

*Type V.*—Total acid about 10, holding nearly to a straight line. No free HCl is discovered at any time. This is seen in *Achylia Gastrica* which may be divided from the etiological viewpoint into three groups:—

- a. *Achylia gastrica* with destruction of gastric glands as seen in—
  - a. Chronic progressive gastritis
  - b. Linitis Plastica.
  - c. Alcoholic gastritis with cirrhosis of the liver.
  - d. Carcinoma.
- b. *Achylia gastrica* which accompanies the severe anemias—

*Primary Anemias*

- i. Pernicious Anemia.

*Secondary Anemias*

- i. Those with tape worm infections.

ii. Those with

- a. Syphilis.
- b. Chronic Rheumatism.
- c. Gout.
- d. Hyperthyroidism.

- c. *Achylia gastrica* of a functional nature. To this group belong the great majority of cases in which there is a demonstrable disturbance of the vago-sympatic system with a predominating sympaticotonia of the gastric secretion. This condition is contributed to by certain reflex states seen during the menopause, with gall stones, in appendicitis, and other intra-abdominal lesions as well as in the experimental removal of the parathyroids. It occurs in both the status asthenicus and in the status apoplecticus.

1. In *Status Asthenicus*, where it is associated with a stomach which is ptoed and whose emptying times may be as long as seven hours. In these cases as a rule the other factors lead to constipation.
2. In *Status Apoplecticus*, where it is associated with a stomach which empties too rapidly, it is in this type that diarrhea is prone to occur.

The Wolff-Junghaus Reaction is the detection of an increase in the soluble proteins of the gastric contents to a higher dilution than normal. It is a simple and worthwhile procedure in that the presence of a positive reaction is significant. It is to be done only in cases without free HCl.

*Examination of the stool* is a most valuable procedure in the study of the gastro-intestinal case. To be of value in an evaluation of intestinal function the patient must be on a known standardized diet, otherwise the examination is as valueless as it is unpleasant. *So far as gastric cancer goes, however, blood is the important thing.* The examination of the feces for occult blood is a simple chemical test which is within the province of every practitioner and demands no special laboratory conveniences. A positive test may be due of course to the fortuitous introduction of hemoglobin-containing food stuffs. It is clear that the occult blood may also come from hemorrhoids, or from source of hemor-

rhage in the mouth or nasopharynx as well as such blood diseases as the anemias, leukemias, and hemophilia in which hemorrhages from the mucus membranes may occur.

*Precautions.*—The precautions to observe, therefore, are:—

1. Rule out hemoglobin from the food by restricting the patient's diet. Allow no fish, fowl, or meat. No soups, gravies for at least three days. A better way is to use the intestinal marker of charcoal or carmine and thus insure that the sample is from the hemoglobin-free diet. It takes one c.c. of blood to give a positive reaction.

2. Rule out all other sources of hemorrhage. The best test is the benzidine test of Schlesinger and Holst, as modified by Abrahams. Where time is a factor and the test is to be practicable, it must be performed as early and expeditiously as possible. For this reason I would recommend Dudley Robert's benzidine tablets which contain benzidine already saturated with sodium perborate. Our experiences with the test agree with that of Friedenwald and others. We have found it satisfactory for the rapid examination of many samples or for the occasional one.

*Glucose Test.*—It is pretty well established now that there is no true "glycuresis" in the sense in which the word has been defined by Professor S. R. Benedict, after ingestion of large quantities of pure glucose by healthy man. Only hyperglycemia occurs in the normal man and this definitely below the renal threshold of sugar. When glucose appears in the urine, it happens because the level of blood sugar has risen above the normal threshold or because the threshold itself is below the normal, as in renal glycosuria. The determination of a definitely lowered tolerance for glucose on the part of the patient has been suggested by Friedenwald and Grove as means of differentiating the presence of carcinoma and other diseases of the gastro-intestinal tract. This test, they warn us, is of course only of value after diabetes, nephritis, hypertension, tuberculosis, and disturbances of the thyroid gland have been excluded. The test is performed as follows:—

1. After a night and without eating a thing before appearing in the laboratory at 8:00 A. M., the patient empties the bladder and drinks seven ounces of water.

2. At 9:00 A. M. the patient arrives in the laboratory and a specimen of the urine and a specimen of the blood are taken at once to serve as controls.

3. Now 100 grams of anhydrous dextrose are given to the patient in 300 c.c. of water with the juice of two lemons added to prevent nausea.

4. Blood sugar determinations are now made from samples of blood taken thirty minutes, sixty minutes, one hundred and twenty minutes (if this last is unusually high it is best that another be taken at the end of another hour).

5. The patient voids with—just before or after—each sample of blood and the amount of sugar in it is determined after the methods of Benedict.

6. The patient then saves all urine passed up to and including the 10:00 A. M. of the following day. This is sent to the laboratory and analyzed for sugar.

The typical cancer curve, as described by Friedenwald and Grove, is one in which the fasting contents in blood-sugar is high (140-170

mgm. for every 100 c.c. of blood) followed by a rise of from 210-240 in forty-five minutes, remaining at nearly this level for 120 minutes and at no time during the period falling below 200 mgm. for every 100 c.c. of blood. In seventy-five cases of gastro-intestinal cancer these observers found the test positive in seventy-two cases. There were also five cases proved by operation to be non-malignant which gave this type of curve. It must, however, be looked upon with a good deal of conservatism until we have learned more about the true significance of *the renal threshold for sugar*. We must understand more about renal permeability to sugar, the relationship of renal impairment to the positive test in these cases and the more especially the loss of body tissue mass to sugar storage. After these are more clearly understood and they have had time to accumulate many more observations on both malignant and non-malignant gastro-intestinal disorders will we be able to evaluate this test. This is the work of the larger clinics.

In the meantime, the family physician has simpler tests and observations which will yield, if employed, a fairly high percentage of correct diagnoses in the type of cases under consideration.

## SUMMARY

The menace of cancer is too great for us to neglect the elderly patients with gastric symptoms. These patients demand at once our most careful observation and systematic study. An early diagnosis of cancer of the stomach can be made only by the balanced use of all tried methods with the intelligent co-operation of the patient. The important thing, which we must get clearly in the public understanding, is the difficulty and uncertainty of the diagnostic problem. We still must educate our patients to the necessity of examinations for the percentage of confirmed presumptive diagnoses will be the largest when examinations are checked and rechecked, and when *the laboratory findings are not regarded as static, but are correlated and interpreted as signs of an ever developing and changing process*. When the clinical history, the physical findings, the laboratory data, and results of the X-ray examination are combined in this way, they form a net through which few cancers of the stomach can escape.

394 E. TOWN ST.

## ACADEMIES AND COUNTY SOCIETIES

### Toledo

(E. J. McCormick, M.D., Secretary)

General Meeting, October 6. Program.—1. Business. 2. Shock: What Can Be Done for It? Dr. E. I. McKesson. 3. Spontaneous Rupture of the Non-Traumatized Uterus during Labor, Dr. F. M. Douglass.

Pathological Section, October 13: 1. Unusual Case of Atrophy of Liver and Photomicrographs, Dr. Theodore Zbinden. 2. Functional Tests as an Aid in Diagnosis, Dr. T. L. Ramsey. 3. Ulcer of the Bladder, Case Report, Dr. J. W. Young. 4. Some Points in Differential Diagnosis of Bone Tumors, Dr. Ralph Deming.

Medical Section, October 20: 1. Glioma of the Optic Thalamus, Drs. L. A. Levison and F. W. Alter. 2. Anemia of Childhood, Dr. H. E. Smead; discussion by Drs. S. D. Giffen, L. E. Payne, W. G. Dice.

Surgical Section, October 27: 1. Fractures of the Spine without Cord Symptoms, Dr. B. J. Hein. 2. Notes on Fluoroscopic Reduction of Fractures, Dr. Thomas Brown. 3. Fractures of the Wrist, Dr. Dale Wilson. 4. Compound Fractures Treated by Carrol-Dakin Method, Drs. C. E. Hufford and B. G. Chollett.

#### FIRST DISTRICT

*Butler County Medical Society*, in session September 27, adopted the following resolution:

"Whereas, the alleged discoveries in diagnosis and treatment, of Dr. Abrams of San Francisco are most conducive to skepticism and credulity, and

"Whereas, the average medical practitioner has little opportunity to test the truth or falsity of Dr. Abram's claims, and

"Whereas, it is of great importance that the profession and the laity be informed in this matter,

"Therefore, be it resolved by the Butler County Medical Society that it urge the proper officials of the American Medical Association to appoint a committee of able chemists, bio-chemists, physicists, physiologists, pathologists, etc., to make a searching inquiry into these claims of Dr. Abrams, and

"Be it further resolved, that a copy of these resolutions be sent to Dr. Abrams, to the proper officials of the American Medical Association, and to the Editor of the Ohio State Medical Journal."

Wilmer E. Griffith,  
Secretary pro-tempore.

#### THIRD DISTRICT

*Allen County Medical Society* held the best attended meeting in its history, September 19. Dr. John Phillips, Cleveland, was the speaker of the occasion and his subject was "Arterio Sclerosis and Myocarditis". In the afternoon preceding the meeting Dr. Phillips conducted a clinic at St. Rita's Hospital at which he discussed diabetes, pruritis and colitis.—News Clipping.

*Hancock County Medical Society's* first meeting of the 1922-23 season was a very satisfactory one, attended by 22 members. After a dinner at the Elks' Home, there was a brief business session and an exceptionally interesting ac-

count by Dr. John V. Hartman, Findlay, of his recent trip abroad.

On October 18, Dr. O. P. Kimball of Cleveland, who has done extensive research work in goiter, addressed the society on the origin, effects and treatment of goiter. Members of the medical profession of surrounding counties, who were also guests at this meeting, were entertained at a six o'clock dinner, after which Dr. Kimball's address was enjoyed.—News Clipping.

*Logan County* Medical Society held its regular meeting in Bellefontaine, October 14. Supper at 6:00 p. m., was followed by presentation by Dr. Milton B. Cohen, from St. Alexis Hospital, Cleveland, of a paper on "Asthma", supplemented by lantern slide charts. This was one of the best papers the society has heard this year, covered a subject of great practical interest, and was read in a most enjoyable manner. Committees were appointed and instructed to arrange for a big, live annual banquet to be held in December. Attendance 23.—M. L. Pratt, Secretary.

#### FOURTH DISTRICT

*Sandusky County* Medical Society held its regular meeting in Fremont, September 28. Dr. O. H. Thomas, county health commissioner, reported on health activities during the county fair, and also on the conference of health commissioners in Columbus. Drs. D. W. Philo, S. C. Sackett and W. H. Booth were appointed members of a committee to confer with the board of health relative to plans for the examination of school children. Dr. J. J. Kurlander, Cleveland, read an interesting paper on "Osteomyelitis, Diagnosis and Treatment", which was thoroughly discussed, and for which the society thanked the essayist by electing him to honorary membership.—C. I. Kuntz, Secretary.

#### FIFTH DISTRICT

*Lorain County* Medical Society enjoyed a splendid paper on "Blood Pressure" by Dr. H. C. King, Lakewood, at its September 12 meeting in Amherst. The attendance of 40 included the wives of members and five public health nurses of the county. "Graves Disease" was the subject of an address by Dr. E. E. Sheffield, Elyria, before the society in session at Lorain, October 10.—W. E. Hart, Secretary.

#### SIXTH DISTRICT

*Mahoning County* Medical Society had as its guest on September 19, Dr. C. A. Hamann of Cleveland, who presented a splendid paper on "Tumors of the Neck". A buffet luncheon was served.—A. W. Thomas, Secretary.

*Portage County* Medical Society held its October meeting on the evening of the 4th in Kent, with a good attendance. For the scientific program Dr. E. J. Widdecombe gave a talk on "Slight Elevations of Temperature", and Dr. S. A. Brown gave an exhaustive and interesting

report of a case of acute splenic leukemia. The president, Dr. G. W. Waggoner, reported on the proceedings against an unlicensed chiropractor. The presence of Dr. D. W. Stevenson, Akron, councilor for the Sixth District, added greatly to the interest of the meeting, and his kindness in attending meetings, taking part in discussions and offering helpful suggestions for the benefit of the society is appreciated.—E. J. Widdecombe, Secretary.

*Summit County* Medical Society met for its regular session at the Peoples Hospital, Akron, October 3. There was an attendance of 113 from Akron, Barberton, Canal Fulton, Copley, Cuyahoga Falls, Doylestown, Kenmore, Mogadore and Chicago. Two new members were admitted. The new constitution had its first reading. The scientific program consisted of a lecture and clinic on "The Heart" by R. H. Babcock, A. M., M. D., LL.D., Chicago, who exhaustively discussed patients, symptoms, examination, diagnosis, treatment and prognosis.—A. S. McCormick, Secretary.

#### SEVENTH DISTRICT

*Coshocton County* Medical Society members and their families enjoyed a banquet at the Park Hotel, Coshocton, September 28. Approximately 50 were in attendance. There was a delightful program of music and readings, after which the guest-speaker, Dr. J. P. Farson of Columbus, presented the subject "Infant Feeding, with a Consideration of the Proprietary Foods," in an instructive and interesting manner. The president, acting as toastmaster, called upon the members for comic stories and amusing experiences, and himself gave a brief organization talk in which he emphasized the value of society work and urged each member to do his share.—News Clipping.

*Tuscarawas County* Medical Society's program on October 12, when monthly meetings were resumed at Dover, included talks on "Obstetrical Procedures" by Dr. S. T. Marshall, and "An Interesting Autopsy," by Dr. K. E. Shawecker.—P. J. Alspaugh, Secretary.

#### EIGHTH DISTRICT

*Morgan County* Medical Society was entertained at six o'clock dinner, September 6, at the home of Dr. Claud V. Davis. Dr. John Dudley Dunham, Columbus, read the paper of the evening, his subject being "Unusual Cardiac Dyscrasias." There was a good attendance and the evening was thoroughly enjoyable. The regular monthly meeting of the society was held, September 29, at the home of Dr. C. E. Northrup, McConnellsville. Dr. R. B. Bainter, Zanesville, gave an instructive paper on "Puerperal Infections". Preceding the regular business of the evening an excellent dinner was served.—D. G. Ralston, Secretary.



## All Legal Technicalities Employed by Unlicensed Chiroso Preparatory to Desparate Legislative Effort for Special Board

The latest effort of the Ohio Chiropractors to impede indefinitely the enforcement of the state licensing laws, which establish minimum educational requirements and reasonable standards for all those who would treat the sick, has been fruitless.

A temporary injunction was secured in the Hamilton County Court of Common Pleas several months ago by a representative of the State Association of Chiropractors, which prevented the State Medical Board from carrying out the provisions of the licensing laws pending the settlement of the action.

This restraining order has been dissolved and the suit, which was brought to enjoin the State Medical Board from exercising jurisdiction over chiropractic practitioners under the Reorganization Code, has been dismissed.

Allegations made in the chiropractic petition are summarized in the decision handed down by Judge Thomas H. Darby, of the Court of Common Pleas in Cincinnati on September 29th:

1. "That the department of education has failed to make certain recommendations required by it under Section 156-46 of the Administrative Code."

2. "That the State Medical Board had failed to call to its aid certain examiners of chiropractors as provided in Sections 1274-2, 1274-3 General Code.

3. "That the State Medical Board is without authority by reason of the Administrative Code, and the failure of the department of education to make recommendations of standards and methods, to proceed with the examination of those seeking licenses to practice medicine in limited branches thereof, as provided in Section 1274-1."

The defense for the State Board, as set forth in the answer filed by the Attorney General's office, to which the plaintiffs demurred, asserted that the law conferred all of the powers legally granted to the State Medical Board, and that the Board complied with it by requesting the State Association of Chiropractors to name special examiners, but this organization refused to accede.

It was further averred that the Reorganization Code took nothing away from the State Medical Board, but merely gave the State Department of Education the right to make recommendations, which recommendations the Board was not legally bound to follow.

The contentions of the state were sustained by the decision and the demurrers filed by attorneys for the chiropractors, which were an admission of facts in the answer, were overruled. The court also granted the motion of the state to dissolve the temporary injunction.

This decision brings to a close, for the time at

least, another legal battle waged against the state licensing laws by the chiropractors. In the Spring of 1920, the Cuyahoga County Court of Common Pleas granted the chiropractors a temporary injunction, an account of which appeared in the *Journal*, April, 1920, pages 227 and 271. The Court of Appeals on November 12, 1920, reversed the Cuyahoga County Court and upheld the Ohio laws entirely (see December, 1920, *Journal*, page 925).

The case was then carried to the Ohio Supreme Court where a decision was handed down on April 26, 1921, with all members concurring, sustaining the constitutionality of the laws. (See June, 1921, *Journal*, pages 367 and 425).

Not convinced by these defeats indicating that the Ohio laws were specific in protecting public health, the chiropractors carried their suit to the United States Supreme Court, where the decisions of the Court of Appeals and the Ohio Supreme Court were sustained (see August, 1921, *Journal*, page 530).

For the past two or three years the State Medical Board has been hampered by litigation in the enforcement of the licensing laws governing chiropractors, and during this time, these unlicensed practitioners have plied their practice in disregard of the best interests of public health. The State Board has been restrained from prosecuting offenders during most of this period.

As repeatedly stated, the obvious and only reason of the chiropractors, through legal and political subterfuges to temporarily delay the enforcement of the laws enacted for public protection, has been to "hang on" in Ohio with the avowed purpose of attempting to secure special legislation and a separate licensing board in the next legislature. If their coming attempt can be prevented, as it should and must be in the interest of public protection, the way will be clear for maintenance of high standards and law enforcement.

The Tri-State District Medical Association, comprising the states of Iowa, Illinois and Wisconsin, with districts from surrounding states, will hold its annual assembly at Peoria, Ill., October 30 to November 2nd, with an interesting program made up of scientific addresses, essays and diagnostic clinics.

Among the speakers will be: Dr. George W. Crile, Professor of Surgery, Western Reserve University, School of Medicine, Cleveland; and Dr. Charles F. Hoover, Professor of Medicine, Western Reserve University, School of Medicine, Cleveland.

## PUBLIC HEALTH NOTES

—The semi-annual conference of the Ohio Society for Crippled Children was held in Cincinnati, recently. In a discussion of means of extending the society's program in behalf of crippled children, Dr. R. G. Leland of the State Department of Health urged education of the public to early recognition of preventable defects through proper and prompt medical and surgical attention.

—Dr. John D. Boylan, Mahoning county health commissioner, is now a full-fledged editor. The bulletin of his department, previously issued in circular letter form, appeared in a four-page, printed pamphlet in September. Vital statistics, mortality reports, school sanitation, prevention of poisoning from canned foods, danger of medical advice from amateurs, news of the health district and other articles designed to inform the public on means to better health, were among the contents.

—More than \$70,000 has been spent by the Cleveland health department in five years for the care of quarantined dogs and the persons bitten by dogs. Only one fatality has occurred in three years.

—Although facing a possible shortage in funds next year, the Akron city health department is planning increased activities. One of the worst immediate problems is said to be the safeguarding of the city's meat and milk supplies. The department declares there is urgent need of a municipal abattoir, city meat inspectors and an ordinance forbidding any meat to be sold in the city that does not bear either the municipal or the United States government inspection stamp. A total of 5,314 gallons of milk, more than 200 sacks of potatoes and large quantities of other foods were confiscated and destroyed by the department during the first eight months of the year because of impurities or unwholesome condition. During this period 408 dairies were closed, of which 260 were reopened after complying with sanitation rules.

—Warning the public against the dangers of diphtheria, Health Commissioner James A. Beer, of Columbus, appealed for greater care in treating sore throats and recommended that a physician be consulted when there is the slightest suspicion that diphtheria is developing. Deaths of two school children in Columbus in the latter part of September were attributed to delay in administering antitoxin.

—A health pageant "Happy, the Pied Piper of Healthland", participated in by the children of Mansfield and Richland County, was a feature of the county fair held in Mansfield, recently.

—Dr. Roscoe E. Brown, of the United States Public Health Service, is now in Ohio cooperat-

ing with the State Department of Health in organizing the health workers among the colored people.

### WITH THE HEALTH COMMISSIONERS

Dr. G. L. Lyne of Auglaize County General Health District will leave that county on December 31, 1922, to be succeeded by Dr. C. L. Mueller, at present health commissioner of Wapakoneta.

Dr. K. R. Teachnor of Butler County General Health District has resigned. His successor is Dr. C. J. Baldrige.

Dr. H. T. Thornburgh of Trumbull County General Health District has been succeeded by Dr. L. A. Connell of Orwell, Ohio.

### CLINICS

The second psychopathic clinic held in Ohio under the direction of the State Department of Health and Welfare, in conjunction with the local medical society, took place in Xenia, October 5. The clinic was in charge of Drs. E. A. Baber, superintendent of the Dayton State Hospital, and E. M. Baehr, chief of the Bureau of Juvenile Research.

A trachoma clinic was held in Portsmouth, October 11 and 12, under the auspices of the State Department of Health, as a result of a report of 100 cases of the disease among school children of Scioto County. The clinic, in charge of Dr. John McMullen, chief of the trachoma division of the U. S. Public Health Service, was the sixth conducted in Portsmouth for the suppression of trachoma since 1920.

The largest tuberculosis clinic of the 31 conducted by the State Department of Health with the cooperation of local health departments and medical societies, closed in Newark, September 27, after a two-day session. Altogether 107 patients were examined, 25 of whom were found positive, 25 suspicious, and 57 negative. The clinic was held at the Newark city hospital. Drs. F. C. Anderson of the State Sanatorium at Mt. Vernon, Dr. C. H. Benson of the Franklin county sanatorium, and Dr. Emmett Fayen of Rocky Glen Sanatorium, McConnelsville, were the examining physicians.

A successful tuberculosis clinic was also held at Wooster, October 3 and 4, when approximately 60 persons from that city and Wayne County were examined. Drs. E. P. Edwards and E. F. Griesinger, both of Cleveland, served as diagnosticians.

Marietta was the scene of a crippled children's clinic, October 5, conducted under the joint auspices of the State and local health departments, the Washington County Medical Society and other welfare organizations interested in the state-wide program in behalf of crippled children. Dr. Robert Carothers, Cincinnati, was chief diagnostician at the clinic.

## Proportionate Distribution of Physicians in Ohio by Population and Taxable Wealth, Rural and Urban, Result of Interesting Analysis

Disquieting observations frequently have been made in recent years by both the laity and members of the medical profession in Ohio concerning a scarcity of physicians in rural districts and a surplus in the urban communities.

This problem has been a topic of professional discussion, the source of numerous editorials, and the basis of considerable community concern.

Undoubtedly, there exists a few small communities and isolated areas in Ohio sorely in need of resident physicians. Too, there may be a surplus of professional service in other parts of the state. But as a whole, Ohio in comparison with other states is fortunate in the medical service available.

A more efficient and economic apportionment of legally qualified physicians in the state might be conceived, especially for rural areas, but a survey and analysis of existing conditions, reveals rather a well-balanced geographic distribution; one which permits the profession to administer to the health needs of its clientele with reasonable celerity, if consideration be given to the topographic obstacles in several of the counties.

Theoretically, a shortage of medical service does not exist in any district in the state. Such an observation may be made if conditions are contrasted with those in other states; in other nations and republics.

Ohio is essentially a state of cities. Ninety-four cities are scattered through 59 of the 88 counties. Seven of these have populations exceeding one hundred thousand. Beside, there are 733 towns and villages. To complete the political structure, there are 1344 townships and 2,485 school districts, or a total of 4,747 taxing districts, or governments.

Eight thousand and thirty-two legally qualified physicians are listed by the 1921 Directory of the American Medical Association as residing in Ohio. This array of medical talent serves 5,759,394 persons, or conversely, there is one physician for every 717 people in the state.

Such service, per physician, is slightly in excess of the average for the United States and more than double that of England. The average for the United States is 765, for England, 1,537, for France, 1,969, for Germany, 2,124, for Austria, 2,319 and for Russia, 7,865.

Among the forty-eight states, Ohio ranks twentieth in the number of persons per physician. The State of California leads with an average of 508 and South Carolina is last with 1,160.

If the average for the United States may be considered a fairly conservative factor of distribution, then Ohio has 40 counties above the

average; 35 counties that range between 780 and 1,000; and 13 counties between 1,000 and 1,870. All but one county exceeds the average for England and all are well above France and Germany.

Eleven of the 40 counties that exceed the average for the United States are strictly rural or agricultural counties; and Warren, a rural county, leads the list with an average of 329.

With the exception of the following counties, the amount of taxable wealth of the particular political sub-division in proportion to each physician practicing there varies between a million-and-a-quarter to slightly over two million dollars, with the counties named ranging between a half and one million dollars: Warren, Franklin, Hamilton, Clermont, Washington, Brown, Gallia, Athens and Jackson.

In the 94 cities, there are 3,481,429 persons and 5,834 legally qualified physicians, or one physician for every 596 people. Outside the cities, 2,198 members of the profession administer to 2,277,965 people, or one physician for every 1,036 persons. From this, it is readily seen that there are two physicians in the cities to one in the rural districts. Also that about 36 per cent. of the population is rural and 63 per cent. is urban.

Seventy-seven of the cities are comfortably above the average for the United States, meandering from a ratio of 263 in population to each physician in Wilmington, the baby Ohio city, to 765 in Sandusky. Five range between 788 and 950 and 12 are between 1,060 and 3,150. Six of these last 12 cities, however, lie adjacent too, or are part of larger city areas.

From the standpoint of vital statistics, the normal increase in the number of physicians is keeping pace with the steady growth in population.

Since 1820, the average annual increase in population in Ohio has been 2.69 per cent. Accepting 2 per cent. as a conservative figure, the state's population is increasing at the rate of 117,000 each year.

In 1921, the State Board of Medical Examination, licensed by reciprocity and examination, 261 physicians. During this same period, 137 deaths were recorded among the members of the profession. The increment is therefore 124. Contrasting this with the population increase, there are 124 additional physicians to meet the needs of the increased number of people. There is an average of one physician for each 928 persons in the annual increase of population.

As a factor in medical economics, the geographic distribution of physicians might be

viewed from other angles, and the appended compilation should be of interest to the members of the profession as a whole. The basis of computation on number of physicians in each state, county and city is the 1921 (latest) A. M. A. directory.

In compiling the data, the number of persons per physician was secured through the use of a slide rule, or computing scale, so the actual number of persons per physician may vary one or two points, in some instances, from a strictly accurate computation.

PHYSICIAN DISTRIBUTION  
FROM A NATIONAL STANDPOINT

	No. Physicians	Persons Per Physician		No. Physicians	Persons Per Physician
District of Columbia.....	1,689	258	Washington .....	1,797	754
California .....	6,766	508	Pennsylvania .....	11,348	769
Colorado .....	1,817	517	Oklahoma .....	2,622	771
Nevada .....	147	526	Rhode Island.....	778	776
Missouri .....	5,921	575	Idaho .....	553	780
Vermont .....	594	593	Michigan .....	4,593	798
Illinois .....	10,651	610	Connecticut.....	1,729	799
Maryland .....	2,364	614	Georgia .....	3,406	850
New York.....	16,284	637	Delaware .....	262	851
Massachusetts .....	5,959	646	West Virginia.....	1,717	853
Nebraska .....	1,965	660	Arizona .....	380	876
Indiana .....	4,446	661	Montana .....	620	882
Iowa .....	3,536	681	Louisiana .....	2,001	899
New Mexico.....	529	681	Utah .....	496	905
Oregon .....	1,145	684	Virginia .....	2,545	906
New Hampshire.....	641	691	Minnesota .....	2,628	910
Kansas .....	2,550	694	Wisconsin.....	2,750	956
Maine .....	1,105	697	New Jersey.....	3,260	965
Tennessee.....	3,328	701	South Dakota.....	658	969
OHIO .....	8,032	717	Alabama .....	2,405	976
Arkansas .....	2,450	716	Mississippi.....	1,761	1,002
Kentucky .....	3,323	727	North Carolina.....	2,236	1,142
Wyoming .....	264	729	North Dakota.....	556	1,160
Texas .....	6,205	750	South Carolina.....	1,452	1,160
Florida .....	1,281	754			

PHYSICIAN DISTRIBUTION  
FROM THE OHIO COUNTIES STANDPOINT

	No. Physicians	Persons Per Physician		No. Physicians	Persons Per Physician
Warren .....	78	329	Preble .....	32	728
Franklin .....	594	478	Cuyahoga .....	1,284	734
Ashland .....	47	524	Muskingum .....	78	743
Hamilton .....	937	526	Wyandot .....	26	749
Clinton .....	40	576	Putnam .....	37	750
Madison .....	34	578	Ross .....	55	755
Logan .....	52	578	Brown .....	29	780
Knox .....	50	590	Paulding .....	24	780
Allen .....	112	609	Shelby .....	33	785
Clermont .....	46	615	Geauga .....	19	790
Lucas .....	447	617	Coshocton .....	37	800
Fulton .....	38	618	Union .....	26	804
Wood .....	72	621	Erie .....	49	810
Hancock .....	61	628	Ashtabula .....	80	819
Hardin .....	46	632	Pickaway .....	31	831
Seneca .....	68	634	Gallia .....	28	833
Wayne .....	65	635	Medina .....	31	839
Marion .....	66	636	Mercer .....	32	840
Washington .....	67	644	Lake .....	34	842
Williams .....	38	648	Ottawa .....	26	851
Montgomery .....	322	650	Athens .....	59	854
Morgan .....	22	660	Summit .....	335	854
Huron .....	49	661	Auglaize .....	34	868
Miami .....	73	663	Holmes .....	19	892
Licking .....	84	670	Crawford .....	40	900
Highland .....	41	674	Mahoning .....	205	910
Henry .....	34	685	Scioto .....	69	910
Greene .....	45	694	Lorain .....	99	911
Butler .....	125	696	Morrow .....	17	915
Van Wert.....	40	705	Columbiana .....	90	924
Richland .....	78	708	Sandusky .....	40	928
Fairfield .....	57	709	Adams .....	24	933
Delaware .....	36	722	Tuscarawas .....	68	936
Darke .....	59	727	Jackson .....	29	940

	No. Physicians	Persons Per Physician		No. Physicians	Persons Per Physician
Jefferson .....	82	946	Fayette .....	20	1,073
Guernsey .....	47	963	Perry .....	33	1,094
Lawrence .....	41	963	Clark .....	105	1,120
Hocking .....	24	970	Carroll .....	14	1,139
Defiance .....	25	980	Monroe .....	18	1,143
Portage .....	37	981	Pike .....	12	1,180
Trumbull .....	84	999	Harrison .....	15	1,270
Vinton .....	12	1,000	Belmont .....	71	1,312
Champaign .....	54	1,042	Noble .....	12	1,489
Stark .....	170	1,042	Meigs .....	14	1,870

## PHYSICIAN DISTRIBUTION

FROM THE OHIO CITIES STANDPOINT

	No. Physicians	Persons Per Physician		No. Physicians	Persons Per Physician
Wilmington .....	19	263	Alliance .....	37	584
Athens .....	23	278	Jackson .....	10	584
Wooster .....	37	304	Uhrichsville .....	11	584
Urbana .....	24	318	New Philadelphia .....	18	595
Bowling Green .....	18	321	Coshocton .....	18	600
Greenville .....	22	322	Cuyahoga Falls .....	17	600
Mt. Vernon .....	29	330	Vernona .....	12	601
Gallipolis .....	18	336	Wellston .....	11	606
Van Wert .....	23	352	Shelby .....	9	620
Xenia .....	23	396	Conneaut .....	15	621
Bellefontaine .....	23	405	Kent .....	11	642
Wapakoneta .....	13	407	Portsmouth .....	51	648
Ashland .....	22	420	East Liverpool .....	33	649
Marietta .....	36	420	Bucyrus .....	16	650
Cambridge .....	31	423	Galion .....	11	665
Logan .....	13	423	Springfield .....	88	690
COLUMBUS .....	546	435	Middletown .....	34	695
Lancaster .....	33	445	CLEVELAND		
Kenton .....	17	451	Cleveland Heights		
Painesville .....	16	455	Lakewood		
Findlay .....	37	460	East Cleveland		
Delaware .....	19	461	West Park .....	1,246	695
CINCINNATI .....	863	465	Elyria .....	29	705
Lima .....	87	474	Hamilton .....	56	709
Tiffin .....	30	479	Warren .....	37	730
Troy .....	15	484	Ashtabula .....	30	733
Defiance .....	18	493	Steubenville .....	38	750
Chillicothe .....	32	494	AKRON	274	760
Fostoria .....	20	498	YOUNGSTOWN	173	765
Ironton .....	28	500	Sandusky .....	30	765
Piqua .....	30	500	Dennison .....	7	788
Circleville .....	14	502	Dover .....	10	810
Sidney .....	17	505	Canton .....	101	862
Massillon .....	34	512	Niles .....	14	931
Salem .....	20	515	East Palestine .....	6	950
Fremont .....	24	519	Martin's Ferry .....	11	1,060
Norwalk .....	14	527	Lorain .....	35	1,062
Washington C. H. ....	15	530	Norwood .....	23	1,081
Newark .....	50	534	Girard .....	6	1,090
Mansfield .....	52	535	Wellsville .....	8	1,101
DAYTON .....	284	536	St. Marys .....	5	1,135
Nelsonville .....	12	536	Bellaire .....	13	1,158
Zanesville .....	53	557	Struthers .....	5	1,170
Marion .....	50	558	Barberton .....	15	1,252
TOLEDO .....	433	561	Kenmore .....	8	1,580
Delphos .....	10	574	East Youngstown .....	4	2,800
Bellevue .....	10	577	St. Bernard .....	2	3,150

## Paterson Elected President

The Mississippi Valley Tuberculosis Conference, at its tenth annual meeting in Milwaukee, October 9-11, elected Dr. Robert G. Paterson, Columbus, as president for the coming year. Dr. Paterson has been vice-president of the organization during the past year and has previously served as secretary. He is executive secretary of the Ohio Public Health Association.

Among other Ohioans who attended the conference were Dr. J. A. Frank, chief of the tuberculosis division of the State Department of Health; Dr. F. C. Anderson, superintendent of the State Sanatorium at Mt. Vernon, and Mr. Earl Baird, educational direction of the Ohio Public Health Association. Dr. Frank discussed unofficially with representatives of health departments of other states plans relative to tuberculosis clinics.

## Anti-Tuberculosis Christmas Seal Campaign Under Way

Between Thanksgiving Day and Christmas Ohioans will again be asked to "Stamp Out Tuberculosis by Buying Christmas Seals."

Thirty million of these "harbingers of health" are to be placed on sale through the various voluntary health agencies affiliated with the Ohio Public Health Association.

In addition to affording the means to carry forward this great work, the seal sale also looms big as a nation-wide educational campaign. The sale alone acquaints millions with

During this same decade, the death rate, from tuberculosis, per hundred thousand population declined from 150 in 1910 to 89 in 1921.

"If the thirty million seals are sold this year, there will be available \$300,000 for tuberculosis preventive work. A major portion of this money remains in the hands of the local organizations charged with carrying on the work," explains Dr. Robert G. Paterson, secretary of the Ohio Public Health Association.

"The amount which can be raised in any community by the Christmas Seal sale depends solely upon the leaders in charge of the campaign and the program of work which they seek to have financed by the seal sale."

The Christmas Seal, as an institution for better public health, had its beginning back in the days of the Civil war, when a group of women, while playing "post-office" inaugurated the "Charity Stamp". This group, interested in the Sanitary Commission which was the forerunner of the American Red Cross, established miniature post-offices in connection with fairs held in Boston and other eastern cities.

Two years later, or in 1864, the "Charity Stamp Sale" raised more than a million dollars for the care of soldiers in northern hospitals.

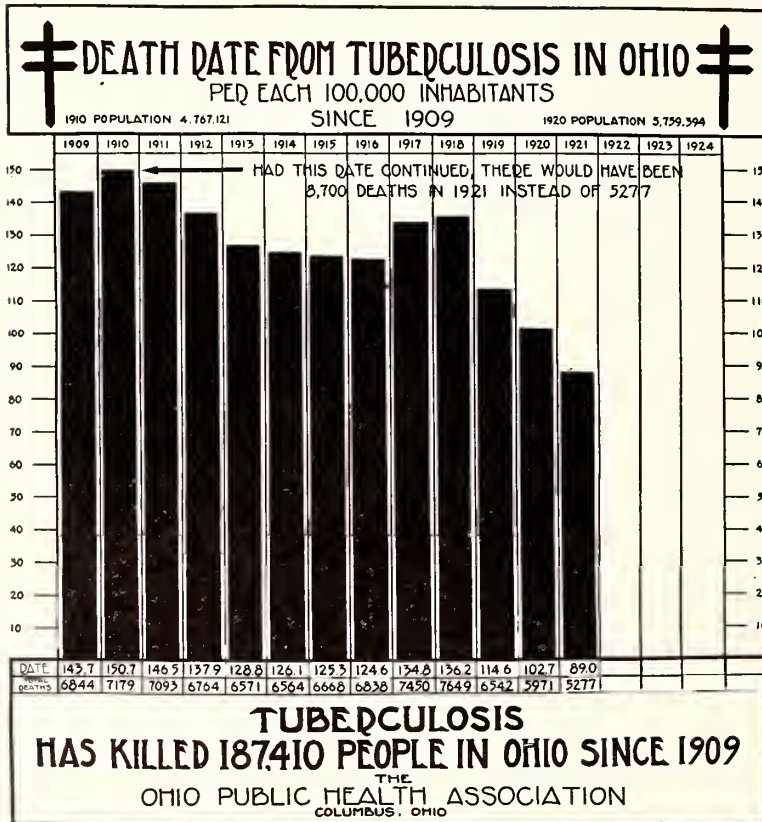
The stamp idea as a means of financing public health work was again revived in

1892, when used for Red Cross work in Portugal.

An enterprising Danish postmaster conceived the idea of using a tuberculosis seal in 1904 and secured royal patronage for launching a Christmas Stamp sale to establish a sanatorium for children.

Later the Danish Tuberculosis Seals were described in an interesting magazine article by Jacob Riis. This article was read by Miss Emily P. Bissell, a Red Cross worker at Wilmington, Delaware. In 1908, she persuaded the American Red Cross to adopt a similar plan of finance. In the first year, without much organization, more than \$135,000 was realized.

The National Tuberculosis Association took over the anti-tuberculosis educational work and the organization for the sale of Christmas seals and since 1919 has been the exclusive agency in



the remarkable results that obtain from tuberculosis preventive work.

For fifteen years, the slogan of the Ohio Public Health Association—"Stamp Out Tuberculosis—Buy Christmas Seals"—has resounded through the state at Yuletide. One penny buys a stamp, which carries its message of tuberculosis preventive work into the home; besides furnishing the funds for field nurses and other educational work.

The progress that has been made in "prevention through education" is presented in realistic form through the Story of Vital Statistics.

In 1910, 7179 Ohioans died from tuberculosis. At that time, there were 4,767,121 people in the state. Last year, with a population of more than five-and-a-half millions, but 5277 deaths were due to tuberculosis.

the United States for the tuberculosis Christmas seals, for directing a nation-wide crusade against tuberculosis.

### "Free Health" Buncombe

(Continued from page 732)

ed, a class which will next demand other benefits without pay or effort. It is my belief that the time has come for action on the part of the physicians who are proud of their profession \* \* \*"

The danger signals raised by Dr. Gardner have been recognized and pointed out in the past. Some progress toward combating the evils of these forces has been made. But a united front—the effective cooperation and organization of the county, state and national associations of the profession—is essential to a successful struggle against this menace not only to professional integrity but to national life itself. For these and other equally clear reasons, every eligible physician in Ohio should be an active, constructive, cooperative member of organized medicine.

### 1923 Prohibition Permits Should be Secured Now

Prompt filing of applications for 1923 permits to purchase and prescribe alcoholics by the physicians of Ohio will save considerable inconvenience later on, Federal Prohibition Director Russell has announced.

Six weeks to two months lapse between the time the application is received and the permit is issued. For this reason, all physicians are urged to file application on Form 1404 at once so that when the new year arrives, all permits will have been issued, and embarrassing delays will be avoided.

Application blanks have been forwarded to all physicians holding 1922 permits. These should have been received sometime ago. Physicians who have not received an application are requested to notify the Federal Director, Gule Building, Columbus.

New Washington regulations require the applicant for a permit to furnish the name of the druggist expected to fill the prescription. Director Russell says that the address is unnecessary and in cities where one organization operates several pharmacies, the drug concern's name is all that is necessary.

Approximately 2500 physicians in Ohio hold 1922 permits, the director says. A large percentage of these hold both the right to purchase and prescribe. A few hold permits to prescribe alone and several are authorized to purchase. Most city physicians have permits to both purchase and prescribe.

Many applications for the 1923 permits have already been received. If all physicians submit applications within the next month, the 1923 permits will all be issued by January 1, 1923, it

is promised. It may be of interest to physicians to remind them that even in case they do not care to take out a permit to "prescribe" that they are entitled to a permit to "use"; which means that on such permit they may purchase not to exceed six quarts per annum of whisky or brandy for emergency use.

### Value of Medical Organization

In addition to the benefits of and service to each individual physician through affiliation with medical organization, another value is found in the greater possibilities of service to the community, Dr. John Phillips, President of the Academy of Medicine of Cleveland, says in an article which appeared in the September 25th issue of the *Bulletin* of that society.

"The medical society cannot fail to exert a beneficial influence on the medical practice of its community; in particular, as an integral part of the state organization and, through the state organization, a factor in the activities of the American Medical Association, it bears its part in the improvement of the standards of medical education and practice throughout the nation; in legislation bearing upon the welfare of the whole people; in all matters pertaining to the public health", he pertinently states.

"In view of these facts it becomes evident that the physician who through apathy, or carelessness, or ignorance stands aloof from the organized activities of his fellows cannot acquire his proper standing in the community, and his usefulness is correspondingly limited. Only by membership in his local medical society and by participation in its activities can he reach his greatest professional growth and share in the responsibilities for and the benefits of the far reaching influence of the organization."

In such brief manner does Dr. Phillips summarize a creed and convey an inspirational message.

### Back Again

All because he found "his native country, Austria, rapidly approaching the brink of disaster and annihilation of all great culture, with the outlook for professional men and the great middle class fraught with peril and terror", Dr. A. Lorenz, orthopedic surgeon, and his two sons have come to America to "continue his charity work among the cripples and introduce a new bloodless operation which he declares will relieve hitherto hopeless cases."

Before presenting his new operation, he stated that "he expected to discuss it in the medical press and before medical societies."

His youngest son is expected to enter Columbia university to study medicine and surgery. The eldest son is to assist his father.

### "Before You Invest—Investigate"

"The professional man, especially the M. D. and the D. D. S., has the reputation generally of being about the easiest picking of any for the 'Blue-Sky' or 'Get-rich-quick' operator," says E. D. Tucker, M. D., of Toledo, in discussing investment possibilities in a recent article, published in the *Bulletin* of the Toledo Academy of Medicine.

"Whether or not this is true, I am quite sure that the worthless stocks and other so-called investments held by the members of the medical profession in any community will make a bundle many times greater than their holdings of securities having real investment merit.

"This is a condition which should not exist. All present will agree with me, I am sure, when I say that the Doctor earns his money—certainly he earns every dollar he *collects*. And there is no one to blame but himself, if, after a lifetime of labor in his chosen profession, he finds himself unable to retire because of lack of income.

"Wise investment of surplus earnings would, I believe, place the great majority of physicians on Easy Street long before the undertaker is called in for the final consultation.

"Possibly some of you will ask how it is possible to diagnose an investment—how can the organically sound be determined from the pathological, there being no temperature to take nor respiration or pulse to count.

"The fact is, it is a very difficult thing to draw a hard and fast line of demarcation between Investment and Speculation, but it is at least possible and an evidence of just good business judgment to ascertain something about the investment house you may intend to deal with, and about the personnel of any company, the stock of which you propose to buy, before signing on the dotted line. In other words, 'BEFORE YOU INVEST—INVESTIGATE.' This slogan was brought forth by the Capital Issues Committee in collaboration with the 'Better Business Commission' of Cleveland during the war.

"After satisfying oneself that the intent back of a specific offering of a security is not to defraud," Dr. Tucker continues, "probably the next most dangerous pitfall to beset the investor is the lure of speculation—the promise of fabulous profits that so rarely materialize. Hundreds of persons are misled into the belief that they are investing when in reality they are speculating. Confusion of this issue is disastrous, and yet it is common, because most people believe that placing money in anything that promises a return is investing—whether it is in education, business, farm, oil lease, patent, bond, stock or merchandise. Bankers and banking laws differentiate between investment and speculation with precise technical discernment; thus,

banks are permitted to *invest*, but are prohibited from *speculating*.

"In an investment the relation between the original outlay of money and the final return is certain. Example, a bond. Here the *investor* has an enforceable contract, often backed up by valuable security, calling for the payment of a certain sum with a fixed rate of interest, at a stipulated time. The conditions present and future are *known in advance*. In a speculation, however, the relation between the original outlay and final return is uncertain. The *speculator* has no contract or other guarantee that he will get out what he has paid in. Example, a stock. A stock is not a contract to pay money. It does not mature. True, its value may rise; but the chances are equal that it will fall. It may even become worthless. The speculator has no protection; instead he hazards his principal for the chance of gaining a larger return than an investment insures.

"According to Mr. Glenn G. Munn, formerly of Toledo—now a rising young financial writer of New York, in a recent series of short investment articles written especially for our firm, 'safe investment mediums—contracts to pay a principal sum with a series of regular incomes, are practically restricted to certain classes of bonds, notes, and real estate mortgages.' Annuities, endowment insurance policies and savings banks accounts, though less usual, also qualify. Bonds usually run from 5 to 40 years (although there are longer maturities) and therefore furnish a medium for long-term investment. Real estate mortgages run 3 to 5 years, subject to renewal; real estate mortgage bonds usually mature serially from 3 to 10 or 15 years. These furnish a medium for moderate-term investment. Notes run from three months to several years, and are known as short-term investments. While bonds and notes may or may not be secured, real estate mortgages are always secured. Because of the difficulty of appraising their safety and the fact that they are purchased by banks, notes may be omitted as a medium for the private investor, who is confined very largely to bonds and mortgages.

"Bonds represent the chief investment medium. There are numerous varieties of bonds, and by no means are all equally safe. The most important classification of bonds is according to the issuer—the debtor organization which promises to pay. Under this classification there are two great divisions: civil bonds and corporation bonds. Civil bonds are the obligations of a national government, state, county or municipality. Liberty Bonds, State Bonds and Municipal Bonds belong to this class. Corporation Bonds are the obligations of business corporations, and are subdivisible into (1) railroad, (2) public utility, and (3) industrial, being obligations respectively of railroads, public service corporations (electric light, gas, telephone,



traction, interurban), and industrial corporations (steel, machinery, food products, etc.)

"Of these classes of bonds, those of the United States Government and of the various states and municipalities are entitled to the highest rating. While not secured by a specific pledge of assets, as are many corporation bonds, the ultimate security rests in something much better—the taxing power. Liberty Bonds, for instance, may be considered as having the endorsement of every taxpayer in the United States. Similarly, municipal bonds, practically speaking, have the endorsement of every taxpayer in the issuing municipality. Because of the wealth of American cities, municipal bonds rank almost equally with United State Government Bonds for safety of principal.

"Of the Corporation Bonds, railroad bonds are the most 'seasoned,' because they have been in existence longer than the others, and their value has become tested by time. Most railroad bonds are secured by mortgages on property and equipment. If not secured, they are known as debenture bonds. All railroad bonds are not equally safe, however, the degree of safety depending very largely upon earnings.

"Public Utilities Bonds as a class rank close to railroad bonds. Due to the control of these corporations by state public service commissions, whose duty, among other things, is to safeguard the interests of security holders, public utility bonds are growing in favor.

"Industrial Bonds are the most recent class, and therefore the least 'seasoned.' They were practically non-existent before 1900. On account of the wide fluctuations in earnings of industrial corporations, this class is not entitled to the standing of the others. Still, there are many industrial bonds that answer all the requirements of reasonable safety.

"Prospective investment selections should be subjected to certain tests. These are presented in the order of their importance from the point of view of the average investor. Since the needs of investors differ, this order may need revision in special cases.

"Safety of principal is the supreme investment requirement. The advantage of all classes of civil bonds is that this requirement is fully met, provided the bonds are issued in accordance with statutory regulations, and for a legal purpose. Reliable bond houses, offering these issues, employ competent attorneys to pass upon the question of legality, in order that this uncertainty may be removed. The safety of corporation bonds depends not only upon legality, but many other factors. For instance, is the business sound and skillfully managed? Is the security ample? Is the credit standing good? Are the earnings as demonstrated over a period of years sufficient to pay operating expenses, interest charges, sinking fund requirements, and still leave a balance to operate as a 'margin of

safety'? Will the price of the bond be immune from violent fluctuations, due to a wide range in yearly earnings?

"The interest yield from an investment is necessarily secondary to safety. High interest rates mean nothing if the principal is insecure. While influenced by other considerations, generally speaking, safety diminishes as the yield increases, leaving the inference that an investment which promises a fancy yield probably contains some speculative qualities.

"Regularity of income—usually semi-annually—is essential to the investor, and nowhere else is this test better fulfilled than in a bond.

For business men who may at times need to borrow money, or to raise money in order to embrace a sudden opportunity, marketability and high loan value are important. By marketability is meant the ease with which the investment may be sold without undue sacrifice, if the investor needs to get his money out, before maturity. Loan value is the amount which can be borrowed from a bank with the investment as security. All civil bonds, and the bonds of large corporations, many of which are listed upon the Stock Exchange, have these qualities in a very high degree.

"Other less important tests of a good investment are: Is it tax-exempt? Is there a possibility of enhancement in value?

"The investor should inform himself upon all the features of his prospective purchase. He should know the date of issue, maturity, and of interest payments. He should also know the total amount authorized and issued, sinking fund provisions, if any, whether optional retirement is provided, and whether the issue has been approved by competent attorneys. He should also study the financial markets and the trend of interest rates, in order to know whether the price is right, in view of the standing of the issue, and current interest rates.

"The Doctor, with limited time at his disposal, may not feel competent to apply these tests with confidence as to the results. He cannot go far wrong, however, if he will observe three fundamental cautions:

"1. 'BEFORE YOU INVEST—INVESTIGATE.'

"2. Be sure you are *investing*, not *speculating*.

"3. Seek the assistance of a reliable investment house. It can help you 'check' your selections, and can impartially recommend the investments most suited to your needs.

"Before closing, I should like to say something about the Partial Payment Plan. Under it the initial payment on any purchase of securities is, say, 20 per cent. of the total cost of a bond or stock. Upon payment of this sum, ownership is assured at the current market price.

"Following the initial payment you have eight to ten months in which to complete payments. If you desire, you can make the initial payment

more than 20 per cent. and can pay the balance due in fewer or a greater number of payments.

"The Partial Payment Plan is a convenience to the large as well as the small investor, for under this plan he can invest in a greater variety of securities at one time, thus diversifying his holdings. It promotes thrift, as one is more apt to keep up regular payments on a specific investment than he is to deposit regularly a fixed sum in bank.

"To illustrate, I want to tell you about one of the well known younger physicians in the city. He came into our office about eighteen months ago and purchased a \$500 bond on this plan. He said he probably could pay \$50.00 or more per month. It was his first bond purchase, but he had bought pretty nearly every 'Blue-sky' security that had been offered him in times past.

None of these had any market, and so far as I know none of them was paying dividends. Checks began coming from him by mail. Two or three times a week we would receive a check ranging in amount from \$25.00 to \$50.00. In a surprisingly short space of time he had paid for his first bond, and he has kept right on. Upon referring to his account a few days ago I was surprised myself to learn that he has **already** purchased several thousand dollars par value of bonds through our office. Furthermore, I find that the selling price of his bonds today is considerably more than he had to pay for them. The market on some of his purchases had advanced to such an extent that he has a nice profit in addition to the average return of 7 per cent. to 7½ per cent. on the investment. What he has done, any of you can do."



At the meeting of the State Medical Board, October 3, 1922, the certificate of Dr. William Agnew, Akron, to practice medicine and surgery in the state of Ohio was revoked on the grounds of grossly unprofessional and dishonest conduct.

The following is a list of the physicians who were granted certificates to practice medicine and surgery in Ohio through reciprocity at the October 3rd meeting of the board, with their schools of graduation and intended locations:

William P. Edmunds, University of Michigan, 1912, Washington, C. H.; Amos T. Fisher, St. Louis University, 1903, Cleveland; George E. Gerken, University of Michigan, 1921, Toledo; Donald B. Holloway, Hahnemann Medical College, 1901, Cleveland; John P. Horle, Syracuse University, 1894; James H. McCall, Detroit College of Medicine and Surgery, 1911, Cleveland; Owen D. McFall, Meharry Medical College, 1921, Steubenville; Leo L. Newfield, University of Michigan, 1921, Akron; Jacob Reicher, New York Homeopathic Medical College, 1921, Cleveland; Nicholas A. Schneider, St. Louis University, 1921, Athens; Raymond D. Schirack, Detroit College of Medicine and Surgery, 1920, Canton; James A. Schurgot, University of Pennsylvania, 1914, Lorain; David Rodgers, Meharry Medical College, 1915, Cincinnati; Thomas A. Vogel, Georgetown University, 1921, Columbus; Frank B. Murphy, Medical College of Virginia, 1895, Akron; James B. Rucker, University of Pennsylvania, 1902, Toledo; Nathan J. Epstein, George Washington University, 1921, Cleveland; Frederick E. Hansen, Detroit College of Medicine and Surgery, 1921, Hicksville.

Convictions for the illegal practice of medicine were reported as follows:

Andrew Rankin, who pleaded guilty to the illegal practice of medicine, was fined \$25.00 and costs, in the Municipal Court of Cleveland.

George Kuces, who admitted he was guilty of the illegal practice of medicine, before Justice of the Peace C. W. Martin, Youngstown, was fined \$100.00 and costs, \$50.00 suspended on good behavior.

A. P. Anderson, who pleaded guilty before Justice Martin, Youngstown, to (1) opening and conducting an office without a certificate; (2) illegal practice of medicine, was fined \$100.00 and costs on each charge.

Marcus Kadji was found guilty of the illegal practice of medicine, in the Municipal Court of Cleveland, September 7th, and fined \$100.00 and costs.

James Reed pleaded guilty in the Municipal Court of Akron, August 25, to a charge of illegal practice of medicine, and was fined \$25.00 and costs; suspended on good behavior.

Mrs. Anna Mikels pleaded guilty, before Squire Mattison, Warren, to the illegal practice of midwifery. Fined \$25.00 and costs.

A. Aurilio, M. D., unlicensed, pleaded guilty, before Squire Mattison, Warren, to (1) opening and conducting an office in the name of a licensed physician; (2) advertising and announcing himself before obtaining a certificate; (3) second offense charged. Fined \$150.00 and costs on each count, with \$125.00 suspended on condition that he leave the state.

George Schuster pleaded guilty, in the Court of Justice Martin, Youngstown, to (1) illegal practice of medicine; (2) same offense; (3) second offense charged. Fines assessed, \$300.00 and costs and six months in the county jail.

Sullivan, unlicensed chiropractor, found guilty in the Municipal Court of Cleveland, August 11, of practicing without a license. Fined \$100.00 and costs.

The reciprocity agreement with the state of Illinois, as applied to those individuals examined during 1920 and 1921, was cancelled.

Examinations for license to practice medicine and surgery in Ohio will be held by the State Medical Board on December 6, 7 and 8th in the Senate Chamber of the State House, Columbus.

# Features of the Public Health Nursing Course in the Ohio State University with Emphasis Upon the School Nursing Project

Norma Selbert, Assistant Professor, College of Medicine, Ohio State University

The Public Health Nursing curriculum in the Ohio State University is sponsored by the College of Medicine. The courses are taught by means of the Project Method. The teaching lays emphasis on practical work which is done along with the theoretical work given in the University. This method gives training in the technique of reasoning and tends to make the field work more interesting and significant. It differs from those curricula in Public Health Nursing in which the college does all its field work in one center, in that the students here carry out each project in its natural setting.

The curriculum is divided into three quarters, each beginning and ending with the quarters in the other colleges of the University. Cooperation has been established with the Columbus District Nurses Association for experience in visiting nursing; the Jeffrey Manufacturing Company for experience in industrial nursing; the County Tuberculosis Sanatorium and City Tuberculosis Association for observation and treatment of tuberculosis; the Columbus Family Service Society for experience in social service; the State Hospital for the Insane for experience in mental nursing; the Franklin County District Board of Health for experience in rural nursing; the Grandview Schools and the special school for tuberculosis children for experience in school nursing. The Dispensary which is maintained by the Ohio State University affords experience in clinics. The State Schools for the Blind, the Deaf, and the Feebleminded give many opportunities for the various branches of public health nursing. An excursion to each of these institutions is taken during the first quarter of the course. Two weeks of field work are given in each of these branches of public health nursing during the second quarter, after which the student elects that branch in which she wishes to specialize. All of the field work in the third quarter may then be done in the chosen branch of nursing.

## SCHOOL NURSING

The following is an outline of the school nursing project as carried out by one of our students in Grandview near Columbus. The immediate purpose in doing school nursing is to give experience to registered nurses who are students in the Public Health Nursing Course in the Ohio State University, and to give them experience in keeping records, endorsed by the State Department of Health. The secondary aim is to stimulate interest which would lead the adults in the community to want medical inspection

made permanent in their schools, and to get the teachers and the children interested in hygiene; also to correct defects.

The problems which we have encountered while carrying the school projects are: Inadequately built school-houses, in which we found overcrowded rooms; poverty (which results in squalid homes where children have handicaps). In the richer homes we sometimes found lack of discipline. In the poorer homes we often found superstitions and traditions which made people unwilling to change their mode of living.

## ORGANIZATION

The school doctor was one of the faculty of the College of Medicine in the Ohio State University. He spent one-half day each week in the school. The principals, nurses and teachers knew when to expect him and were free to call him at any other time. The nurse spent one whole day each week in the school. She made home calls at some time during the week following the children's examination. The doctor and the nurse met in the school.

Reports, exhibits and publicity matter were arranged with the aid of the State Department of Health, county health commissioner, the Ohio State University and local Parent Teacher Associations. The automobile which conveyed the nurse from school to school and to homes and dispensaries was furnished by the County Department of Health.

## PLAN OF PROCEDURE

The nurse took survey of school buildings, using the form which the Ohio State Department of Health issues for that purpose. A place in each school was selected for use of medical inspections and dispensary. The nurse visited all rooms in each school, introduced herself and gave a ten minute talk to explain the plan of medical inspection to the children. She told when she would return for class inspection.

During the second visit she wore the uniform of a registered nurse and made superficial inspection of all children in their class room. The nurse took position by the window and requested pupils to stand near her while she noted general appearance and the condition of their skin, hair, eyes, ears and oral cavity. All pupils found with pediculosis were sent home at once with a note telling how to treat the same. Each child was told to return next day. He was readmitted on the next day if the proper treatment had been given. If nothing had been done he was sent home again and then the nurse

visited his home and carried out the treatment.

All obviously defective cases were immediately sent to the school doctor or taken to the dispensary conducted by the College of Medicine. Girls' toilets were inspected by the nurse, boys' toilets were inspected by the school doctor. The janitor was instructed how to care for the same.

The routine individual inspection was conducted in a private room. Three children came to the doctor and nurse. As soon as one child returned to his class room another came for inspection. The nurse weighed and measured the child, took temperature, pulse and respiration. The record was put on the child's card; the child took the card to the doctor for more thorough inspection; the doctor made a record of his findings. Parents of a child who was found with defects were urged to visit the doctor at the school. He explained to the parent the existing conditions and what could be done to help the child.

Parents were notified by note before children were examined so that they could always be present when the examinations were made. If doctor recommended that the child should go to dispensary and if the parent could not take child, the nurse obtained written permission from the parent or guardian and she then took the child to have the necessary treatment in the dispensary. The nurse arranged toothbrush drills and handkerchief drills and special talks from time to time.

Home visits were made by nurse in order to urge correction of physical defects, to see that the ill pupil was receiving proper care and to give demonstrations in the home.

#### DEMONSTRATION FOR PARENTS

A demonstration was held for the Parent Teachers' Association to show how medical inspection was done in the schools. It was conducted one evening in three scenes as follows:

Scene I. *Nurse's First Visit in Class Room.* Eight children were asked to appear in the demonstration. Children were seated and nurse explained work to them and left health cards. Scene II. *Depicting the Nurse's Second Visit in Class Room.* Children passed the nurse who stood in uniform with her back to light. Children held out hands with palms and wrists exposed. Then they opened their mouth and put out tongue; then they separated their eyelids in such a way as to expose the conjunctiva. The nurse did not touch the children, but explained to the mothers that in this way she was able to note more obvious symptoms of infection. Scene III. *The Medical Examination.* The doctor and nurse examined a school child, proceeding as described above.

The demonstrations which showed special treatments were well received. In showing how to treat an infected head, she actually immersed the hair with kerosene and olive oil, tied up the head, and then gave a shampoo and vinegar

rinse. Other demonstrations showed "How to Prevent Children from Sucking Thumb;" "How to Put on and Remove Glasses and How to Clean Them"; and "How to Walk and Stand and Sit Correctly". The reason why defects should be corrected promptly were given and several mothers asked for help with personal problems. The importance of correcting defects was emphasized without causing needless alarm to the parents or children. Demonstrations in infant care and pre-school nursing were given to the Mother's Club. No nursing had been done in these schools prior to this year.

#### RESULTS OBTAINED

A first aid closet was equipped in each school, and a scale has been placed in each since this project was started by the University. Several exhibitions were arranged with the teacher in home economics and the school children. They consisted of a group of tables showing: (a) foods which make us grow (protein foods); (b) foods rich in iron; (c) foods of high caloric value with a sign "Avoid Eating Much of These in Summer." The children also made "Correct Posture" posters and illustrated "Health Habits." Plans are now being made to organize a Health League in each school.

Parents will usually consent to have the children receive medical care when they understand what is needed and how it is done. They should be assured that the interest of the nurse is centered in the welfare of the children and that no corrective work will be done without their consent.

### Typhoid Fever Epidemics at Canton and Troy

During the months of August and September serious epidemics of typhoid fever occurred at Canton and Troy. At Canton over 60 cases occurred between the first of July and the end of September. The peak occurred on August 24.

The outbreak was traced to the public water supply which is drawn from two groups of wells. The oldest group is situated in the heart of the city along the course of a creek. Engineers of the State Department of Health recommended years ago that because of its unfavorable situation, this source should be abandoned. The other group is situated well outside of the city.

When cases of typhoid fever began to appear in Canton, the health commissioner examined samples of water and found that those from the distribution system in the area served by the old group of wells showed evidences of contamination. After conferring with engineers of the State Department of Health, a chlorine machine was installed. The exact means by which this water supply became contaminated has not been discovered, but investigations are being continued. In the meantime, the Director of Health

has again recommended that the group of wells situated in the congested portion of the city be abandoned as rapidly as new sources can be developed to supply the deficiency.

The outbreak at Troy began on September 5. There were really two outbreaks, one reaching its height on September 13 and one on September 21. Sixty-two cases were reported. Practically all cases used milk from one dairy. One suspected and one typical case of typhoid fever were found at this dairy. The supply was immediately shut off. Except for contact in a few of the later cases, no source other than this dairy was implicated. This outbreak points the moral that pasteurization of milk by the holding method is the only real protection against outbreaks of milk-borne disease.

### Industrial Commission to Adopt Occupational Disease Code

Since the law defining Occupational Diseases under the Workmen's Compensation act became effective in Ohio, 90 per cent. of claims for compensation filed came from plants of manufacturers of rubber goods or those of manufacturers who use lead in some process of their work. As a result of the experience in the first 500 cases filed with the Commission occupational diseases will probably be divided into the following six classes in the order of their present numerical proportion:

1. Rubber industry
2. Lead
  - a. Manufacture of lead
  - b. Use of manufactured article containing lead
3. Machine shops where cutting oils are used
4. Chemical manufacturers
5. Mining
6. Miscellaneous.

The medical division has recommended that the Commission authorize someone to visit industrial plants in order to get suggestions as to safety measures to be adopted for the elimination of occupational disease hazards. It also suggested that inquiry be made of other state industrial departments as to what they are doing in occupational disease prevention.

The Commission voted to instruct Director Tetlow to follow the recommendations of the Medical Division and have the division confer with representatives of the State Medical Association and others, and report recommendation to the Commission as soon as possible.

A classification of occupational disease claims filed up to August 31, 1922, shows:

Anthrax 1, aniline poisoning 3, arsenic 1, benzol poisoning 11, carbon dioxide poisoning 4, dermatitis 277, fume poisoning 1, lead poisoning 148, naphthol vapor poisoning 1, zinc poisoning 1, unclassified 46; total 494.

### Druggists on Treasury Department Alcoholic Decisions

All Treasury Department decisions affecting alcoholic drugs which were characterized as being "so numerous as to constitute a menace to the public and the trade" will hereafter be subjected to court tests by the National Association of Retail Druggists.

This procedure was adopted at the annual convention of the association, held during the last week in September at Detroit.

It will be remembered that a somewhat similar position was taken by the House of Delegates of the American Medical Association at the St. Louis meeting, when it was "recommended that provisions be made for supplying bonded whiskey for medicinal use only at a fixed retail price to be established by the government."

Several resolutions submitted to the National Association of Retail Druggists by the Ohio State Pharmaceutical Association were adopted, among which were:

1. That the Prohibition Unit of the Internal Revenue Department refuse to permit manufacturers of alcoholic medicines as defined under "Drugs" of the Federal Food and Drug Act of 1906 to use more than 10 per cent. of the alcohol withdrawn, unless such medicines go to the consumer through established channels of physicians, retail pharmacies and other dealers holding permits to use or sell alcohol. This would help eliminate the concerns which sell intoxicants under the guise of "Tonics," etc.

2. Terminate the requirement to list any medicinal preparation of the U. S. P. and N. F. as fit for beverage purpose. This would stop the steady increasing of formalities and restrictions such as those which list as "fit for beverage purposes" any alcoholic compounds which have been so misused. If continued, as at present, practically every drug containing alcohol will eventually be so listed and made subject to "red tape."

3. Disapproval of the action of the National Formulary Committee in deleting certain preparations from the next, or fifth N. F., which have been declared fit for beverage purposes, namely: Blackberry Cordial, Compound Wine of Orange, Wine of Beef, Wine of Pepsin, Wine of Wild Cherry and Sherry Wine. This recommendation would retain the foregoing wines as being of medicinal value within the judgment of the prescribing physician.

4. Requesting the Prohibition Unit to grant bond exemption to permittees holding authority to withdraw and use 15 wine gallons of distilled spirits and other intoxicating liquors each quarter of the year.

*Ophthalmoscopy, Retinoscopy and Refraction*, by W. A. Fisher, M.D., F. A. C. S., Chicago, Ill., U. S. A. Professor of Ophthalmology, Chicago, Eye, Ear, Nose and Throat College; late Professor of Clinical Ophthalmology, University of Illinois; with 248 illustrations including 48 colored plates. Published by W. A. Fisher, M.D., F. A. C. S., 31 North State St., Chicago, Illinois, U. S. A. Price \$4.00.

## "Expert Testimony", Its Meaning and Purpose --- Some Hints, Advice and Definitions by Well-Known Attorney

"There has been much criticism in the last few years in respect to medical experts, as well as experts in other lines", declared Henry Gumble, well known Columbus attorney, in discussing "Expert Testimony" before the members of the Columbus Academy of Medicine at a meeting October 2nd.

"The expert", the speaker continued, "whether he be medical or otherwise, is almost in disrepute with the public and is taken with a great deal of salt by the juries."

"The reason is apparent. The expert," he explained, "is generally a partisan. Unconsciously, he makes the case upon whose behalf he was called, his case. His attitude upon the stand is such as to make the jury feel that they cannot give full credence to what he testifies to."

A solution to this criticism has been proposed, he stated, through the authorization of a board of experts to whom would be submitted questions requiring skilled or expert testimony.

"This sounds good," he added, "but it is met with an objection. It is the function of the jury to determine the fact in dispute. You cannot take this right, this right of determining the facts, from the jury and transfer it to a board of experts."

Courts in recent years have selected their own alienists and experts to testify in criminal proceedings. However, criminals are not limited to the court's selection but may secure their own experts.

"What is a medical expert?" he interrogated, "The courts have held that an expert is one generally who is skilled in a particular profession in which the question involved relates.

"The general view of the court in determining who is an expert is: what are his qualifications, the subject matter of the testimony and to what extent the jury is bound.

"It is impossible for the law to recognize any class of practitioners. However, there is one state, Wisconsin, that does fix the qualification, and by statute makes incompetent as expert testimony any doctor, physician or surgeon who either has not been licensed to practice or who is not a graduate of a recognized medical school.

"What are the qualifications, aside from the statutory qualifications?

1. The witness may qualify, if he has shown to the satisfaction of the court that he is qualified by study without practice.

2. If he has the necessary practice without study.

3. If he is a physician, or has studied to be one.

4. He need not, at the time, to be practicing. This is a wide latitude and I believe that the

rule should be qualified. Experience and study should be the true qualification that counts.

Expert testimony is generally required of medical practitioners upon the following:

1. Causes of death, or disease.
2. Causes of injury.
3. Causes of drugs, medicines and treatment.
4. Probabilities of recovery.
5. Questions of peculiar knowledge of physicians.
6. Physical or mental ailments of the human system."

The chief characteristics of a "convincing witness", he pointed out are: knowledge of the subject; standing in the community; experience; manner of testifying; and evidence of fair-mindedness. "A jury," he continued, "is not bound by the testimony of any expert. In arriving at a verdict, they may resort to their own experience, or knowledge of the matter. They may, without committing gross error, reject the testimony of experts and exercise their own knowledge."

Reviewing courts will not set aside expert testimony from the trial courts, unless it is decided that there has been "a gross abuse of that privilege."

One of the first questions that any physician called to offer expert testimony may expect is "Are you being paid for this?" And usually, the speaker pointed out, the witness hesitates. This is fatal. It engenders a feeling of distrust upon the part of the jury.

"You should say: 'Yes' immediately. Speak right out. It is an evidence of fair-mindedness.

"The true function of the medical expert", he continued, "is to give the court and jury your best judgment upon the hypothetical questions and questions in fact and do not make yourself the attorney for those upon behalf of whom, you are testifying."

### Milton Jay Lichty Chair of Biology

The Doctor Milton Jay Lichty Chair of Biology was dedicated at Mount Union College, Alliance, October 20. "The Trends of Modern Biology" was the subject of the dedicatory address made by Raymond Pearl, Ph. D., Sc. D., LL. D., professor of biometry and vital statistics, School of Hygiene and Public Health, Johns Hopkins University.

Dr. Milton Jay Lichty, a graduate of Mount Union College in 1892, in whose honor the chair is named, was a well known Cleveland physician and councilor of the Fifth District of the State Association. He died February 14, 1918, in war service at Camp Taylor, Louisville, Kentucky, while still holding the councilor office.

## DEATHS IN OHIO

*LaVerne A. Badger, M.D.*, University of Buffalo Department of Medicine, 1875; aged 76; died at his home in Toledo, September 25. Dr. Badger was a practicing physician in Toledo for more than 50 years. Dr. Paul Badger, Toledo, is a son of the deceased.

*Austin D. Beasley, M.D.*, Starling Medical College, Columbus, 1897; aged 50; died at Protestant Hospital, Columbus, October 9, from complications. Dr. Beasley had been a resident of Columbus for 25 years. He leaves a widow and his mother.

*Thomas Delass Bristol, M.D.*, College of Physicians and Surgeons of St. Joseph, 1882; aged 68; died at his home in Cleveland Heights, September 13. He was a former president of the Medico-Physical Research Association and taught in institutes of the American Association of Official Surgeons. His widow survives.

*Frank Broughton, M.D.*, Rush Medical College, Chicago, 1884; aged 62; member of the Ohio State Medical Association; died at his home in Toledo, September 17, from organic heart disease. Dr. Broughton practiced in Waterloo, Indiana, before locating in Toledo in 1915.

*Guy Henry Horwell, M.D.*, Cleveland University of Medicine and Surgery, 1890; aged 58; died at his home in Cleveland, September 23.

*Robert Carson Kinnaman, M.D.*, Cincinnati College of Medicine and Surgery, 1873; aged 74; member of the Ohio State Medical Association, died September 7, from septicemia. Dr. Kinnaman was a charter member of the Ashland County Medical Society and served as its first secretary. He was a native of Ashland and spent his entire medical career there. He had been local surgeon for the Erie Railroad for more than 40 years. Dr. Kinnaman was a son of the late Dr. Jacob W. Kinnaman, a pioneer physician, and the father of Dr. Guy Carson Kinnaman who died in 1910. He leaves a widow, two brothers and one sister.

*Joseph B. Laughlin, M.D.*, Starling Medical College, Columbus, 1897; aged 50; died at the Alliance City Hospital, September 23, after a protracted illness of five years' duration. He had been a practicing physician in Alliance for 13 years. Surviving are his wife, one brother, who is Dr. F. M. Laughlin of East Liverpool, and two sisters.

*Edward George McCassy, M.D.*, Bellevue Hospital Medical College, New York, 1890; aged 51 years; died at his home in Cincinnati, October 1. Dr. McCassy began practice at Jamestown, Kansas, but later entered commercial work.

*Daniel C. McTaggart, M.D.*, Pulte Medical College, Cincinnati, 1887; aged 66; member of the

Ohio State Medical Association; died at his home in Bryan, September 1, from angina pectoris. Dr. McTaggart had been in active practice in Bryan since 1888 and was one of the oldest practitioners in point of years in the community. He leaves his wife, one son and one daughter.

*Philip S. Rieg, M.D.*, Toledo Medical College, Toledo, 1894; aged 56; member of the Ohio State Medical Association and fellow of the American Medical Association; died at his home in Toledo, September 21, from heart disease. Dr. Rieg served in the Navy during the Spanish-American war. He was house physician for a number of Toledo theaters. His widow survives. Dr. Philip W. Rieg, Toledo, is a nephew.

*Curtis Abram Overholt, M.D.*, Cleveland Homeopathic Medical College, 1889; aged 50; died suddenly from cerebral hemorrhage, August 26, while driving his automobile in Toledo. Dr. Overholt's home was in Ada.

*John B. Singleton, M.D.*, Medical College of Ohio, Cincinnati, 1891; aged 60; was found dead in his office in Cleveland, September 22. Death was due to angina pectoris.

*Wilbur Riley Thompson, M.D.*, University of Michigan Medical School, Ann Arbor, 1869; aged 77; member of the Ohio State Medical Association; died at his home in Troy, October 2. Following his graduation from medical school Dr. Thompson located in Vandalia, where he practiced for 10 years before coming to Troy. Surviving are his wife, one daughter and one son.

*George Henry Whaley, M.D.*, College of Physicians and Surgeons, New York, 1870; aged 76; died at his home in Crawford, June 25, from endocarditis.

### "Mental Hygiene" Lectures Before District and Group Meetings

A program of wide interest, both from organization and scientific standpoints, featured the annual meeting of the Tenth District Medical Society in Delaware, October 11. In spite of inclement weather there was a representative attendance from the district and several guests from without, among the latter being Dr. Robert Carothers, Cincinnati, president of the State Association.

The meeting was called to order by the president, Dr. I. T. McCarty, of Delaware. Dr. Carothers and Dr. S. J. Goodman, Columbus, Tenth District councilor, were called upon for organization talks, after which Dr. E. A. Hamilton, Columbus, spoke on "Medical Ethics", and Dr. E. A. Baber, superintendent of the Dayton State Hospital, on "Mental Hygiene."

In the business session, Dr. Robert H. Trimble, Mt. Sterling, was chosen to succeed Dr. McCarty as district president, and Dr. F. D. Postle, London, to succeed Dr. Rees Philpott, Delaware, as secretary. The nominating committee consisted

of Drs. C. C. Ross, Columbus; H. G. Southard, Marysville, and C. W. Chidester, Delaware.

Dr. Baber's address was presented before the Tenth District Society through the courtesy of the State Association Committees on Medical Education and Mental Hygiene, which have arranged for a series of lectures on "Mental Hygiene" before group meetings in various parts of the state during the fall months.

The first group meeting was held at Zanesville, October 4. Dr. Baber was assisted at this meeting by Dr. Grant Martens, Dayton, who spoke on "The Treatment of Neuro-syphilis" and Dr. F. S. Baron, who discussed experiments in focal infection conducted at the Dayton State Hospital.

Other successful meetings at which the subject of "Mental Hygiene" was presented by Drs. Baber, C. W. Stone, Cleveland, and T. A. Ratliff, Cincinnati, were held at Xenia, October 5; Portsmouth, October 5; Steubenville, October 17; Defiance, October 19; Tiffin, October 26, and Athens, October 27. The Portsmouth session was the annual meeting of the Ninth District Society, while the Xenia meeting was primarily arranged as a mental clinic under the auspices of the State Bureau of Juvenile Research.

#### Prohibition and Narcotic Bureau?

The administration of the prohibition and narcotic drug acts through a separate bureau, under the direct control of the President, has been proposed by bills recently introduced in Congress by Representative Wood of Indiana and Senator Ernst, of Kentucky.

These proposed measures, identical in wording, create a prohibition bureau to be directed by a commissioner of prohibition at a salary not to exceed \$10,000.

All duties now performed by the internal revenue office of the Treasury Department in connection with the administration of the Volstead and Harrison Drug acts would be transferred to this bureau.

#### Anesthetists at Columbus

Columbus was the scene, October 30-November 1, of the annual congress of the National Anesthesia Research Society, which met in joint session with the Interstate Association of Anesthetists, New York Society of Anesthetists and Columbus Dental Society. Prominent speakers from various parts of the country participated in the three-day program of general scientific sessions, clinics and special sessions. The latter were devoted to "Teaching of Anesthesia", "Anesthesia and Hospital Service", "Anesthesia for Oral Surgery and Dentistry", and "Anesthesia in Relation to Cardiology."

Dr. E. I. McKesson, Toledo, is president of the National Anesthesia Research Society, and Dr. Arthur E. Guedel, Indianapolis, chairman of the

Interstate Association of Anesthetists. Dr. F. H. McMechan, Avon Lake, Ohio, is chairman of the Research Committee of the former organization, and secretary-treasurer of the latter.

#### Interesting Conclusions Drawn From Admissions to Columbus State Hospital

Among data contained in the annual report for the Columbus State Hospital, recently submitted by Dr. W. H. Pritchard, the superintendent, to the State Department of Welfare, physicians will find special interest in statistics on admissions and their causes.

The total admissions numbered 573 for the fiscal year ending June 30, 1922. During the past six years admissions have varied as follows: In 1917 there were 614; 1918, 620; 1919, 574; 1920, 595; 1921, 570; 1922, 573, from which it may be seen that there has been a decrease and that the admissions last year were the lowest during the six-year period with the exception of 1921.

The report calls attention to a comparison of the statistics of admissions due to the use of alcohol, as a partial explanation of the decrease in total admissions:

Year	Total Admissions	Adm. due to Alcohol	Adm. due to Syphilis
1917	614	43	113
1918	620	49	114
1919	574	32	111
1920	595	4	91
1921	570	17	92
1922	573	15	78

A comparison of the statistics of admissions due to syphilis, also shown above, is interesting.

"National prohibition," Dr. Pritchard's report points out, "became effective in 1919. Beginning with the fiscal year ending June 30, 1920, there has been a marked decrease in the admissions due both to alcohol and syphilis. The decrease in the alcoholic cases is readily explainable. It might be assumed that alcoholic indulgence is not infrequently a precipitating factor in the mental breakdown of the neurosyphilitic; in other words, that the mental breakdown of the neurosyphilitic patient is in some instances, at least, due to the combined toxic action of syphilis and alcohol. If this be true, abstinence from alcohol may explain some of the long remissions and apparent cures in paresis so enthusiastically attributed to arsphenamine.

"A striking feature of the comparative figures for admissions of senile and arteriosclerotic cases is the variation between the years 1921 and 1922. In 1921 there were 97 such admissions while in 1922 they numbered 129—an increase of 32. This may have been due to conditions of unemployment during the past year which made it imperative that the family should be relieved of the care of its broken-down old people.

"The admissions in the groups of so-called



functional psychoses show the following distribution:

Manic-Depressive Psychoses.....	59 cases
Schizophrenic Psychoses (Dementia Præcox) .....	132 cases
Paranoid Conditions .....	28 cases
Psychoneuroses and Neuroses, Psychoses with Psychopathic Personality, Psychoses with Mental Deficiency, Epileptic Psychoses and Undiagnosed Psychoses .....	72 cases
Patients without Psychoses.....	11 cases

PSYCHOSES ASSOCIATED WITH OR DUE TO OTHER DISEASES—NEUROLOGIC OR SOMATIC

“Through the published work of Dr. Cotton, Trenton, New Jersey; Dr. C. A. L. Reed, Cincinnati; Dr. Bayard Holmes of Chicago, and others much attention has been directed of late to the probability of the more or less close association between mental derangement and focal or general infections. There is no controversy over the general application of this proposition. Nether is it entirely new. The statistical manual, approved jointly by the American Psychiatric Association and the National Committee for Mental Hygiene and adopted by nearly all the State Hospitals in the country, broadly recognizes this principle. All the modern text books including those of the followers of Freud, Jung, Prince and others of the Psychological School, recognize the close association between somatic and mental disease. In our tables 276 out of 573 cases, admitted during the year, have been definitely diagnosed as having psychoses based upon, or closely associated with, various forms of neurologic disease, viz., arteriosclerosis and senile decay, neurosyphilis, other organic diseases of the brain, alcoholic toxæmia, toxæmia due to drugs, toxæmia definitely due to infections or exhaustion, toxæmia due to endocrin imbalance, and toxæmia due to cardio-renal diseases. The remaining 297 cases were placed in the various groups of functional psychoses, but in a great many of these cases definite pathology was found in the teeth, the tonsils, the intestinal tract, and the pelvic organs. Without in the least relinquishing our conviction that many cases of functional insanity, particularly of the schizophrenic types, depend upon purely psychological factors, yet, we are equally sure that toxæmic states, due to focal infections and faulty metabolism due to endocrin anomalies are the underlying factors in most of the stuporous, confused, dorientated types of manic-depressive insanity, and the catatonic types of so-called dementia præcox. Various neurasthenic states and anxiety neuroses, and many paranoid conditions which clear up, are also doubtless dependent upon such conditions.

“State Hospital physicians in general recognize these pathological factors as clearly, perhaps, as others, but they have been and still are handicapped by lack of facilities for exhaustive diagnosis and comprehensive treatment. Legislative and supervisory authorities generally

have failed to give ear to their demands for such facilities. Let the hospitals be supplied with the necessary number and quality of medical assistants, and with laboratory and therapeutic facilities equivalent to those of the better class of general hospitals and these problems will be largely worked out within the hospitals.”

### Small Advertisements

*Wanted*—To correspond with a young married physician, recent graduate with hospital experience and looking for permanent location. Must give best of reference as to ability and character. I wish to gradually retire. I have nothing to sell. Address Box 54, Rittman, Ohio.

*Wanted*—Medical book salesmen. Unusual opportunity for a few good live salesmen. We have important large new books now ready. Get in touch at once with publishers. P. Blakiston's Son & Co., 1012 Walnut Street, Philadelphia.

*Position Wanted*—By young woman, undergraduate nurse, as assistant to physician in office and outside work. Preferably with obstetrician in Youngstown, Ohio. Address H. C., care *The Journal*.

*For Sale*—One McDonald adjustable chair-table, upholstered in genuine leather, in good condition, \$25; one McIntosh No. 7 wall or table plate; galvanic and faradic, including cords, handles and sponge discs, perfect condition, \$10; one large size, natural brown horsehide fur overcoat, quilted lining, wrist bands, kicker, worn but few times, good as new, \$18; obstetric forceps and surgical instruments, some never used, at your own price. Write M. D. M., care *The Journal*.

*For Sale*—\$5000 cash practice in southwestern Ohio, 8-room house, furnace, electric lights, both kinds of water under pressure, shower and tub baths, 2-room garage, separate office building; rich farming community, level country with good roads, good schools, electric and steam railroads. Part cash for property, balance easy terms. Selling at sacrifice. No charge for practice. Reason for selling will be given to purchaser. Address O, care *The Journal*.

*For Sale*—Eye, ear, nose and throat practice in good city, at once. A good thing for some one. Address X, Y., care *The Journal*.

*Location*—Established practice in city of 5,000 population in northern Ohio, to the purchaser of eight-room, modern, brick house on large lot on paved street in excellent neighborhood. Finished throughout from basement to third floor. Garage. City has seven physicians, four of whom are active. Will introduce well qualified man. Address B., care *The Journal*.

*For Sale*—Seven-room modern residence and three-room office combined. Also books, medicines, instruments, including Campbell's static machine, and office furniture. General practice well established in desirable location in Columbus. Write C., care *The Journal*.

*Physicians Wanted*—Southwestern Ohio industrial concern has openings for two high grade physicians in its plant. Those interested should write or confer with Dr. H. S. Murat, chief surgeon, American Rolling Mill Co., Middletown, Ohio.

*For Sale*—Office outfit, including instruments and drugs, in fine location in large city. Office rent reasonable. Physician retiring. Address S. W., care *The Journal*.

# Policies, Professional Relations, Hospital Problems, Plans and Prospects Considered by Council at October Meeting

## MINUTES

Council of the Ohio State Medical Association met October 1, 1922, at the Hotel Deshler, Columbus, with the following members present: President Carothers; President-elect Rardin; Treasurer Platter; Councilors Hussey, Hendershott, Waggoner, Updegraff, Stevenson, Brush, Seiler and Goodman; Dr. Upham, Chairman, Committee on Public Policy and Legislation; Executive Secretary Martin; Assistant Executive Secretary Thomas; and by invitation Dr. H. H. Snively, State Director of Health; Dr. R. G. Leland, also of the State Health Department, and Dr. Nelia B. Kennedy, secretary of the Hancock County Medical Society.

Minutes of the meeting of July 2nd were approved as published in the August, 1922, issue of *The Journal*.

Drs. Carothers, Hussey and Goodman reported on preliminary plans for the 1923 annual meeting of the State Association, to be held in Dayton, May 1, 2 and 3, 1923. The local committees under the chairmanship of Dr. L. G. Bowers were commended for their preliminary efforts.

The special committee appointed and authorized at the last meeting of Council, to attempt solution and arbitration of the Sandusky County Medical Society situation, reported in detail through Dr. Updegraff, the chairman, who supplemented his written report by oral comment. Dr. Hendershott, a member of the committee, also explained in detail the efforts of his committee and the attitude of the members of the Sandusky County Medical Society.

Following the adoption of a minor amendment to the written report, and on motion by Dr. Goodman, seconded by Dr. Hussey, the report was adopted, and Dr. Waggoner, councilor of the Fourth District, was authorized to convey to the members of the Sandusky County Medical Society the action and attitude of the Council.

On motion by Dr. Waggoner, seconded by Dr. Updegraff and carried, Council authorized and requested the State Association Committee on Hospitals to study and investigate the problems of relationship of hospitals toward the medical profession; the policy and authority of hospital management; the rights and privileges of all reputable and legally qualified members of the medical profession to hospital service, particularly in those institutions maintained through public funds, either by contributions or taxation; as well as the proper limitation and control in hospital management over the scientific discretion of physicians and surgeons attending cases in such institutions; including the accountability of the management and board of trustees of hospitals to the community as a

whole; as well as the powers and duties relative to selection or limitation of staffs and qualification therefor. Such report from the Committee on Hospitals to be made to the Council for transmission to the House of Delegates for special action at the 1923 annual meeting of the State Association.

On presentation by Dr. Upham, chairman of the Committee on Public Policy and Legislation, the following partial report of his committee was adopted, on motion duly seconded, as official by the Council:

The State Association's Committee on Public Policy and Legislation met in Columbus pursuant to the call of the chairman, on Tuesday, August 22nd, with the following members present: Chairman Upham; Drs. Alcorn, Carothers, Davidson and Platter, and Executive Secretary Martin.

After a detailed discussion the Committee reaffirmed its policies adhered to during the past two legislative sessions, as established in contact with state and federal departments, and as set forth specifically by the House of Delegates both through adoption of the formal reports of the Committee, and as formulated through official procedure.

Chairman Upham summarized the issues which would likely arise, many of which were anticipated in the last annual report (May, 1922, *Journal*) of his Committee, and upon unanimous vote the Committee recommends to the Council that no changes in policy be made at this time.

The legal and legislative angles of the problem of nurse education were discussed. The Committee recommends no definite policy on this question, awaiting the report of the special committee on that subject, but does recommend that all possible effort be made to arrive at a solution without new or additional legislation, if possible.

Following detailed discussion of questions having to do with violations of the Medical Practice Act, a recent court decision in Cincinnati dissolving the temporary injunction of the unlicensed chiropractors against the State Medical Board was explained, it being announced that the previous court decision of the Ohio Supreme Court and the Supreme Court of the United States (published on page 425, June, 1921, and page 330, May, 1922, issues, respectively, of *The Journal*) are now in effect.

The report of the Committee on Public Policy and Legislation was further supplemented by Dr. Upham in a discussion of the present status of the Sheppard-Towner Maternity Law. Dr. Upham read to Council a copy of a letter which he had directed to the president of the Ohio League of Women Voters in reply to an article published in a recent issue of *The Ohio Woman Voter*, the official publication of the League.

On motion by Dr. Rardin, seconded by Dr. Seiler, Council authorized the Committee on Public Policy and Legislation to employ on be-

## *You do not speculate when you buy an investment bond*

The interest rate on a bond is fixed and the ultimate payment of the principal is secured.

In the case of a Municipal bond, which is the obligation of a city, county or town in one of the States of the Union, the security behind the bond is the taxing power of the issuing municipality.

In the case of the Corporation bond, the security is a direct mortgage on actual property owned by the company. The corporation must pay interest on its bonds before declaring dividends on its stock issues.

Consequently a good sound bond is desirable as an investment for your savings because it means fundamental security and an assured, regular income of from approximately six to seven per cent.

Savings Banks, Life Insurance Companies, Trustees of estates and large investors, buy investment bonds because they combine high return with safety of principal. An increasing number of persons who heretofore have never purchased bonds are turning their attention to this method of investment.

*Probably not again in this generation will good investment bonds offer such opportunities as at present. We will gladly mail you a list of sound investment bonds upon request.*

## **E. H. Rollins & Sons**

**BOSTON**  
200 Devonshire St.

**NEW YORK**  
43 Exchange Pl.

**PHILADELPHIA**  
1421 Chestnut St.

**CHICAGO**  
111 W. Jackson St.

**SAN FRANCISCO**  
300 Montgomery St.

**DENVER**  
315 International Tr. Bldg.

**LOS ANGELES**  
203 Security Bldg.

half of Council whatever legal services are considered necessary for special purposes. On motion by Dr. Rardin, seconded by Dr. Stevenson, the Council authorized the transfer from the unassigned funds and the appropriation of \$2,000, to be placed at the disposal of the Committee on Public Policy and Legislation.

Drs. Carothers, Snively and Upham outlined the policies and results of the recent conference of health commissioners and called attention to the articles and comments on the conference published in the October issue of *The Journal*.

It was reported that the survey of the special Committee on Codein—Narcotic, under the chairmanship of Dr. Teachnör, was now under way and that a complete report would be made at the next Council meeting.

Detailed correspondence with various railroad companies relative to a special Ohio State Medical Association train to the A. M. A. meeting in San Francisco next June, was submitted to the Council, and on motion, duly seconded, Council instructed the executive secretary to secure full information and arrange advantageous rates and routes for a special train for those members of the State Association who may attend the San Francisco meeting, under the direction of a special committee to be appointed by the president. President Carothers then announced the appointment of Drs. S. J. Goodman, Columbus, chairman; Lester Taylor, Cleveland, and Kenon Dunham, Cincinnati, to membership on this committee.

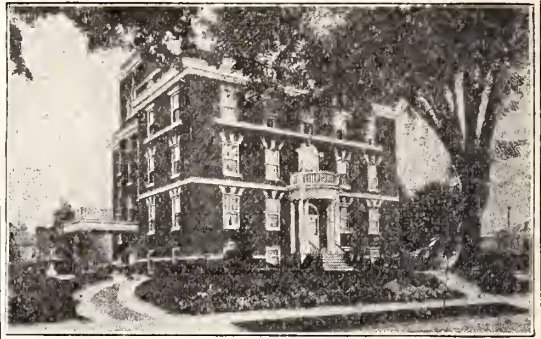
A preliminary report of plans of the Medical Education and Mental Hygiene Committees for a series of group meetings throughout Ohio in October was submitted and approved.

In a discussion of the plans of the special Committee on Nursing Education, it was announced that a meeting of the committee, consisting of Drs. Charles S. Hamilton, Columbus; Charles Phillips, Cleveland; and J. P. Baker, Findlay, would be held in Columbus in the early part of October. The committee was commended for its preliminary investigations and encouraged to cooperate with the other groups interested, including the special committee from the Ohio Association of Graduate Nurses and the Ohio Hospital Association.

A summarized membership report showing a total membership of 4795 to date for 1922 was presented.

Following a general discussion of policies, activities and prospects, on motion, Council adjourned to meet in Columbus on Sunday, January 7, 1922, unless a call for an earlier meeting should be issued by the president.

Because the prevalence of anthrax has been traced to the use of horsehair shaving brushes, steps have been taken by Congress, through the introduction of a measure which would prohibit the importation of or interstate shipment of any shaving, lather or hair brush made of horsehair.

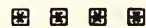


## The Holzer Hospital Gallipolis, Ohio

*Radium for all  
therapeutic  
uses*

## Radium Laboratory

350 East State St., Cor. Grant Ave.  
Columbus, Ohio



**Edward Reinert, Ph. G., M. D.**  
**R. R. Kahle, Ph. B., M. D.**

Citz. 9215

Bell, M. 7417

*X-Ray,  
Radium,  
Removal of  
Foreign Bodies*

CHAS. F. BOWEN, M. D.  
344 East State Street  
Columbus, Ohio

## Radium Rental Service

Radium loaned to physicians at moderate rental fees, or patients may be referred to us for treatment if preferred.

Careful consideration will be given inquiries concerning cases in which the use of Radium is indicated.

### BOARD OF DIRECTORS

William L. Baum, M. D.      Wm. L. Brown, M. D.      Frederick Menge, M. D.  
Louis E. Schmidt, M. D.      Thomas J. Watkins, M. D.

## The Physicians Radium Association

1110 Tower Building, 6 N. Michigan Ave.  
CHICAGO, ILL.

Telephones: Randolph 6897-6898

William L. Brown, M. D., Managing Director



## HOSPITAL NOTES

Resolutions recommending the issuance of \$100,000 worth of county bonds for the erection of a hospital in Sidney were recently adopted by the Shelby County Medical Society, and petitions asking for the bond issue filed with the county commissioners. It is the intention to make the hospital a memorial to Shelby County war veterans. A fund of \$20,000 is already available for the purpose.

—Increased hospital rates will be in effect in the Springfield city hospital during the coming year. The new rates will range from \$1.50 to \$6.00 per day, representing an increase of 50 cents on former \$3.00 and \$3.50 rooms and \$1.00 on \$4.00 and \$5.00 rooms.

—More than 100 children who are unable to attend the public schools have been enrolled in a special hospital school at Cincinnati General Hospital. Fifteen have been enrolled in a special class for adult crippled persons, which is a recent addition to the school. A shop equipped for toy-making, sewing and other occupations has been established.

—A plot of land 200 feet square has been donated to the village of Westerville as a site for a hospital by a local resident.

—Work on a new combination administration building and children's tuberculosis at Warrensville sanitarium has been started.

—The third floor of Ohio Valley Hospital has been remodeled and re-opened for the first time since the influenza epidemic in 1918. Mr. J. E. Fay has recently come from Hartford, Connecticut, to assume the superintendency of the hospital.

—Work on a new power house at Flower Hospital, Toledo, which was recently started, marks the first step in a \$1,000,000 improvement plan contemplated to increase the capacity of the hospital from 55 to 300 beds and make it one of the most modern in northwestern Ohio.

—Coal miners of Harrison and Jefferson counties are considering the erection of a hospital at Dillonvale in the near future. Representatives of the operators and local unions have held several conferences for discussion of the proposition.

—The goal of \$500,000, sought in a drive for the benefit of the building fund of the new Children's Hospital, Columbus, during the week of October 1, was surpassed by approximately \$5,000.

—Robinwood Hospital has completed installation of a deep X-ray therapy machine for the treatment of cancer. This apparatus will de-

# Cincinnati Radium Laboratory

22 West Seventh Street

Needle, Tube and Plaque  
Applicators



CHARLES GOOSMANN, M. D.

X-Ray Treatment When Indicated.

**D**o you believe that the fitting of trusses is a part of the Practice of Medicine? If so, send your patients needing trusses to

## The Columbus Truss & Optical Co.

PARKER W. PHENEGER, M. D., Mgr.

We Specialize in  
Elastic Stockings Made to Measure

Office and Fitting Rooms  
suite 303-309 Rowlands Bldg., Broad and Third Sts.  
COLUMBUS, OHIO

liver to the patient 200,000 volts of X-ray, and has a capacity of 300,000 volts if a tube can be made that will stand the additional voltage. An additional room for the exclusive use of orthopedists has been built onto the fourth floor of the hospital, and a new fracture table and other appliances and equipment are soon to be added.

—Dr. T. S. Brown, formerly of Gallipolis, has been provisionally appointed as supervising dentist for the state institutions by H. S. MacAyeal, director of the state department of welfare. The appointment is to be effective for a period of 90 days during which time, it will be decided whether the position is to be made permanent.

# Artificial Pneumothorax

in

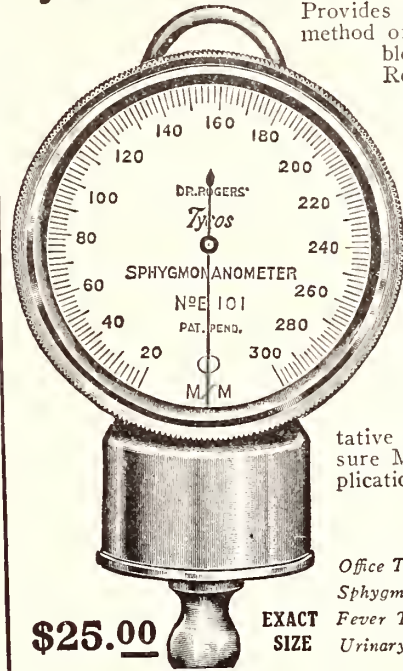
## Pulmonary Tuberculosis



### LOUIS MARK, M. D.

327 East State Street  
Columbus, Ohio

## Tycos SPHYGMOMANOMETER



Provides a simple method of determining blood pressure. Recognized as embodying every essential possible in a portable manometer. Made of non-corrosive materials. No friction. Stationary dial. Self-verifying.

*Tycos* authoritative Blood Pressure Manual on application.

Office Type  
Sphygmomanometer  
Fever Thermometers  
Urinary Glassware

**\$25.00**

EXACT  
SIZE

Taylor Instrument Companies, Rochester, N. Y.  
#1-M

## BILE SALTS

### "The Natural Chologogue"

have an important place in the armamentarium of most physicians.

*Prescribe*

ENTERIC COATED

GLYCOTAURO TABLETS, H. W. & D.

Salol coated tablets of purified and standardized ox-bile for intestinal absorption without gastric irritation.

*Literature and Trial Package on Request*

Specify—H. W. & D.—Specify

### Hynson, Westcott & Dunning

BALTIMORE

THE BETZCO LINE

Supplies and Equipment for Physicians and Hospitals

Frank S. Betz Co.  
HAMMOND, IND.

## Let this Catalog Help You Save Your Dollars

Not only does this Catalogue contain a complete line of standard instruments, dressings, rubber goods, bags, glassware, steel furniture, etc., but it includes as well, many new specialties that will be particularly interesting to you.

The general mailing has been completed and if you have not received your copy just fill out the coupon and it will be sent to you at once. This catalogue may be accepted as establishing a standard of fair price and honest value.

**Frank S. Betz Co.**  
Hammond, Ind.  
*New York  
Chicago.*

**FILL  
IN  
THE  
COUPON**

FRANK S. BETZ CO., Hammond, Ind.

Dear Sirs: Send me at once a copy of your free complete catalogue No. 22.

Name \_\_\_\_\_ Address \_\_\_\_\_

CJ

## "Proprietary Medicines and the Doctor"— and Bottle Maker

The physicians of the country have been flooded during the past few weeks with a leaflet reprint sent out by a trade publication, *The Glass Container* of New York City, but mailed from Chicago, where are located headquarters of the "patent medicine" organization. The title of the leaflet is "Proprietary Medicines and the Doctor," and it is supposed to give "Vital Reasons Why the Medical Profession and the Medicine Man Should Pool Their Ideals and Work Together to Benefit Humanity." The author of the leaflet, which is a reprint from *The Glass Container* for May, 1922, is Irwin G. Jennings. The reprint is prefaced with a biographical sketch of "Judge Jennings," a lawyer who it is claimed holds an "A. M." from Marietta College and "Ph.D." from Columbia University. The sketch fails to mention that Mr. Jennings is business manager of the "Glass Container Association" which, of course, is essentially interested in the development and extension of the glass bottle business; nor is it mentioned that Mr. Jennings is the editor of the official organ of this association, *The Glass Container*, in which the article originally appeared. The thesis that Mr. Jennings develops in his paper is briefly this: (1) "The bread and butter and economical success" of physicians "depend on establishing and maintaining a conviction in the minds of the American public that there are curative properties in properly selected drugs"; (2) "patent medicine" interests "*unassailed*, can easily keep the American public sold to the curative properties of drugs"; *ergo*, (3) the physician, as a business proposition, should not assail the "patent medicine" maker! The work is rather crude; in fact its very crudity makes one wonder how a Ph.D. (Columbia) could imagine that he could get away with it. In the development of his thesis Mr. Jennings runs in the usual stock arguments of the "patent medicine" people in favor of their business, arguments that are as feeble as they are fallacious. It is not necessary to refute or even to discuss this phase of his paper. We imagine Mr. Jennings is in no way to blame; he probably accepted the data furnished him by the nostrum people. That the business manager of the Glass Container Association and the editor of its official journal should favor the "patent medicine" business is understandable and natural. Nostrum makers are, doubtless, his best customers. As the shoemaker says, "There's nothing like leather." The astounding feature of the whole thing is that a man of intelligence should, in 1922, attempt to convince physicians that the only therapy of modern medicine is drug therapy. In his effort to do this, Mr. Jennings has undertaken a large and hopeless job.—*Journal A. M. A.*

URINE	BASAL METABOLISM
BLOOD	AUTOGENOUS
SPUTUM	VACCINES
EFFUSIONS	FAECES
STOMACH	GENITO-URINARY
CONTENTS	SURGICAL and
WASSERMANN &	GYNECOLOGICAL
NOGUCHI	PATHOLOGY
REACTIONS	DARK FIELD
GONORRHEAL	ILLUMINATING
COMPLEMENT	FOR
FIXATION TEST	SPIROCHETA
BLOOD CHEMISTRY	PALLIDA
PROTEIN	MEDICO-LEGAL
SENSITIZATION	POST MORTEM
TESTS	X-RAY

# LABORATORY

## Clinical and Pathological

COLUMBUS, OHIO 370 East Town Street

J. J. Coons, B. S., M. D., D. Sc.  
H. M. Brundage, M. D.  
Dorris Coss, B. S., M. S.  
Ruth Miller, B. S.

### PROMPT SERVICE

Immediate Report on Frozen Sections of all Tumors.

WASSERMANN (daily)	URINE
GONOCOCCUS	BLOOD
FIXATION	SPUTUM
AUTOGENOUS	STOMACH EXAM'S.
VACCINES	FAECES
TISSUES	BACTERIOLOGY
SPINAL FLUID	EXUDATES
DARK FIELD FOR	MILK
SPIROCHETES	WATER
BASAL METABOLISM	SEEDS
BLOOD CHEMISTRY	FEEDS
PROTEIN SENSITIZATION	FERTILIZERS
BLOOD TYPING FOR	IRON
TRANSFUSION	STEEL
MEDICO-LEGAL	COAL

## Ft. Wayne Medical Laboratory

Radium, X-Ray, Pathology,  
Serology and Chemistry

Ft. Wayne, Indiana, 327 W. Berry St.  
(One block south of Interurban station)

Pathology and Serology by Dr. B. W. Rhamy  
Radium and X-Ray by  
Dr. E. M. Van Buskirk  
Medical and Industrial Chemistry by  
P. H. Adams, B. S., Ch. E.

Special Delivery Postage insures prompt  
delivery





## Save the Tenth Child

STATISTICAL data show that approximately 10% of all children having Diphtheria die. Early and adequate Antitoxin treatment would save these children. In meeting this grave responsibility are you sure that your little patients are receiving the best Antitoxin obtainable? Do you have a satisfying consciousness of having done for them all that can be done?

The use of Parke, Davis & Company's Antitoxin inspires just that sort of confidence. For a quarter of a century it has been recognized as the standard the world over. It is potent, pure, and concentrated.

Parke, Davis & Company's Antitoxin is produced in a laboratory possessing unsurpassed facilities. Excellence in achievement here dominates all other interests.

"DIPHTHERIA IMMUNIZATION," a reprint, sent on request. Write nearest branch: Detroit, New York, Chicago, Kansas City, Baltimore, New Orleans, St. Louis, Minneapolis, or Seattle.

**Parke, Davis  
& Co.**

## Never Lose the Realization of this:

the fundamental of  
Malpractice Insurance  
is skill and  
experience in the  
defense

There is no counterpart to Medical Protective Service—founded upon over twenty-three years of doing one thing right in the successful handling of over fourteen thousand claims and suits in but a single line of legal endeavor.

*For Medical Protective Service Have  
a Medical Protective Contract.*

**The Medical Protective Co.**  
of  
Fort Wayne, Indiana

## Second District Society Adds Laurels by Presenting Successful Fourth Annual Post-Graduate Course

Physicians have bettered the health of American people by giving them instruction and advice on the plain rules of hygiene.

Such was the statement of Dr. Stewart R. Roberts, professor of Internal Medicine, University of Georgia, at the meeting of the Second Councilor District Medical Association which opened for a five-day session in Dayton, September 25.

Giving instruction and advice to the individual man, woman, and child regarding avoidance of the use of alcohol and tobacco, getting plenty of sleep, and not overeating is the greatest step which physicians have taken in bringing about the betterment of the health of the American people during recent years, according to Dr. Roberts.

"The establishment of municipal and state boards of health has been the great factor in benefitting the health of groups of people," Dr. Roberts said.

Dr. Roberts spoke on "The Relation of Blood Pressure and Arterio Sclerosis", "The Interpretation and Treatment of Hypertension" and "The Interpretation and Treatment of Hypotension."

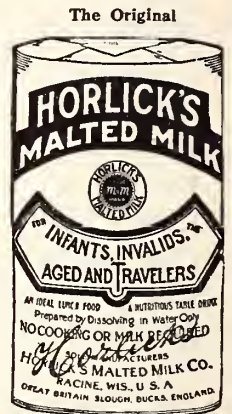
Dr. Douglas Vanderhoff, Professor of Internal Medicine, University of Virginia, also lectured on the first day, devoting three periods to "The Etiology and Symptoms of Indigestion", "The Incidence, Significance and Treatment of Achylia Gastrica" and "Diarrheal Diseases of Adults."

On the second day the entire lecture program was in charge of Dr. Dean Lewis, professor of Surgery, Rush Medical School, Chicago. In the morning Dr. Lewis spoke on "Intestinal Obstruction", "Treatment of Fractures and Nerve Complications Associated with Them", and "Diagnosis of Intestinal Lesions". In the afternoon his subjects were "Surgical Lesions of the Breast", "Surgery of the Vascular System" and "Surgical Diseases of the Joints."

Alternating in one hour periods on the third day's program were Dr. George Eusterman, of the Mayo Clinic, Rochester, and Dr. Charles P. Emerson, Indianapolis, dean of the Indiana University School of Medicine. Dr. Eusterman devoted his periods to "Chronic Gastric and Duodenal Ulcer with Differential Diagnosis", "Gastric Cancer and Syphilis", and "Benign Tumors and Other Rare Lesions of the Stomach." Among other things, Dr. Eusterman declared that the earlier recognition and proper treatment of gastric and intestinal diseases in recent years was due to the advance in the medical education of the general practitioner, and the more extensive use of the X-ray in connection with these diseases.

## Very Useful in Digestive Disorders

A reliable food-drink that can be generally tolerated and assimilated sufficiently to maintain strength. Bland and non-irritating in disturbed conditions, ulcers, etc. Partially pre-digested. Easily adapted to individual needs.



Samples prepaid  
upon request.

# HORLICK'S

Racine, Wis.

Avoid Imitations

## Dares Haemoglobinometer

Candle lighted, or Electric lighted.  
We are accepting orders for prompt delivery.  
Write for booklet and prices.

## Tycos Office Sphygmomanometer

With 6 inch silvered dial.  
A distinct advance over the pocket type.  
Immediate delivery. Price \$37.50.

Surgical Instruments—Dressings,  
Pharmaceuticals, Biologicals

Your orders will receive prompt attention—  
"You will do better in Toledo."

## The Rupp and Bowman Co.

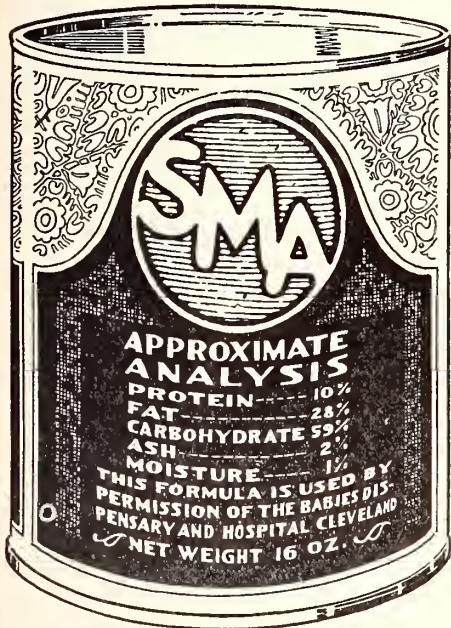
319 Superior St.

TOLEDO,

OHIO

Your druggist  
can supply you  
with

**SMA**



*S. M. A. offers the  
family physician*

- (1) A simple and satisfying food for babies who are deprived of mother's milk, or who require food in addition to what the mother can supply.
- (2) A food which requires only the addition of boiled water to prepare, whether for the month-old baby or the baby a year old.
- (3) A food which contains the required food elements in proper proportion; and whose clinical records of feeding show an absence of spasmophilia and rickets in any infant fed with it while it was still well.
- (4) A food which makes happy, solid, breast-fed-looking infants, and which insures normal development

A Food to Keep  
Babies Well

Adapted to  
Mother's Milk

**I**N order to make S. M. A. easily accessible to all physicians, we have placed a supply in every recognized wholesale drug house in the United States. If your retail druggist does not have S. M. A. you can inform him that his jobber has it in stock, and that he can therefore obtain it for you on very short notice.

S. M. A. is sold only on the order of a physician. Formula by permission of The Babies' Dispensary and Hospital of Cleveland.

The Laboratory Products  
Company

3829 Cedar Ave.

Cleveland, Ohio

Dr. Emerson discussed "The Nervous Patient", "Mental Troubles for Which the General Practitioner Must Care" and "Rather Common Infections Often Overlooked."

Obstetrics and pediatrics occupied the attention of the conventionists on the fourth day, when the lecturers were Dr. Irvin W. Potter, Buffalo, and Dr. Henry J. Gerstenberger, professor of diseases of children, Western Reserve University, Cleveland. Dr. Potter's ideas on version have attracted wide-spread attention, and his remarks before the Dayton meeting were devoted to this subject, covering "A Description of the Technique Used in Performing Elective Version", "Different Steps of the Operation" and "A Review of the Criticisms Advanced against This Procedure." Dr. Gerstenberger presented "The Pathogenesis, Treatment and Prevention of Rickets in the Light of Recent Discoveries" and "Ultra-violet Rays and Radiant Heat-Light as Therapeutic Measures in the Field of Pediatrics," and conducted a question box on "Infant Feeding and Nutritional Disturbances."

On the final day of the meeting Dr. Martin H. Fischer, professor of physiology, University of Cincinnati, gave a splendid series of lectures, with titles as follows: "The Normal and Pathological Physiology of Diseases of the Heart", "Truth and Fiction Regarding Internal Secretions", "Migraine", "Function and Development" and "Back to the Fathers—A Protest."

More than 300 physicians from the eight counties comprising the Second Councilor District and from various parts of Ohio and other states, attended the meeting, again attesting the success and popularity of the plan inaugurated by the Second District Society four years ago in devoting its annual meeting to a series of post-graduate lectures.

The election of officers for the coming year resulted in the selection of Dr. J. C. Ryder, Eaton, as president; Dr. D. B. Conklin, Dayton, secretary, and Dr. H. C. Haning, Dayton, treasurer. Dr. M. F. Hussey, Sidney, is the district councilor.

During the Dayton meeting, the Montgomery County Medical Society took occasion to present to the district organization a bronze tablet in memory of Dr. John C. Reeve, of Dayton, pioneer American physician and first president-emeritus of the Ohio State Medical Association, who died in 1920, at the age of 94 years. The tablet bears the following inscription:

"John C. Reeve, 1826-1920; student, writer, thinker, a doctor of the old school who kept abreast of the times. First in America to use the clinical thermometer. American pioneer in anesthesia by use of A. C. C. To his sacred memory this tablet is dedicated by the Montgomery County Medical Society."

## Every Physician

Is Interested In

## Physician's Supplies

In dispensing, he requires a great variety in his office—in prescribing he uses the **PRESCRIPTION DEPARTMENT** that is **UP-TO-DATE**.

If you are unacquainted with our plan of handling the physician's requirements, you may profit by giving us an opportunity to show you what we can do.

## The Wendt Bristol Co.

47 South High St., Columbus, Ohio

**FINE PHARMACEUTICAL SPECIALTIES**

## Our Business

is confined exclusively to the manufacture of Strictly High Grade Medicines and Pharmaceuticals for Physicians, Dispensing and Prescribing.



Our Offices and Laboratories are now located in our New Building, 330-336 Oak Street, one square north of Grant Hospital.

**NO GOODS SOLD AT RETAIL**

**The COLUMBUS PHARMACAL Co.**  
COLUMBUS, OHIO

EVERY KNOWN METHOD OF SECURING THE PUREST CHEMICALS AND THE BEST DRUGS IS USED IN BRINGING TOGETHER OUR STOCKS.

GOOD CHEMISTRY COMBINED WITH HONEST MANUFACTURE ASSURES THAT EACH FORMULA IS TRUE TO LABEL.

A SINGLE STANDARD OF CHEMICAL PURITY ASSURES A SINGLE STANDARD OF EXCELLENCE.

THESE ARE THE PRINCIPLES EMBODIED IN THE POLICY OF OUR MANUFACTURE.



Columbus,

Ohio

*Manufacturers of Refined Pharmaceuticals.*

## Let's Get Together Rx Work Is the Basis of Your Success. It Is Equal- ly the Basis of Our Success

We are mutually interested in the best—at as low a price as possible. Your patient cannot tell what he is getting from inspection. But he judges you by the results,—or vision, he gets.

You are his dependence. Upon your careful guarding of his interest depends not only his most precious possession—sight—but your professional standing and business success.

Upon our careful Rx work you both depend. It is a matter of principle with us to meet your requirements with scientific accuracy.

How well we have done this is a matter of record with hundreds of dealers. White-Haines quality and prices are not founded on the use of second quality lenses or material. You can depend on us to continue supplying the same grade and quality in the future as in the past, thereby safeguarding your interest in price as well as quality.

## THE WHITE-HAINES OPTICAL CO.

*Nine Complete Manufacturing Plants in which spectacles are correctly made*

COLUMBUS, OHIO

Indianapolis, Ind.  
Springfield, Ill.  
Huntington, W. Va.

Roanoke, Va.  
Lima, Ohio.

Pittsburgh, Pa.  
Wheeling, W. Va.  
Cumberland, Md.

## COMPREHENSIVE ORDINANCE GOVERNING EXAMINATION OF FOOD HANDLERS MAY BE EFFECTIVE IN COLUMBUS

*Note*—The Columbus City Council, at a meeting October 17th, decided to postpone official action on the Foodhandlers ordinance until a conference could be arranged with the Board of Health and Dr. Beer, city health commissioner, so that the question of fees for physical examinations could be discussed. It is understood that council informally expressed favorable consideration for the ordinance, should the examinations be made without cost to those whom it affects.

Through the efforts of the Columbus Department of Health and Dr. James A. Beer, city health commissioner, a new ordinance has been adopted to be effective about November 1, which will require every person in Columbus employed in a place "where food or drink is prepared, cooked, mixed, baked, exposed, bottled, packed, handled, stored, manufactured or offered for sale or sold", to have a certificate of health.

It is estimated that no less than fifteen thousand persons will be affected by this new health regulation.

In order to secure a certificate, persons so engaged must submit to a physical examination at least annually in accordance with the provisions of the ordinance.

The ordinance, which was adopted September 25th, and which is of interest to the medical profession in every municipality, follows in detail:

Each and every person who works in any place where food or drink is prepared, cooked, baked, exposed, bottled, packed, handled, stored or manufactured for sale, or offered for sale, or sold, shall have a certificate of health. Such a certificate shall be issued by the department of health only after records filed at the health office show said person to be free from any disease (infectious, contagious, venereal) in a communicable form. Each person included in the foregoing classification shall submit to a physical examination annually, to be performed in accordance with regulations of the board of health, either by a physician in the employ of the board of health, or by his or her physician.

Reg. 1. The results of physical examinations performed in accordance with the foregoing rule shall be filed with the department of health, upon official blanks furnished for such purpose. Such blanks shall be signed by the physician making the examination and shall contain the following information:

Name    Age    Sex    Color-Nativity.  
Address    Occupation.  
Where employed    Address.

*Lungs:*

Tuberculosis:    Active — Yes—No.    Inactive:  
Yes—No.

### The Management of an Infant's Diet

## Malnutrition, Marasmus or Atrophy

Mellin's Food	}	Analysis:	Fat	. . .	.49
4 level tablespoonfuls			Protein	. . .	2.28
Skimmed Milk			Carbohydrates	. . .	6.59
8 fluidounces . . .			Salts	. . .	.58
Water			Water	. . .	90.06
8 fluidounces . . .					<u>100.00</u>

The principal carbohydrate in Mellin's Food is maltose, which seems to be particularly well adapted in the feeding of poorly nourished infants. Marked benefit may be expected by beginning with the above formula and gradually increasing the Mellin's Food until a gain in weight is observed. Relatively large amounts of Mellin's Food may be given, as maltose is immediately available nutrition. The limit of assimilation for maltose is much higher than other sugars, and the reason for increasing this energy-giving carbohydrate is the minimum amount of fat in the diet made necessary from the well-known inability of marasmic infants to digest enough fat to satisfy their nutritive needs.

Mellin's Food Company, Boston, Mass.



Rheumatism  
Gout  
Neuralgia  
Neuritis  
Sciatica  
Lumbago  
Migraine

## “Twice gives he who gives promptly”

says a Latin proverb. The remarkably prompt pain and inflammation relief bestowed by ATOPHAN, is truly such a two-fold gift. What's more, it's rational, safe and reliable relief.

Genuine ATOPHAN is manufactured at our Bloomfield, N. J. plant by a special process, precluding the possibility of even traces of irritating empyreumatic admixtures.

*Complimentary Trial Package and Information from*

**SCHERING & GLATZ, Inc.**

150 Maiden Lane

NEW YORK

## SAVE MONEY ON YOUR X-RAY SUPPLIES

Get Our Price List and Discounts on Quantities Before You Purchase  
**HUNDREDS OF DOCTORS FIND WE SAVE THEM FROM 10% TO 25% ON X-RAY LABORATORY COSTS**

### Among the Many Articles Sold Are

- X-RAY PLATES.** These brands in stock for quick shipment PARAGON Brand, for finest work; UNIVERSAL Brand, where price is important.
- X-RAY FILMS.** Duplitzed or Dental—all standard sizes Eastman, Ilford or X-ograph metal backed. Fast or slow emulsion.
- BARIUM SULPHATE.** For stomach work. Finest grade Low price.
- COOLIDGE X-RAY TUBES.** 5 Styles. 10 or 30 millamp.—Radiator (small bulb), or broad, medium or fine focus large bulb. Lead Glass Shields for Radiator type.
- DEVELOPING TANKS.** 4 or 6 compartment stone, will end your dark room troubles. 5 sizes of Enameled Steel Tanks
- DENTAL FILM MOUNTS.** Black or gray cardboard with celluloid window or all celluloid type, one to eleven film openings. Special list and samples on request. Price includes your name and address.
- DEVELOPER CHEMICALS.** Metol, Hydroquinone, Hypt, etc
- INTENSIFYING SCREENS.** Patterson TE, or celluloid-backed screens. Reduce exposure to one-fourth or less Double screens for film. All-metal Cassettes.
- LEADED GLOVES AND APRONS.** (New type glove, lower priced).
- FILING ENVELOPES** with printed X-Ray form. (For used plates). Order direct or through your dealer.

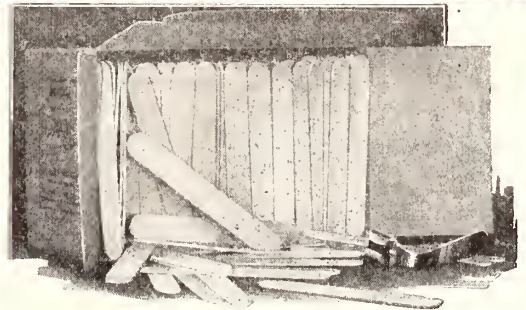
If You Have a Machine Get Your Name on Our Mailing List



**GEO. W. BRADY & CO**

771 So. Western Ave.,  
Chicago

## BETZCO SMOOTH TEX Wood Tongue Depressors



### Metal Handle Free

Clear, close grained, firm and of standard size. Free from splinters and knots, remarkably pliable. Put up in handy packages of 500 blades with special metal handle free.

**Frank S. Betz Co.**  
**Hammond, Ind.**

Send me sample package of 500 Smooth Tex blades with metal handle, 3CJ1139, for which I enclose \$0.85.

Name..... Address.....  
City..... State.....

Specify signs of other lung diseases.

If signs of tuberculosis exist, send applicant to board of health for sputum examination, and for decision as to permit to work.

**Venereal Disease:**

Syphilis, Chancre: Yes—No. Mucous patches: Yes—No.

Skin lesions: Yes—No. Cardiac Lues: Yes—No.

Cerebro spinal lues: Yes—No.

If active signs are present, send applicant to board of health.

Has Wassermann been taken—if inactive syphilis exists: Yes—No.

Gonorrhoea, Acute: Yes—No.

Chancroid: Yes—No—.

If active gonorrhoea or chancroid exists send applicant to board of health.

If chronic gonorrhoea exists, has urethral smear been taken: Yes—No—. Positive—negative.

**Typhoid:**

Does applicant give history of typhoid: Yes—No—. Date—.

Has case of typhoid occurred in immediate family or place of residence: Yes—No—Date—.

If history of either of above is given, send applicant to board of health for tests.

**Skin Disease:**

Scabies: Yes—No—. Pediculosis: Yes—No—.

Ringworm: Yes—No—. Tuberculosis lesions: Yes—No—.

**Other Diseases:**

I hereby certify that the above named person has been thoroughly examined by me as to the presence of evidence of communicable disease and has been found (free—no free) from such disease.

Date..... Dr. .... Address.....

Food handlers license will not be issued if this card is not *completely* filled out.

Reg. 2. When such official blank, properly filled out and signed shall have been filed with the department of health and approved, a certificate, properly numbered, and specifying the date of issue thereof, shall be issued by the department of health to the person so examined, on payment of a fee of one dollar. Such certificate shall specify the date of such physical examination, and shall state that the person to whom it was issued was free from any disease in a communicable form on the date of such examination. Such certificate shall not be transferable and shall not be used by any other person than the one to whom it has been issued.

Reg. 3. Certificates issued under and by virtue of the provisions of Regulation 2 hereof shall not be construed to authorize the employment of persons to whom they have been issued, where such persons thereafter contract, or are infected with, or have been, or are exposed to any communicable disease requiring isolation or exclusion from their employment by any regulation, law or ordinance. Nor shall such certificate be construed as nulifying or limiting the power of the board of health to require a re-examination of such persons in its discretion.

Reg. 4. Whoever being subject to the requirements hereinabove specified, shall perform work without such certificate of health, and contrary to these regulations shall, upon conviction thereof, be fined not more than fifty dollars nor less than five dollars.

These rules and regulations shall take effect and be in force from and after the earliest period allowed by law.

# To Prevent Hydrophobia

Use

## Pasteur Treatment

With a

Potent Product and Prompt Service

PRICE \$25.00

Order from

**James McIlvaine Phillips, M. D.**

2057 N. High St.

Columbus,

Ohio

Acute Respiratory Diseases offer an excellent opportunity to demonstrate the value of Therapeutic Immunization with Bacterial Vaccines

DATA FURNISHED ON REQUEST

Bacteriological Laboratories of

**G. H. SHERMAN, M. D.**  
DETROIT, MICH.



# LOESER'S INTRAVENOUS SOLUTIONS



ACCEPTED  
BY THE  
COUNCIL

LOESER'S INTRAVENOUS SOLUTION  
OF  
MERCURY OXYCYANIDE, 8 Mgs.

A sterile, stable solution in nonsoluble glass ampoules, 5cc containing 8 mgs. (1/8 grain) of Mercury Oxycyanide.

LOESER'S INTRAVENOUS SOLUTION  
OF  
MERCURY OXYCYANIDE, 12 Mgs.

A sterile, stable solution in nonsoluble glass ampoules, 5cc containing 12 mgs. (1/6 grain) of Mercury Oxycyanide.

We offer these solutions to the medical profession as a means of carrying on intensive mercurial treatment of syphilis.

The objections to the intramuscular method lack of uniform absorption, irritation, induration and abscesses, are overcome by the intravenous administration.

The superiority of these solutions of Mercury Oxycyanide over the intravenous administration of the so-called acid salts of mercury, bichloride, biniodide, etc., is due to the fact that they are less apt to cause irritation of the veins, a common fault of most soluble mercury compounds.

Clinical Reports, Reprints, Price List and  
"The Journal of Intravenous Therapy"  
Sent to any physician on request.

**New York Intravenous Laboratory**  
100 West 21st Street  
New York, N. Y.

*Producing Ethical Intravenous Solutions  
for the Medical Profession Exclusively.*



## CORRECTED ROLL OF DISTRICT AND COUNTY SOCIETIES

Societies	President	Secretary	
<b>First District</b> .....	G. D. Lummis, Middletown.....	Eric Twachtman, Cincinnati.....	
Adams.....	F. C. Leeds, Winchester.....	O. T. Sproull, West Union.....	3d Wednesday in April, June, Aug., Oct.
Brown.....	R. B. Hannah, Georgetown.....	Geo. P. Tyler, Jr., Ripley.....	4th Wednesday in Feb., May, and Nov.
Butler.....	James G. Grafft, Trenton.....	F. M. Fitton, Hamilton.....	2d Wednesday, monthly
Clermont.....	T. A. Mitchell, Owensville.....	O. C. Davison, Bethel.....	3d Wednesday, monthly
Clinton.....	F. A. Peele, Wilmington.....	Elizabeth Shrieves, Wilmington.....	2d Tuesday, monthly
Fayette.....	E. F. Todhunter.....	Lucy Pine, Washington, C. H.....	1st Thurs., March, June, Sept. Dec.
Hamilton.....	Mark A. Brown, Cincinnati.....	L. H. Schriver, Cincinnati.....	Monday evening of each week
Highland.....	J. C. Bohl, Hillsboro.....	H. H. Lowe, Leesburg.....	1st Wednesday in Jan., April, July, and Oct.
Warren.....	T. E. Keelor, Lebanon.....	Herschel Fisher, Lebanon.....	1st Tuesday in May, June, July, Sept., Oct. and Nov.
<b>Second District</b> .....	C. I. Stephen, Ansonia.....	D. B. Conklin, Dayton.....	Dayton
Champaign.....	David H. Moore, Urbana.....	J. F. Stultz, Urbana.....	2d Thursday, monthly
Clark.....	A. R. Kent, Springfield.....	C. E. M. Finney, Springfield.....	2d and 4th Monday each month
Darke.....	G. W. Burnett, Greenville.....	A. F. Sarver, Greenville.....	2d Tuesday each month
Greene.....	W. A. Galloway, Xenia.....	H. C. Messenger, Xenia.....	1st Thursday each month except July and August
Miami.....	H. E. Shilling, Troy.....	G. J. Hance, Troy.....	1st Thursday each month
Montgomery.....	A. O. Peters, Dayton.....	H. H. Williams, Dayton.....	1st and 3d Friday each month
Preble.....	S. P. Carter, W. Manchester.....	H. Z. Silver, Eaton.....	3d Thursday, monthly
Shelby.....	V. W. LeMaster, Sidney.....	C. C. Hussey, Sidney.....	1st Thursday, monthly
<b>Third District</b> .....	R. J. Morgan, Van Wert.....	Norris Gillette, Toledo.....	Van Wert
Allen.....	A. F. Basinger, Lima.....	A. N. Wiseley, Lima.....	1st and 3d Tuesdays
Auglaize.....	Harry S. Noble, St. Marys.....	C. L. Mueller, Wapakoneta.....	3d Thursday, monthly
Hancock.....	W. J. Zopfi, Findlay.....	Nellie B. Kennedy, Findlay.....	1st Wednesday, monthly
Hardin.....	LeRoy L. Belt, Kenton.....	W. A. Belt, Kenton.....	1st Thursday, monthly
Logan.....	C. K. Startzman, Bellefontaine.....	M. L. Pratt, Bellefontaine.....	1st Friday, monthly
Marion.....	R. C. M. Lewis, Marion.....	D. O. Weeks, Marion.....	1st Tuesday, monthly
Mercer.....	J. E. Hattery, Celina.....	D. H. Richardson, Celina.....	2d Tuesday, monthly
Seneca.....	V. L. Magers, Tiffin.....	E. H. Porter, Tiffin.....	3d Thursday, monthly
Van Wert.....	L. A. Ellis, Van Wert.....	C. R. Keyser, Van Wert.....	2d and 4th Monday, monthly
Wyandot.....	Frederick Kenan, U. Sandusky.....	B. A. Moloney, U. Sandusky.....	1st Thursday, monthly
<b>Fourth District</b> .....	(With Third District in Northwestern Ohio District)		
Defiance.....	W. S. Powell, Defiance.....	F. W. Watkins, Defiance.....	2d Tuesday, Feb., April, June, Aug., Oct., Dec.
Fulton.....	C. F. Murbach, Archbold.....	Geo. McGuffin, Pettisville.....	Semi-monthly
Henry.....	I. H. Boesel, McClure.....	C. H. Skeen, Napoleon.....	3d Wednesday, monthly
Lucas.....	J. F. Wright, Toledo.....	E. J. McCormick, Toledo.....	Friday, each week
Ottawa.....	A. A. Brindley, Pt. Clinton.....	S. T. Dromgold, Elmore.....	2d Thursday, monthly
Paulding.....	F. F. DeMuth, Cecil.....	R. J. Dillery, Paulding.....	3d Wednesday, monthly
Putnam.....	Frank Light, Ottawa.....	J. A. Harold, Ottawa.....	1st Thursday, monthly
Sandusky.....	M. O. Phillips, Fremont.....	C. I. Kuntz, Fremont.....	last Thursday, monthly
Williams.....	D. S. Burns, Bryan.....	F. E. Solier, Bryan.....	2d Thursday, each month
Wood.....	J. W. Rae, Bowling Green.....	F. V. Boyle, Bowling Green.....	2d Thursday, monthly
<b>Fifth District</b> .....	(No District Society)		
Ashtabula.....	R. B. Wynkoop, Ashtabula.....	J. J. Hogan, Ashtabula.....	2nd Tuesday, monthly
Cuyahoga.....	John Phillips, Cleveland.....	Lester Taylor, Cleveland.....	Every Friday evening
Erie.....	F. F. Lehman, Sandusky.....	H. N. Sarchet, Sandusky.....	Last Thursday, monthly
Geauga.....	F. T. Myler, Burton.....	Isa Teed-Cramton, Burton.....	2d Thursday, Jan., March, July and Sept.
Huron.....	R. L. Morse, Norwalk.....	J. D. Coupland, Norwalk.....	2d Thursday, monthly
Lake.....	V. H. Tuttle, Madison.....	West Montgomery, Mentor.....	1st Monday, monthly

Societies	President	Secretary	
Lorain.....	R. D. A. Gunn, Oberlin.....	W. E. Hart, Elyria.....	2d Tuesday, monthly
Medina.....	M. F. Miller, Wadsworth.....	H. P. H. Robinson, Medina.....	3d Wednesday
Trumbull.....	J. J. Tyler, Warren.....	John D. Knox, Warren.....	3d Thursday monthly except June, July and August
<b>Sixth District..</b>			
Ashland.....	G. B. Fuller, Loudonville.....	L. G. Sheets, Ashland.....	1st Tuesday, Jan., March, May, July, Sept., Nov.
Holmes.....	M. B. Pomerene, Millersburg.....	A. T. Cole, Millersburg.....	1st Tuesday, monthly
Mahoning.....	J. L. Washburn, Youngstown.....	A. W. Thomas, Youngstown.....	3d Tuesday, monthly
Portage.....	G. J. Waggoner, Ravenna.....	E. J. Widdecombe, Kent.....	1st Wednesday, monthly
Richland.....	Chas. R. Keller, Mansfield.....	J. S. Hattery, Mansfield.....	3d Thursday, monthly
Stark.....	D. F. Banker, Canton.....	George S. Hackett, Canton.....	3rd Tuesday, Jan., March, May, July, Sept., Nov.
Summit.....	R. H. McKay, Akron.....	A. S. McCormick, Akron.....	1st Tuesday, monthly
Wayne.....	O. P. Ulrich, Orrville.....	O. G. Grady, Orrville.....	2d Tuesday, Jan., April, July, Oct.
<b>Seventh District</b>			
Belmont.....	F. S. Wright, Bellaire.....	J. S. McClellan, Bellaire.....	2d Wednesday, monthly, at 1:45 p. m.
Carroll.....			
Columbiana.....	J. M. King, Sr., Wellsville.....	C. R. Larkin, East Liverpool.....	2d Tuesday, monthly, alter- nately, in Lisbon, Salem and E. Liverpool
Coshocton.....	D. Edmund Cone, Coshocton.....	J. D. Lower, Coshocton.....	4th Thursday, April, June, Sept., Dec.
Harrison.....	H. I. Heavilin, Cadiz.....	R. P. Rusk, Cadiz.....	1st Wednesday, monthly
Jefferson.....	B. F. Collins, Steubenville.....	G. F. Gourley, Steubenville.....	2d Tuesday, monthly
Monroe.....	G. W. Steward, Woodsfield.....	J. H. Pugh, Woodsfield.....	2d Wednesday, monthly
Tuscarawas.....	E. C. Davis, Dover.....	P. J. Alspaugh, N. Philadelphia.....	2nd Thursday, monthly
<b>Eighth District</b>			
D. J. Matthews, Zanesville.....	E. M. Brown, Zanesville.....		
Athens.....	J. F. Weber, Amesville.....	T. A. Copeland, Athens.....	1st Tuesday, monthly
Fairfield.....	C. H. Hamilton, Lancaster.....	Ralph H. Smith, Lancaster.....	2d and 4th Tuesday, monthly
Guernsey.....	C. A. Moore, Cambridge.....	G. F. Swan, Cambridge.....	1st and 3d Tuesday each month
Licking.....	T. L. Baxter, Newark.....	W. E. Shrontz, Newark.....	Last Thursday, monthly
Morgan.....	C. V. Davis, Pennsville.....	D. G. Ralston, McConnelsville.....	1st Wednesday, monthly
Muskingum.....	C. P. Sellers, Zanesville.....	Beatrice Hagen, Zanesville.....	1st Wednesday, monthly
Noble.....	G. H. Zimmerman, Belle Valley.....	J. L. Gray, Caldwell.....	1st Thursday, monthly
Perry.....	H. W. Shaw, Junction City.....	C. B. McDougal, N. Lexington.....	3d Thursday, monthly
Washington.....	J. W. Donaldson, Marietta.....	A. G. Sturgiss, Marietta.....	2d Wednesday, monthly
<b>Ninth District..</b>			
O. H. Henninger, Ironton.....	E. E. Ellsworth, Ironton.....		Ironton
Gallia.....	C. G. Parker, Gallipolis.....	Milo Wilson, Gallipolis.....	1st Wednesday, monthly
Hocking.....	O. V. Donaldson, Gore.....	M. H. Cherrington, Logan.....	
Jackson.....	A. G. Ray, Jackson.....	R. W. Caldwell, Jackson.....	1st Tuesday, monthly
Lawrence.....	O. H. Henninger, Ironton.....	E. E. Ellsworth, Ironton.....	1st Thursday, monthly
Meigs.....	P. A. Jividen, Rutland.....	L. A. Thomas, Middleport.....	1st Wednesday, April, July and Oct.
Pike.....	R. M. Andre, Waverly.....	I. P. Seiler, Piketon.....	1st Monday, monthly
Scioto.....	Ira Martin, Portsmouth.....	W. A. Quinn, Portsmouth.....	2d Monday, monthly
Vinton.....	O. S. Cox, McArthur.....	H. S. James, McArthur.....	4th Wednesday, monthly
<b>Tenth District..</b>			
R. H. Trimble, Mt. Sterling.....	F. D. Postle, London.....		London, 1923
Crawford.....	C. E. Klmerline, New Wash.....	K. H. Barth, New Washing'n.....	2d Thursday, monthly
Delaware.....	I. T. McCarty, Delaware.....	Rees Philippott, Delaware.....	1st Friday, each month
Franklin.....	E. A. Hamilton, Columbus.....	James A. Beer, Columbus.....	1st four Mondays
Knox.....	C. K. Conard, Mt. Vernon.....	I. S. Workman, Mt. Vernon.....	2d and 4th Wednesday, from March to middle of Dec.
Madison.....	R. H. Trimble, Mt. Sterling.....	F. D. Postle, London.....	4th Thursday
Morrow.....	W. L. Case, Mt. Glead.....	Todd Carls, Mt. Glead.....	1st Wednesday, monthly
Pickaway.....	A. F. Kaler, New Holland.....	D. V. Courtright, Circleville.....	1st Friday, monthly
Ross.....	L. E. Hoyt, Chillicothe.....	G. S. Mytlinger, Chillicothe.....	1st Tuesday, monthly
Union.....	H. C. Duke, Richwood.....	C. W. Hoopes, Marysville.....	2d Tuesday



## NEWS NOTES of OHIO

*Columbus*—Dr. E. G. Horton and family have returned from an 8,000-mile motor trip through the West.

*Cincinnati*—Plans for an eight-story physicians' office building, soon to be erected here, include the most modern devices in connection with water supply, electricity, refrigeration, sterilization, gas, compressed air and mechanical service.

*Leesburg*—Dr. K. R. Teachnor has returned to this village after an absence of several years, during which he was health officer of Butler county, a position he resigned because of ill health.

*Sandusky*—On September 13th Dr. William Graefe observed the fiftieth anniversary of his start in the practice of medicine.

*Springfield*—Offer of the professorship of the department of health at Antioch College has been extended to Dr. O. H. Craven, local health director.

*Montpelier*—Dr. H. J. Luxan, formerly a resident of Youngstown, has located here. He will conduct a private hospital.

*Uhrichsville*—A Ford coupe owned and driven by Dr. J. A. McCollum was badly damaged when

struck by a passenger train recently. Dr. McCollum escaped injury.

*Lewisburg*—Dr. Karl W. Horn has moved to this village from Cincinnati.

*Cleveland*—Dr. Henry H. Dale, English scientist, director of the National Institute for Medical Research, London, gave a Hanna lecture at the Medical Library Auditorium, October 6.

*Fremont*—Drs. O. H. Thomas and F. L. Kinsey, graduates of the Medical College of Ohio, Cincinnati, in 1882, recently retired after 40 years' practice. The former is health commissioner of Sandusky County.

*Zanesville*—Dr. J. Z. Heston, a former practitioner of this city, is now located at West Jefferson, where he is occupying the offices of the late Dr. Amos F. Green.

*Morrow*—Dr. Austin C. Roberts moved to Wilmington, November 1. He has purchased the residence and office of Dr. W. R. Hale, who will locate in Long Beach, California.

*Columbus*—Dr. James A. Gardner, Buffalo, addressed the General Practitioners' Medical Society on "Socialistic Tendencies in Medicine", October 12.

*Warren*—Dr. H. T. Thornburg, of this city, and Miss Natalie Merrill, R. N., Columbus, were married recently. Mrs. Thornburg has been connected with the State Health Department and the Bureau of Juvenile Research.

## MEAD'S

### INFANT DIET MATERIALS

Like many good things there is no mystery about Mead's Ethical Policy—but there is MUCH OF GOOD SENSE

*Mead's Slogan—"Consult the Doctor First."*

MEAD'S DEXTRI-MALTOSE is an ethical infant diet material offered to physicians who wish to modify cow's milk for the individual requirements of babies.

MEAD'S "D-M" is not advertised in women's magazines, newspapers, or any lay publications.

MEAD does not print feeding directions on the "D-M" package.

Satisfactory results—because the doctor's creative talent has full scope and he is not hindered by "outside interference."

A quality product marketed in this ethical manner must necessarily give results in most cases since it is offered only for the consideration and approval of physicians.

*The Doctor's Confidence Is Not Misplaced*

#### THE MEAD JOHNSON POLICY

Mead's Infant Diet Materials are advertised only to physicians. No feeding directions accompany trade packages. Information in regard to feeding supplied to the mother by written instructions from her doctor who changes the feedings from time to time to meet the nutritional requirements of the growing infant. Literature furnished only to physicians.

28,000 doctors asked us for literature this year.

Will you please write for some too?

**MEAD JOHNSON & COMPANY,**

**Evansville, Indiana**

# MEDICAL ECONOMICS

PUBLIC HEALTH - SOCIAL WELFARE *and* ORGANIZATION PROBLEMS  
WITH EDITORIAL COMMENT *by* D. K. M.

## Merry Christmas!

May the holiday season bring you its blessings and rewards for faithful service, well rendered for the betterment of humanity and the advancement of scientific medicine. May the season be a time of cheer and happiness, for you and yours, an opportunity for meditation and gratification, for close adherence to purpose and ideals, and of optimistic outlook for the New Year just ahead.

## A Call to Arms

Through his fund of experience, his faithful and untiring service, his optimistic belief in the future of the medical profession, and his conviction that all serious problems can be met and solved, provided the members are arrayed in unison for the common good, Dr. Robert Carothers, president of the State Association, in his characteristic, terse, direct manner, has issued the following communication:

Toward the close of the present calendar year and at the end of the first half of my term as President of the Ohio State Medical Association, it is proper that I express to you, fellow members, my appreciation for the support and cooperation which are making possible the splendid achievements of medical organization in Ohio.

You are well aware of the many proceedings of the various bureaus and departments, of the committees and officers of the State Association which are constantly on the alert and active on behalf of yourself and the profession at large.

Only through constantly strengthened organization can the interests of each member be safeguarded and promoted. Fulfilling as it does its function as a medium of service to physicians, individually and collectively, each member will benefit in greater ratio in proportion to enlarged membership and greater cooperation.

Membership dues are the means through which organization machinery, state headquarters, publication of *The Journal* and innumerable other services are maintained. Enlarged activities have been inaugurated to continue which, there must be an adequate budget.

A new year is approaching—a legislative year. The State Association is concerned with numerous activities and preliminaries preparatory to the coming session of the General Assembly. From the standpoint of legislation alone, the coming twelve-months will be of vital concern.

The effectiveness of the work now under way,

and the work planned for 1923, depends directly upon the spirited activity and responsive cooperation of the county societies.

By the payment of 1923 membership dues by present and new members as quickly as possible, the State Association headquarters is not only afforded the opportunity of devoting most of its time to Association activities, but will be enabled to function consecutively and enter the new year with decks cleared for action.

## Obligation Plus Opportunity

Roosevelt once said that "every man owes some of his time to the upbuilding of the profession to which he belongs." This terse truism is particularly applicable to the medical profession. To take part in the deliberations and activities of his county society, is the solemn duty of every legally qualified and eligible physician in Ohio—a duty not alone to his profession but to himself and to those he serves.

"Those who are apathetic, or those who remain aloof to this moral responsibility, which is equally binding upon all of those whose privilege it is to be a member of the oldest and most highly honored of all professions, are leaving a duty unfulfilled, an opportunity neglected and spurned," says one great leader.

Another year is about to close. A new year is in the offing. Much has been done; more remains to be accomplished. The future depends upon the interest and whole-hearted support of the individual physician.

Before the first of the new year, the secretaries of the various counties will be engaged in collecting dues, in advance, for 1923. This work could be materially lightened, if each member would forward his dues to his county society secretary *at once*. By doing this, the county secretary will be able to forward the proportion allotted to the State Association promptly and you will be assured of continuous "good standing."

Aside from the usual and special activities, the State Association is concerned with preliminaries preparatory to the coming session of the legislature. Also numerous committees are busy with plans for the annual meeting of the State Association which is to be held at Dayton, May 1-3. Prompt payment of dues for the coming year; an active interest in the affairs of the county society and medical organization in general; as-

sisting in securing new members; and cordial cooperation for the common cause are vital.

The future of the County Societies, the State Association and the American Medical Association will determine the future of the individual physician.

### A View of Organization

Tradition has it that the tribal patriarchs of Araby frequently sat in council for solemn reflection, contemplating the world as supported by four huge columns—"the justice of the great; the prayer of the righteous; the bravery of the valiant; and the science of the physician."

The attributes of this apt Arabic conception might be said to represent, in no small degree, the essentials of the successful physician of today.

To be great, to be righteous, to be brave, and to be well-versed in scientific knowledge require an unselfish contact with fellow members of the profession and a broad understanding of the affairs of the community.

"The wheels of progress" says Dr. Lester Hollander in discussing 'Medical Organization and Its Profit to the Doctor' in a recent issue of *The Pennsylvania Medical Journal*, "were put in motion and are kept in motion by the unanimous realization of industry, business and profession that no one individual exists without an obligation to society, of which he is a component part, and that common good is immeasurably greater than individual avarice."

"Working on this plan," he continues, "the fences of the old settlers were theoretically and practically torn down and affiliations in profession and business were made imperative, to keep step with the rapid strides of world progress known as civilization."

Profits that accrue to the physician through affiliation with medical organization are enumerated by Dr. Hollander as follows:

1. It assures the physician's standing in the community, before the public, the law and the profession.
2. Organization provides access to a continuous post-graduate course.
3. Organization induces the sharing of trade secrets for the good of all.
4. Organization establishes confidence in yourself through the association with the best of the medical profession has, and through the meeting and chatting with its leaders, who, by the way, make up the bulk of those attending scientific meetings.
5. Protection from malpractice suits which may arise in the practice of even the best physician is another immeasurable advantage.
6. Organization helps in the elimination of professional jealousy and piracy.
7. Another item of value is the maintenance of fees.
8. A participation in the united effort to protect the population against cults and fads can be hoped for only if the medical profession stands united, and uses collectively its tremendous individual influence for the rights of the profession.

### Clinics, "Free" and "Pay"

The development of clinic service, its relation to individual practice and its degree of service to the public is a subject of direct interest and vital concern. Much has recently been said and written from various angles and divergent viewpoints both as to "free" and "pay" clinics and dispensaries.

As having a bearing on the general subject, the recent report of the Committee on Hospitals and Dispensary Relations of the Cleveland Academy of Medicine, is of unusual interest from the viewpoint of policy as well as specific recommendations for a standardized classification of patients.

On the particular subject of "pay" clinics, the report of a joint committee representing medical societies in New York State (published on page 859 of this issue of *The Journal*) is also in point.

The "high lights" in the Cleveland report are as follows:

It is the concensus of opinion of your Committee that the further development of uncontrolled dispensary activities, under the guise of "public health measures," will in the end do much injury to true public health activities by inciting the enmity of the medical profession.

Your Committee believes that there is far more work to be done among the worthy poor than there are funds to do such work. That there is much time expended on the "amply able to pay" and "able to pay" patients, which time must be taken from the "unable to pay."

Nearly all the dispensary physicians admit that their work with the "unable to pay patients" would be more satisfactorily performed if more time could be spent with them. This time is greatly taken up with patients who are able to pay private physicians.

Your Committee wishes to make the following recommendation:

1. That the Directors of the Dispensaries be informed that the Academy of Medicine believes it is in the best interest of preventive medicine that the Dispensaries establish a very liberal system of rating, and separate all applicants for dispensary treatment into three classes, based on their economic conditions:

- (a) Amply able to pay
- (b) Able to pay
- (c) Unable to pay

That the applicants classed as "amply able to pay" be referred to their private physicians for physical examination, diet, vaccination, toxin and antitoxin administration, etc., whether sick or well.

That those in the class "able to pay" be admitted for examination, vaccination, toxin, antitoxin administration, etc., but be referred to their private physicians when sick. That those classed as "unable to pay" be admitted at all times or referred to other dispensaries when sick.

2. That the Directors of the Dispensaries, after making such a basis for classification of applicants, submit such basis for classification to the Academy of Medicine.

3. That the Academy of Medicine further recommends extension of the work and further intensive care and study of the class "unable to pay," in order that the morbidity and mortality be further reduced in this class.

### Miracle or Fake?

One Dr. Albert Abrams from out Frisco way, who recently startled the "Scientific World" with the presentation of his Hypothesis and Thing-O-Ma-Bob,—Hot Dawg! Now we have it—his "Oscilloclast," has gone in for experience meetings, where the contraption is shelved from prying eyes and testimonials of the marvelous accomplishments are submitted instead.

No Sir-ee! the Oscilloclast is not for sale; but it can be leased. A mere few hundred bucks will secure one; and, presto! up goes the box office receipts. Mr. Upton Sinclair asserts that "a great number of physicians who are using this instrument today are enjoying incomes of from \$1,000 to \$2,000 per week."

For sometime the profession has been accused of "doing their utmost to keep the great news for which humanity has been waiting in agony for centuries from reaching the public," all because physicians mindful of their responsibility to the community, investigate thoroughly before adopting some new contraption guaranteed to cure-all over night.

Several times, those eminently qualified to pass upon the merits of the Abrams' claims have been refused permission to make a thorough investigation. The latest comes from Boston and is aptly and tersely told by the *Boston Medical and Surgical Journal*.

"On Sunday afternoon", the Journal says, "he (Abrams) delivered a lecture at the Copley Plaza, at which between 800 and 1000 persons were present. On Monday afternoon, he appeared before the Board of Registration in Medicine at an informal hearing, prepared, as the Board was led to believe, to give a demonstration of his method. Opportunity had been given a representative of the practitioners of the Electronic method to inspect the room and to arrange for proper wiring, but when the meeting was called to order, Dr. Abrams said it was impossible to give a demonstration then. Instead, he and his followers, started to hold an experience meeting in which they might testify to the efficiency of the method. Dr. Prior, chairman of the Board, acting with dignity and firmness, refused to listen to such a recital. The meeting was adjourned. The next day (Tuesday, October 10,) pursuant to an invitation extended by him, Dr. Abrams gave a clinical demonstration of his method in the laboratory of one of his disciples. He first attempted to demonstrate simple phenomena based upon his theory of electronic reactions. It was a remarkable coincidence that the reactions were clearly visible or audible to those followers of his who were in the rear of the room, but were quite impercep-

tible to those members of the Massachusetts Medical Society who were there to look into the method, and who occupied chairs close to the demonstration.

"Dr. Abrams consistently refused to submit his method to any test offered by those present, and confined himself to demonstrating the presence of lesions, the existence of most of which could be proven only by post mortem examination. He selected for his experiment a member of the Journal staff, a man in apparently perfect health. Yet this individual, according to Dr. Abrams, presented the following pathological conditions: Streptococcus infection of the left frontal sinus and of the right antrum; two ohms of tuberculosis, location, intestinal tract; congenital syphilis; sarcoma; non-metastatic, of the intestine. In demonstrating the situation of the sarcoma, Abrams located it first in the right lower quadrant and later, by another method, in the left lower quadrant.

"Analysis of the results of Dr. Abrams' statements and demonstrations while in Boston shows two outstanding facts. First, he persistently refused to submit his method to a scientific controlled test, or to a demonstration given under such conditions that the investigation of the method could be carried on under the usual rules of scientific criticism. Second, in the one case upon which he did demonstrate his method, he found the existence of four diseases—syphilis, tuberculosis, sarcoma, and streptococcus infection—in an individual entirely free from symptoms of any disease whatsoever.

"If, by his method, he could diagnose disease where no symptoms existed, he surely should have been able to approach without fear of failure a test based upon the diagnosis of blood specimens from a patient with well-marked clinical pathology. The fact that he refused to perform such a test is capable of only one interpretation—that is, that he knew full well his inability to make a really correct diagnosis.

"The marvelous 'cures' reported by himself and his followers must be explained on the ground of mental suggestion. Abrams gave this away when he said in his Sunday lecture that 'if the patient will convince himself that he has no disease, I cannot elicit a reaction.'

"Abrams says that his Electronic Reactions are either the greatest miracle of the age or the greatest fake. No one who witnessed his demonstration and who listened at all critically to his vague explanation of the theory of these reactions would concede the former. Whether the thing is a conscious hoax or is a case of self-deception we cannot say. Whichever it is, it is dangerous doctrine."

### Misleading Abrams Publicity

The President of Leland Stanford University deeply resents the persistent publicity effort that is being made to have it appear that one Albert Abrams, director general and dictator supreme of the Abrams Electronic Hypothesis, is connected with that institution.

Here is a letter which the president recently sent to the Associated Press:

The Manager, Associated Press, Chicago, Ill.  
Dear Sir:

May I call your attention to the enclosed clippings, apparently sent out from your office, indicating that Dr. Albert Abrams is connected with Leland Stanford University. The same error has been corrected several times. Dr.

Abrams has never had any association with Stanford University. He is a graduate of Cooper Medical College, which was taken over by Stanford University long after his graduation. It is evident that Dr. Abrams, or some one associated with his publicity work, has tried to keep up the fiction of his association with Stanford.

It seems to me bad enough for such a responsible institution as the Associated Press to herald far and wide the scientific rubbish of Dr. Abrams, and worse still to connect the name of the University in any way with such absurdities. If there is an opportunity in any later dispatch to correct this misstatement it would be appreciated. Naturally I realize the difficulty of ever following up such a mistake.

I should think it would be clear to the managers of the Associated Press by this time just what kind of a man they are dealing with in Dr. Abrams. Why not give publicity to some of the worth-while things that are being done in this country instead of making American science the laughing stock of the world? With the monkey gland publicity, Abrams' electronic diagnoses of male and female handwriting, and other such stuff, it is naturally confusing to all of those that are not trained in such matters.

I am writing this because I realize that there is a constant desire in the Associated Press to be accurate, conservative and constructive rather than to merely see how many lines of space can be occupied in the papers of the country.

Very truly yours,  
(Signed) RAY LYMAN WILBUR,  
*President.*

#### Legislative Personnel

Results of the recent election show that the 85th General Assembly, which is to convene in Columbus during the second week in January, will be heavily Republican, while the Governor is Democratic.

There will be 35 members of the Ohio Senate and 130 members of the House of Representatives, which represents a slight increase in membership over the previous session. Of the members of the new senate only 16 served during the last session; while in the house, but 64 of the 130 were in the 84th session.

Thirty-one of the 35 senators are Republicans; the other four are Democrats. In the house, 103 are Republicans and 27 are Democrats.

The new legislature will be confronted by many perplexing problems, and a deluge of legislative proposals are expected. At the last session, more than 1,800 specific measures were introduced in both branches. Even more have been predicted for the coming session. "Vigilance" is the watchword.

#### "Whither Are We Drifting?"

In these days of cults and isms, where fancies and fads flourish and pass with kleidoscopic changes, much has been said about the trend of medicine. Whither is it drifting?

George E. Vincent, president of the Rockefeller Foundation, in his annual report for the past year, which was recently published, has selected a significant simile from which he draws

some rather interesting conclusions concerning the trend.

"Cure looks through the microscope, prevention through the telescope is the clever phrasing of a successful American health officer", he says. "If the figure is not too closely examined it serves its purpose. There has been and still is a marked difference between the average physician's point of view and the sanitarian's. The former deals with disease which has manifested itself; the latter seeks to foresee and to forestall its occurrence. The one thinks of the individual patient, the other of the community as a whole."

"It is sometimes cynically asserted," he continues, "not only that the attitudes of the two differ, but that their interests clash. In a town from which malaria has been banished, a local doctor who has always specialized in chills and fever was asked how his profession had been affected. 'If it hadn't been for influenza, we'd have gone broke; that saved us,' was the half jocular reply. If the two things are looked at narrowly, locally and for a brief period, there is undoubtedly a conflict of interests.

"But the leaders of the medical profession have not taken the myopic view. As a matter of fact they have been the very prophets and promoters of preventive medicine. The men who have done most to introduce the telescope have, with certain notable exceptions, been trained primarily to concentrate upon the microscope. With them cure and prevention have been not sharply contrasted but closely related ideas. They have increasingly regarded experience with disease in individuals as a means of protecting the community against it.

"The progress of public health depends upon the appreciation, sympathy and support of the medical profession. Doctors will come to think of themselves and to be regarded by the public as primarily responsible for keeping people well. Periodic physical examinations, the early discovery of incipient maladies, warning against environmental dangers, the wise control of diet, insistence on appropriate exercise, suggestions about personal and social life, will in increasing measure replace medicines, hospitals and sanatoria; may even reduce the demands for surgical service. Who knows but that the doctor of the future, receiving an annual retaining fee from his clients, will feel no embarrassment in taking the initiative and in keeping a watchful eye upon them? Then a case of illness would be not the physician's opportunity but a reflection upon his vigilance."

While the conclusions arrived at by one who has gained eminence in the field of public health may, or may not, represent the future destination of the medical profession; it is at least indicative of the state of flux, or era of transition, which has been so freely discussed in the past.

Changing conditions must be met. Constant adjustments to shifting economic problems are

(Continued on page 860)



# Classification and Surgical Treatment of Chronic Diarrhea-Colitis\*

SAMUEL GOODWIN GANT, M.D., New York City

(Continued From November Issue)

*Editor's Note.*—When, following weeks, months or years of treatment including dieting, medication, rest and colonic lavage, diarrhea persists or recurs at short intervals, Dr. Gant considers that the affection responsible for the colitis has become surgical and must be so treated if the patient is to be permanently cured. Furthermore, every disease causing intestinal inflammation, ulceration or obstruction, responsible for chronic diarrhea, hemorrhage, sepsis and malnutrition, that fails to respond to medical treatment within a reasonable time, should be treated surgically. Dr. Gant gives in detail the methods by which ulcerative colitis may be handled surgically under local anesthesia.

## PART III

### CLASSIFICATION AND SURGICAL TREATMENT OF CHRONIC DIARRHEA-COLITIS

**C**LASSIFICATION.—There are many types of chronic diarrhea, some are considered *medical*, since they are induced by diseases curable by dieting, medication, rest in bed, change of climate or surroundings and medicated irrigations introduced *per anum*, while others are classed as *surgical* because an operation *plus* through and through colonic irrigations, or putting the bowel completely at rest by an operation that prevents feces reaching lesions in the diseased bowel responsible for loose movements is indicated.

*Diseases Responsible for Diarrhea Curable by Medication.*—This group includes persistent diarrhea induced by organic diseases—buccal, dental, nasal, pharyngeal, gastrogenic, enterogenic, neurogenic, urogenic, hepatogenic, intestinal amyloidosis, pellagra, sprue, obesity, alcoholism, gourmandizing, daily consuming cold drinks or ices, eating irregularly, prolonged catharsis, chemical and ptomain poisoning, psychic disturbances, typhoid, typhus and relapsing fever.

Catarrhal and infectious types of colitis mentioned later should be regarded as and treated *medically* so long as the patient shows decided improvement from non-operative measures. However, when following weeks, months or years of treatment including dieting, medication, rest and colonic lavage *per anum* diarrhea persists or recurs at short intervals, the affection responsible for it has become surgical and must be so treated if the patient is to be permanently cured.

Occasionally some of the above diseases fail to respond to medication and the intestinal mucosa through the frequent passage over it of improperly balanced gastro-intestinal juices, undigested food remnants and medicines prescribed to relieve the condition becomes *extremely irritable, eroded or ulcerated* when an operation reinforced by medication and through and through irrigation is indicated.

*Diseases Responsible for Diarrhea Requiring Surgical Intervention.*—Every disease causing intestinal inflammation, ulceration or obstruction responsible for chronic diarrhea, hemorrhage, sepsis and malnutrition, that fails to respond to medical treatment within a reasonable time, should be treated surgically.

Surgical colitis is usually induced by chronic *catarrhal* or *infectious ulceration* involving the colonic and rectal mucosa though in exceptional cases the disease involves both the small and large intestine (entero-colitis). Named in order of their importance the following are the varieties of *ulcerative colitis* most frequently responsible for chronic diarrhea:—

(1) Catarrhal Colitis, the etiology of which is not known.

(2) Tubercular Colitis, usually secondary to pulmonary infection caused by Tubercle Bacilli.

(3) Amebic Colitis, induced by Amebae Histolytica.

(4) Bacillary Colitis, caused by Shiga, Kruse, Flexner, Duval or other so-called Dysenteric Bacilli.

(5) Balantidic Colitis, the result of infection by Balantidium Coli.

(6) Helminthic Colitis, incident to Tape (cestode) or Round (nematode) Worms.

(7) Flagellate Colitis, incited by Cercomonas Hominis, Trichomonas Hominis or Lamblia Intestinalis.

(8) Coccidic Colitis, caused by Coccidium Curriculi, C. Hominis or C. Bigennium.

(9) Syphilitic (luetie) Colitis, induced by Spirocheta Pallida.

(10) Gonorrheal Colitis, caused by Gonococci.

Occasionally two or more types of infection prevail in the same case of colitis each aggravating or prolonging loose movements, but with few exceptions the treatment need not be modified because of this, since both conditions are simultaneously curable with the aid of *appendicostomy* or *cecostomy* and through and through colonic irrigations or providing physiologic rest for the bowel by performing *intestinal exclusion, ileostomy* or *colostomy* in deplorable cases complicated by polyposis or obstruction.

\*Oration in Surgery presented before the General Session of the Ohio State Medical Association, during the Seventy-Sixth Annual Meeting, at Cincinnati May 2-4, 1922. The oration was illustrated by motion pictures.

## OPERATIVE TREATMENT OF ULCERATIVE COLITIS

The following are the procedures most frequently indicated in the operative treatment of *ulcerative colitis* with or without *polyposis* (*multiple adenomata*) also loose movements induced by chronic intestinal obstruction:—

- |                                    |                         |
|------------------------------------|-------------------------|
| 1 Appendicostomy.                  | 5 Intestinal Exclusion. |
| 2 Cecostomy.                       | 6 Ileostomy.            |
| 3 Appendico-cecostomy.             | 7 Colostomy.            |
| 4 Ileo-cecostomy—Gant's Operation. | 8 Colectomy.            |



Fig. 6. Irrigating the colon following the writer's stab wound appendicostomy.

*Appendicostomy* (Fig. 6), or *Cecostomy* reinforced by through and through irrigation is indicated when the colon *only* is involved; Gant's *ileocecostomy* is employed when both the ileum and large intestine are involved in the inflammatory process; *intestinal exclusion* is resorted to in the treatment of ulcerative colitis complicated by polyposis.

*Ileo-Cecostomy* or *Colostomy* is performed in cases of chronic diarrhea induced by tumors or other varieties of chronic intestinal occlusion and *Colectomy* is practised as a last resort in

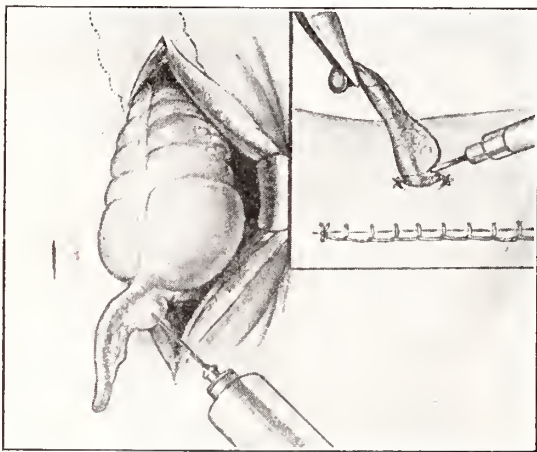


Fig. 7. Technique of writer's stab wound appendicostomy following infiltration of abdominal structures by the layer method shown in preceding illustrations. The cecum is brought out through a Kammerer incision and appendix desensitized by infiltrating its mesentery. Skin, fat fascia, muscles and peritoneum are infiltrated for the button-hole incision after the plan shown in the following illustration, the intestine being protected from injury by fingers introduced through the original incision. Insert shows appendiceal mesentery ligated, button-hole wound closed and appendix being excised with Paquelin cautery.

deplorable cases of ulcerative colitis complicated by polyposis or obstructive lesions that have permanently destroyed the functioning power of the colon.

## APPENDICOSTOMY

Appendicostomy (Fig. 7), the operation of choice in lean and moderately thin individuals, who have not previously submitted to an appendectomy when the appendix has not been rendered unfit through being too short or small, strictured, kinked or otherwise diseased, since there is less danger of leakage and infection following appendicostomy than cecostomy and because cecal are more difficult to close than appendiceal openings.

*Technic.*—The procedure is simple and the appendix may be brought out through an *intermuscular* incision and anchored to the skin in the region of McBurney's point, but the writer

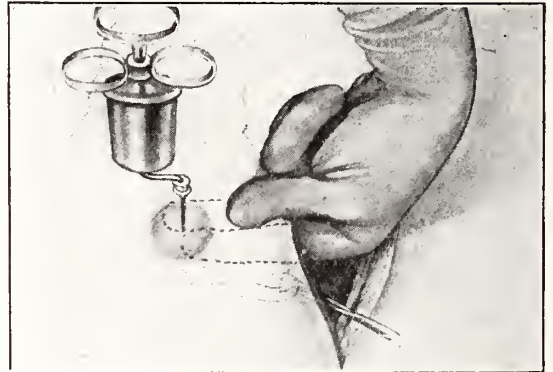


Fig. 8. Plan of anesthetizing abdominal structures for stab-wound incision and method of protecting intestine with fingers in the writer's local anesthesia appendicostomy.

prefers his *stab-wound appendicostomy* embracing the following steps:

(1) The abdomen is opened by a three inch incision at the outer border of the rectus (Fig. 8), the muscle is retracted inward and *wound* edges protected with gauze handkerchiefs; (2) cecum and appendix are located, freed, brought to the surface and cecal suspension sutures introduced; (3) cecum is scarified, the appendix straightened by dividing adhesions and mesentery at a safe distance from the artery and suspension stitches placed one inch apart are carried through the abdominal wall of the cecal region with a long handled needle; (4) with first and second fingers introduced as a guide a free stab-wound is made in the abdominal wall at McBurney's point and the appendix is withdrawn through it with the aid of long curved forceps; (5) suspension sutures are tied across rubber tubing, angle stitches (of linen or chromic gut) are introduced and tied on either side of the appendix and the abdominal wound closed; (5) the appendix is bent over and covered first with rubber tissue smeared with vaseline and gauze and the operation completed by

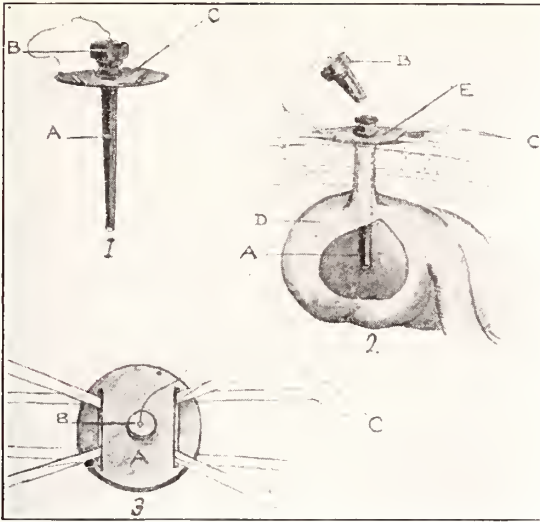


Fig. 9. Writer's appendicostomy operation wherein his soft rubber irrigator is employed.

1. A. Writer's soft rubber appendiceal irrigator; B, stopper; C, retention shield.
2. A, Appendiceal irrigator; B, stopper; C, adhesive strips fastening shield to the skin; D, cecum.
3. Appearance of irrigator at completion of operation. A, retaining shield; B, stopper; C, adhesive strips.

placing outer dressings over the closed stab and abdominal wounds.

To avoid possible infection the appendix is not opened for a few days when it is amputated a short distance above the skin under local anesthesia. In aggravated cases of colitis complicated by malnutrition, marked loss in weight, persistent loose movements and hemorrhages the appendix is removed while the patient is on the operating table, a Gant soft rubber *appendiceal irrigator* (Fig. 9), is inserted and the colon immediately flushed with a 5 per cent. ichthyol solution and daily thereafter for a week, when a milder solution is employed.

*Cecostomy* is indicated in the same class of cases as appendicostomy. In Gant's stab-wound operation the steps in the procedure are similar to his appendicostomy described above. Since the cecum is approached through a right rectus incision and the catheter leading from it is brought out and fixed to the skin through a stab-wound made over the caput coli; to avoid the tendency of subsequent leakage the writer forms an inverted circular valve about the inserted tube by three purse string sutures which when tied infold the bowel about it, the catheter is then bent at a right angle and the anterior cecal wall plicated over it before the tube is withdrawn through the stab opening.

The operation is completed by closing abdominal and stab-wounds, anchoring the catheter to the skin with adhesive straps applied in a special manner and closing the outer end with a cravat clamp to prevent the escape of gas and feces.

*Appendico-Cecostomy.*—When attempting appendicostomy and the organ is found unfit for

the purpose the appendix is amputated half an inch external to the cecum and one end of catheter is introduced through it and the catheter brought out through a stab-wound as in cecostomy, a procedure designated *Appendicostomy*.

*Gant's Ileo-Cecostomy.*—This procedure was designed by the writer as a substitute for appendicostomy and cecostomy in cases in which both the ileum and colon are involved in the ulcerative process, since it provides for *simultaneous or separate irrigation* of both the small and large intestine which cannot be successfully accomplished through an appendiceal or cecal opening.

Briefly described the following comprise the steps in Gant's ileo-cecostomy:—

- (1) Through a two inch intermuscular or right rectus incision the ileo-colic angle is withdrawn and wound edges protected with gauze handkerchiefs; (2) ascending colon and ileum are clamped to prevent soiling of the wound when the bowel is opened and the cecum scarified; (3) linen purse-string sutures are introduced opposite the ileo-cecal valve and the gut opened inside the suture line; (4) holding the bowel so the ileo-cecal valve rests between thumb and fingers of the left hand, a Gant catheter guide is passed across the cecum through the ileo-cecal valve into the small intestine; (5) the obdurator is removed and a catheter inserted through the guide into the small bowel; (6) a short piece of rubber tubing is projected into the cecum beside the first catheter; (7) infolding purse-string sutures are tied forming a cone-shaped valve about the catheters which subsequently prevents leakage of gas and feces; (8) clamps are removed and the cecum anchored to the transversalis fascia denuded of peritoneum by suspension sutures passed through the abdominal wall and tied across rubber tubing; (9) the wound is closed and catheters anchored by skin sutures or an incircling crossed by a second

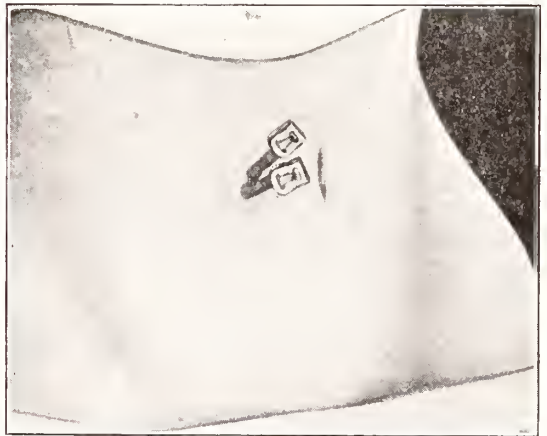


Fig. 10. Appearance of wound and catheters in position closed by cravat clamps, following the author's double catheter ceco-ileostomy.

adhesive strip; (10) tubes are closed with cravat clamps to prevent leakage and the operation completed by applying gauze pads about the tubes and over the closed wound.

Catheters are then marked that interne and nurse may know which is in the large and which is in the small intestine when time for irrigating arrives, (Fig. 10).

To avoid possible wound infection flushing is not begun for a few days, unless diarrhea, hemorrhage or toxic manifestations are alarming. To facilitate operation, dispense with soft catheters that might be expelled by peristaltic

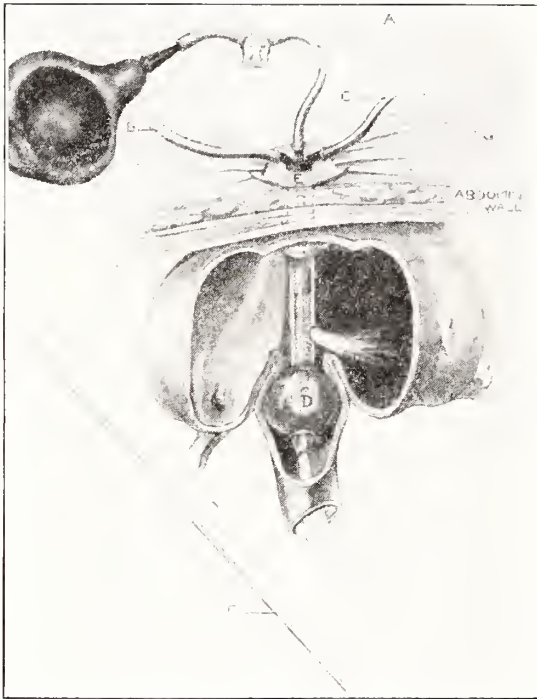


Fig. 11. Gant's soft rubber entero-colonic irrigator in position. A, inflating tube; B, pipe leading to small intestine; C, colonic-tube; D, inflating bag; E, retaining shield; F, cravat clamp closing tube; G, adhesive strips.

contraction and insure the solution's entering and being retained in the small intestine, the writer devised a soft rubber entero-colonic irrigator which he used to advantage in several cases.

When the irrigator (Fig. 11), is in position the inflated bag rests in the small gut against the ileo-cecal valve and when distended temporarily prevents escape of the irrigant from the small gut into the cecum.

With this twin tube irrigator the small and large intestine can be separately or simultaneously irrigated by physician, nurse or patient.

Steps in the writer's ileo-cecostomy when the irrigator is used are the same as when catheters are employed except a catheter guide in unnecessary.

#### IRRIGATING SOLUTION

The beneficent action of through and through colonic irrigation is due almost as much to *mechanical* action of the fluid in cleansing the inflamed and ulcerated mucosa of irritating feces, discharges and pathogenic organisms as to contained *medication*.

*Catarrhal colitis* rapidly improves following daily flushing with normal saline but when there is more or less ulceration, hemorrhages and abundant discharge and frequent evacuations stimulating antiseptic and astringent irrigations are employed morning and afternoon until improvement is marked when irrigation once daily suffices.

In neglecting cases complicated by extensive ulceration, severe diarrhea and hemorrhage the writer begins with silver nitrate grs. xxx to the quart followed by a normal saline irrigation; later the silver is gradually diminished until grs. v are employed or another irrigant is substituted viz.: a 4 per cent. boric acid; 2 per cent. ichthyol; 3 per cent. balsam of Peru; 1 per cent. permanganate or 5 per cent. argyrol solution.

When there is an abundance of pus or *debris* peroxide of hydrogen 20 per cent. is useful and quinine bisulphate 1-1000 may be tried in enteric colitis but is not so reliable as the above irrigants.

The following combination may be relied upon:

B	Fl. ext. Krameria.....	℥iv
	Biborate of Soda.....	℥ii

M—Sig. A tablespoonful to a quart of warm water and irrigate once or twice daily.

The above alternated with an emulsion composed of bismuth ℥i and olive oil Oi is soothing and does much towards lessening peristalsis, eliminating inflammation and soreness, healing ulcers and minimizing tenesmus when alternated with one of the above irrigating solutions.

*Hot Irrigants*—100°-110° F.—are soothing and preferable to *cold*—65° F.—which incite intestinal contractions that expel medication before it has accomplished its purpose.

The *amount* of medicated fluid is varied according to indications but two quarts allowed to run in slowly with the patient in the sitting, standing or preferably recumbent posture with hips elevated is usually sufficient. A larger quantity, two to four quarts, is employed to advantage in aggravated cases to cleanse colonic lesions of irritating discharges and *debris*, but when a large amount of solution is used a small proctoscope is introduced through the anus to permit escape as it runs in which prevents colonic distension and possible ptosis.

When *appendicostomy* and *cecostomy* and direct bowel treatment fail it is because of a serious complicating ailment, the bowel is diseased above the colon or the patient's position is not frequently changed during treatment that the irrigant may reach *all lesions on all sides* of the bowel.

This method of treating chronic diarrhea responds more quickly when reinforced by dieting, internal medication, rest and pleasant surroundings, therapeutic measures that usually fail in chronic ulcerative colitis causing diarrhea except when employed in connection with through and through colonic irrigation.

*Closure of the Opening.*—The appendiceal or cecal aperture may be closed in two or three in *mild* and six months in *deplorable* cases of catarrhal and infectious colitis with mixed infection, but to do so earlier is a mistake because recurrence occasionally occurs though diarrhea, hemorrhages, discharges and auto-intoxication have been apparently cured.

Occasionally the opening closes spontaneously following withdrawal of the catheter or irrigator but when it does not destruction of mucosa with cautery, chemical caustics or preferably by fulguration usually seals the appendiceal or cecal

aperture. When the stoma can not be obliterated in this manner *appendectomy* is performed extra-peritoneally or the cecum is exposed and the opening closed under local anesthesia without opening the peritoneum by an infolding sutures placed and tied about it.

The mortality of these operations has been practically *nil* since I perfected my present technic.

*Results.*—Following *appendicostomy*, *cecostomy* or *Gant's ileo-cecostomy* supplemented by *through and through colonic irrigation*, the patient's mental and physical condition rapidly improves since movements become fewer, bleeding and mucopurulent discharges lessen, abdominal discomfort disappears, manifestations of malnutrition, auto-intoxication and anemia moderate, insomnia ceases, the appetite returns, food is more thoroughly digested, the sufferer gains in weight and feels that at last something definite has been accomplished that will cure him of his affliction.

In this connection the writer has incorporated the accompanying table giving a synopsis of his appendicostomies, cecostomies, ileo-cecostomies and appendico-cecostomies and listed the diseases for which the operations were performed:—

TABLE I

Diseases and Conditions for which Operations were Performed.

Type of Operation	Colitis (Catarrhal, Entamebic, Bacillary, Tubercular, Leptic, etc.)	Ileo-colitis (Catarrhal and Infectious).	Adenomata and Papillomata (Polyposis).	Chronic Ptomaine Poisoning	Haemorrhagic Colitis	Myxorrhoea Membranacea and Colica	Helminths (Pin and Tape Worms)	Pernicious Anaemia	Ordinary Anaemia	Chronic Fecal Impaction	Correct Defective Intestinal Flora	Colonic Putrefaction	Constipation with Auto-intoxication	Hirschsprung's Disease	Chronic Colonic Dilatation	Malnutrition (to inject Nutriment)	Conjunction with Intestinal Exclusion (for Obstipation)	Conjunction with Sigmoidoexy (for Invagination into Rectum)	Tubercular Peritonitis	Paralytic Ileus	Peri-colitis and peri-typhlitis	Appendicitis	Preliminary to Recto-Colonic Exclusion and Resection	Shock from Serious Intestinal Operations (Saline Irrigation)	Conjunction with Obstipation (for Kinks, Twists, Ptosis, Adhesions, etc.)	Colonic Stricture	Total each Operation
Appendicostomy	128	7	4	2	9	1	...	...	1	2	3	1	2	1	2	1	7	3	1	1	2	...	1	1	10	2	192
Author's Stab Wound Cecostomy	23	2	...	1	4	...	...	...	...	...	1	...	1	...	...	...	2	1	...	1	...	...	1	1	5	1	44
Author's Ileo-cecostomy	10	9	1	1	1	1	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	26
Appendico-Cecostomy	6	1	...	...	1	...	...	...	1	...	1	...	...	...	1	...	...	...	...	...	...	1	...	...	1	...	13
Appendico-Enterostomy	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
No. Cases each Disease	168	9	11	6	4	15	2	...	2	2	5	1	3	1	3	1	10	4	1	2	2	1	2	2	17	3	277



Fig. 12. Enterostomy-ileostomy showing extruded gut and surrounding thickened raw skin induced by constant escape of irritating digestive juices and discharges which makes this procedure more objectionable than colostomy following which stools are non-irritating and solid.

#### INTESTINAL EXCLUSION

This procedure has been successfully substituted for *colostomy* in several cases of ulcerative colitis complicated by malnutrition, exhaustive diarrhea or hemorrhages associated with anemia or multiple polyposis.

In this class of cases *ileo-rectostomy* or *ileo-sigmoidostomy* is performed. In some simple *entero-anastomosis* was made and in other instances the ileum was divided, one end closed and the other joined to the sigmoid or rectum by end to end or side to side anastomosis.

At first movements are fluid and frequent, but later as the ileum functionates for the colon stools occur less frequently and become firm. Colonic exclusion is preferable to colostomy, because evacuations are voided *per anum* and disgusting features of having an artificial anus in the abdomen are avoided.

*Interostomy and Colostomy.*—Occasionally the formation of an artificial anus is imperative to put the bowel at rest and provide for irrigation of the diseased gut, particularly when the colon is riddled with numerous extensive deep ulcers and submucous fistulae with or without complicating *polyposis* or stenoses.

*Ileostomy* (Fig. 12), because of consequent frequent fluid evacuations that erode the skin and constantly annoy the patient, is resorted to only in extreme cases where both ileum and colon are involved in the destructive process.

Ileostomy and particularly colostomy are more

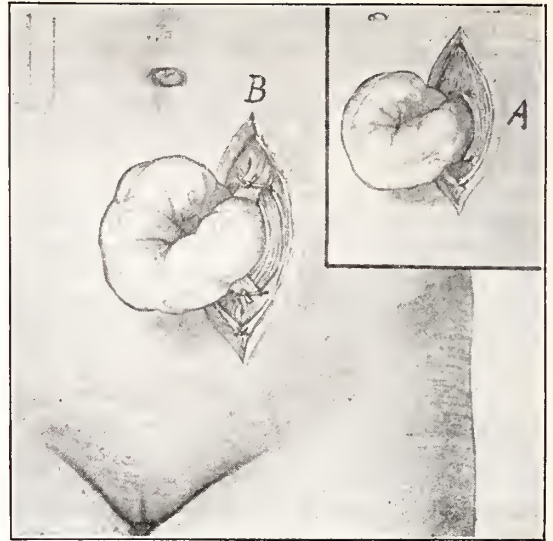


Fig. 13. Method of establishing a controllable artificial anus. A, by suturing the split rectus snugly about the gut and B, arranging fibres of the muscle in figure of 8 fashion around the bowel.

often performed for the relief of diarrhea induced by obstructive lesions—*stricture, cancer, kinks* and other *blocking lesions* within or without the bowel—than for catarrhal, or infectious ulcerative colo-proctitis.

*Colostomy* (Fig. 13), is a useful procedure in suitable cases, but is not indicated nearly so frequently as appendicostomy and cecostomy in the treatment of chronic diarrhea and is not employed in ulcerative colitis unless the above procedures have failed or the patient is rapidly being exhausted from frequent copious hemorrhages or both ulcers and tumors involving the colon.

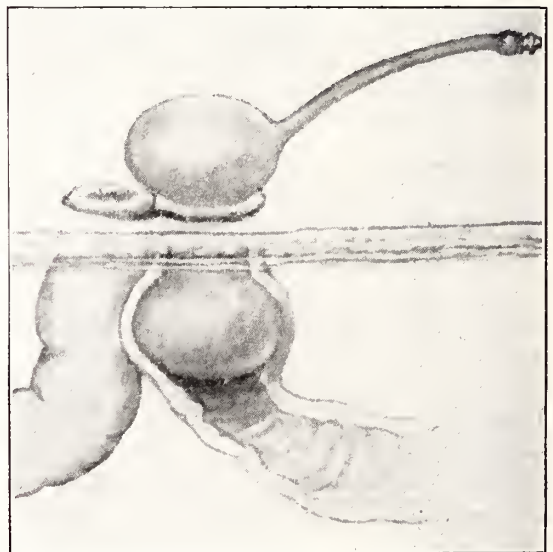


Fig. 14. Writer's dumbbell-shaped soft rubber bag which when inflated effectively prevents involuntary escape of gas and feces. It induces little discomfort because of its small size and no strap or other inconvenient apparatus is required.

In such cases the artificial anus to be effective must be located above the lesions that the diseased segment of gut may be put at rest and frequently irrigated.

The writer's colostomized patients seldom complain of frequent involuntary movements because partial or complete control over them is accomplished by forming a medium sized anus after adjacent muscles have been snugly sutured about it (Fig. 13) and the gut has been twisted, carried under, brought through and attached to the skin with the aid of a cut made two or three inches to the right or left of the original incision. When there is a tendency to frequent involuntary movements the writer's dumbbell-shaped bag, soft rubber (Fig. 14) is effective.

To avoid possible infection of the wound or abdomen the projecting bowel is not amputated for several days unless obstructive manifestations are urgent or the patient is in a dangerous condition from repeated hemorrhages.

*Colectomy.*—This procedure is indicated more frequently in the treatment of surgical diarrhea than chronic constipation, but is seldom called for in either case. One is not justified in

removing the colon for persistent diarrhea until medical treatment and other less radical surgical procedures have failed to control exhaustive loose movements, depleting hemorrhages, anemia, malnutrition and stop the growth of papillomata upon the extensively inflamed mucosa.

In other words colectomy is unjustified in this class of cases unless functioning power in the large intestine has been destroyed by the ulcerative process or is seriously occluded by polyps, stricture, cancer or other obstructive lesions.

The *technique* of colectomy has been omitted for lack of time and because the writer in his works\* has fully described and illustrated the operation.

In *conclusion* the writer would say, he believes that if surgeons would pay special attention to the class of diseases and operations herein discussed they would be amply repaid for the time spent.

471 PARK AVENUE.

\*Gant: Constipation, Obstipation and Intestinal Stasis, 1916.

Gant: Diseases of the Colon, Rectum, Anus and Peri-Anal Region, W. B. Saunders Co., 1922.

## A Short Consideration of Some Phases of Intestinal Obstruction\*

By W. D. HAINES, M.D., F. A. C. S., Cincinnati

*Editor's Note.*—Complete operation in the presence of intestinal obstruction is not always in the interest of the patient's best chances for recovery. The comparative mortality in strangulated external hernia and intestinal intra-abdominal obstruction points a striking lesson. Granted that the incidence of early recognition and prompt operative relief in the external hernia, may, in a measure, account for the wide discrepancy in mortality, Dr. Haines insists that an analysis of records will show nearly the same disproportion in post-operative mortality in patients wherein the time elapsed between the onset of symptoms and admission were equal. From this he concludes that there is something inherent in the operation which in a very decisive way, influences the ebb and flow of the mortality curve in the treatment of acute intra-abdominal obstruction of the intestine. This inherent something is traumatism of the greatest of all allies in abdominal surgery,—the peritoneum.

**I**N THE clinical consideration of obstruction of the intestine, one must keep in mind two phases of the malady; viz.: (a) Complete obstruction; (b) Incomplete obstruction. The patient's chances for recovery will largely depend upon the interpretation of the widely varying presenting symptoms by the doctor who is first called to examine the patient suffering of obstruction.

To discern the difference between complete and partial arrest of the passage of feces and flatus prior to a time when the vitality of the bowel is damaged beyond recovery, is always difficult clinically and is sometimes impossible.

In view of these facts, surgeons have long since come to regard the treatment of obstruction of the intestine as urgent surgery.

### SYMPTOMS

By far the greater number of patients presenting symptoms of obstruction are struck down while apparently in the best of health and following their usual avocations. Not infrequently the patient recalls having lifted some unusually heavy weight on the day his illness began and to this he ascribed the acute abdominal pains which induced him to call his physician. *The dominant symptom in the beginning of the attack is pain, sharp, severe pain in the epigastrium radiating to the region of the umbilicus. The pain is intermittent in character and many of the patients show marked signs of collapse soon after the onset of the symptoms.*

The patient is apprehensive and restless, his features have a pinched expression and the moist clammy skin has a decided pallor.

Vomiting ensues soon after the onset of pain and although copious and accompanied by little

\*Read before the Surgical Section of the Ohio State Medical Association, during the Seventy-Sixth Annual meeting, at Cincinnati, May 2-4, 1922.

exertion on the part of the patient, no relief from the distressing colic follows.

At intervals the attacks of vomiting are replaced by a depressing nausea and painful eructations of gas. At first the vomitus consists of food particles, stomach secretions and large quantities of bile stained fluid. The passage of feces from the lower bowel following an enema has decided the opinion of many a clinician and likewise the fate of many a patient, in the early stages of intestinal obstruction.

In the acute form of the disease, the patient himself is aware of the fact that no gas or stool is being passed notwithstanding the urgent desire and frequent attempts at stool. The temperature is *sub-normal* and does not rise above normal until influenced by the absorption of septic material.

The patient soon shows the devitalizing influence of the loss of body fluids and develops an *insatiable thirst*. Rigidity of the abdominal musculature is absent in the early hours of the attack. The patient drinks large quantities of fluid with avidity but the fluid is almost immediately ejected on reaching the stomach; the process is repeated time over and again until the patient discouraged and exhausted sinks into a state of collapse.

In the progress of the disease the vomitus changes in character to a foul smelling, semi-liquid, dark substance representing intestinal contents above the site of the obstruction.

On partial recovery from the initial collapse, rigidity of the muscles of the abdominal wall ensues and marked tenderness is elicited on palpation. As the hours pass, the absorption of toxins gradually diminishes the sensoria until they are practically abolished. This stage is the progress of the malady is in turn, rapidly followed by relaxation of the musculature, ecchymoses, jaundiced sclera, labored respiration, abdominal distention, hiccough, collapse and death.

*Extensive distention of the abdomen causes pressure on the diaphragm, which in turn embarrasses the heart's action giving rise to that formidable sign, a damask hue of the skin covering the hands, fore-arms, feet and legs; a sign which in a personal experience has ever presaged the near approach of death.*

#### DIFFERENTIAL DIAGNOSIS

In the scheme of differential diagnosis, acute peritonitis complicating appendicitis with or without perforation, is the condition most frequently confused clinically with intestinal obstruction, but there will be found to exist a wide variation in the two disorders when the history and symptoms are critically examined. The collapse in peritonitis is not so severe although well marked after perforation of the stomach, duodenum or appendix.

The accompanying muscular rigidity, abdom-

inal distention and localized tenderness appear earlier in peritonitis than in obstruction. Vomiting, so prominent, distressing and persistent, as a symptom in obstruction, is usually present in appendicitis but subsides as the hours pass. Those valuable aids, the pulse and temperature are increased in appendicitis, but in obstruction, there is a sub-normal temperature and a small thready pulse. Finally, there is not a stoppage of gas and feces.

One should keep in mind while examining a patient with symptoms of ileus, the possibility of the presence of *acute hemorrhagic pancreatitis, the lodgment of biliary or renal calculus and thrombosis of the mesenteric vessels*. A careful analytical examination of the clinical history and presenting symptoms will usually serve to establish the diagnosis.

#### CAUSE AND LOCATION OF OBSTRUCTION

The difficulty in determining the cause and location of the obstruction when situated within the abdomen, is well known to surgeons and still golden hours are spent in trying to figure out these problems which were better if spent in getting the patient into the hospital and relieving the presenting symptoms.

As experience broadens, the judicious will be content with his efforts when he has established the diagnosis of intestinal obstruction; leaving the discussion of classification for future consideration. If one insists upon speculating concerning the cause of the obstruction despite this warning, adhesions following peritonitis or operation, internal herniae, volvulus and intussusception, may well engage his attention during the indulgence of this dangerous pastime.

Interference with circulation of the bowel by mechanical pressure in obstruction is quickly followed by an oedematous infiltration of the segment of bowel implicated and an exudation of considerable fluid into the peritoneal sac, which in some instances is blood stained.

#### THE PATHOLOGICAL SYNDROME

*In visualizing the pathological syndrome which is present in obstruction, one should keep prominently in mind, the enormous distention of coils of intestine which exists immediately above the site of the obstruction. This phase of obstruction embodies the death dealing factors of the malady, and is the one pathological condition most insistent for relief in the treatment. If not relieved, the distention increases to the point of wholly arresting the blood supply resulting in gangrene of the bowel wall.*

In appearance the distended, discolored, lustreless intestine above the site of obstruction is in striking contrast with the pale, collapsed bowel distal to the obstruction and this serves as a reliable landmark in determining the site of the trouble. Two great dangers confront the patient at this stage of obstruction,



(1) Irrecoverable ileus ending in death despite good operative measures; and

(2) Gangrene of the bowel wall.

Obstruction of the small intestine is quickly followed by severe pain, vomiting and collapse, these manifestations are more severe in character and prompt in appearance than when the obstruction is located in the large bowel.

Conversely, distention is much greater in the latter, more especially if the sigmoid is the part involved.

Peristalsis is abolished early in obstruction of the small intestine and if the obstruction is located high, as in the jejunum, stercoraceous vomiting, that pathognomonic sign, in the literature of ileus, will not present regardless of the duration of the disease.

So much has been said in the past decade concerning the one important item in the clinical history of ileus, stoppage of feces and gas, that the diagnosis should be seemingly easy but reports from the various clinics throughout our country show that an accurate pre-operative diagnosis has not been made in from 30 to 50 per cent. of the cases.

The presence of the most valuable diagnostic landmark, stoppage of the fecal stream and passage of gas should warrant transfer of the patient to a hospital and immediate operation if we would improve our recovery statistics in ileus.

The precarious physical condition of these patients on admission ordinarily precludes the possibility of laboratory and other time consuming study of the presenting symptoms, as each hour thus spent but adds to the mortality percentage which is already too high.

#### TREATMENT OF ACUTE ILEUS

What here follows relative to some of the essentials in the management of ileus, you will bear in mind, pertains to the treatment of acute ileus. There are two important measures which should be instituted in the pre-operative treatment of ileus;

(1) The withholding of opiates.

(2) Stomach lavage should be employed.

In planning the operation the chief factor to take into account is the physical condition of the patient; how hard has he been struck! Some of these patients are poor surgical risks aside from the acute condition for which they are being admitted.

Broken compensation and defective liver and kidney function are not infrequently notes in the protocol of such patients. The great object for which operation is instituted is to relieve the over-distended bowel and concomitant stercoremia which are rapidly devitalizing the tissues and sweeping the patient into the grave.

Each succeeding editions of text books on surgery, have, for many years, copied the dicta "Long median incision, rapid search for cause,

removal of cause, close abdomen," following this advice is one of the factors in the production of the high mortality which statistics on ileus record.

To relieve the obstruction and do all necessary operative procedure at the primary operation by removing the cause, resecting a loop of bowel, dividing constricting bands, were perhaps ideal, but at what a frightful cost of life, is best shown by studying the mortality list of such operations.

Traumatism to the already over-taxed peritoneum incident to opening the bowel and emptying the contents by stripping long loops of bowel over a tube, resecting a segment of the intestine or performing an anastomosis will not infrequently turn the scales against the patient.

Surely no other surgical risk, with which the writer is familiar, requires the exercise of more critical judgment relative to the patient's ability to withstand extensive operation than in the type of case under consideration.

For a number of years my assistants and I have made a practice of opening the abdomen of patients suffering of obstruction, either under local or light general anesthesia and seizing the first loop of distended bowel which presented. The bowel is drawn well into the wound in the abdominal wall and fixed by two or three sutures to the mural peritoneum. After partly closing the abdominal incision and protecting the field, an incision is made into the bowel wall and a Monk tube inserted and fixed into the lumen of the bowel. The use of the stomach tube, replacing body fluids, by transfusion, intravenous saline infusion and saline *per rectum* constitute in a general way, the post-operative care of such patients. By this procedure one relieves the stercoremia which is destroying the patient's life.

If the patient survives, clinical and laboratory search may, in due time, be made to determine the cause of the obstruction and this may be removed at a second operation.

An increasing percentage of recoveries since adopting this plan have fully justified the two-stage operation in the management of acute obstruction of the intestine.

By far the greater number of the patients suffering of ileus die of stercoremia, not of gangrene, perforation and peritonitis, the inevitable trend of unrelieved ileus. The great discrepancy in the operative mortality rate of obstruction due to external hernia and the death rate following operation for obstruction within the abdominal cavity, serve to accentuate the added danger of handling the over-taxed peritoneum in the latter type of the malady. These factors in the management of ileus are seemingly disregarded by those surgeons who would deal only with the mechanical side of the problem. When we begin to think in terms of stercoremia and visualize the prime object of opera-

tion for acute ileus as entailing prompt relief of the stercoremia, which is so rapidly piling up on the wrong side of the ledger of life, then, and then only, will we have begun an advance for the betterment of end results in the treatment of this death dealing malady.

#### CLOSING ARGUMENT

It is with a full realization of the sentiment against closing an abdomen in the absence of a complete operation that the method, herein contained, is advocated. It is very comforting to one's conscience to feel as the patient is being rolled out of the operating room, that the patient has had a thorough and complete operation but paramount to this feeling on the part of the surgeon, should be the question, has the patient been given the best chance for recovery.

Those who hold for search and removal of cause at the primary operation should compare the post-operative mortality percentage of intra-abdominal obstruction with those of obstruction due to strangulated external herniae.

Of the last 122 patients suffering of obstruc-

tion which were admitted to the Cincinnati General Hospital, 80 were due to strangulated external herniae and 42 were due to some type of intra-abdominal lesion; 56 patients in the former group recovered and 24 died; while in the latter, (the intra-abdominal), 31 died and 11 recovered.

Granted that the incidence of early recognition and prompt operative relief in the external herniae, may, in a measure, account for the wide discrepancy in mortality, an analysis of these records will show nearly the same disproportion in post-operative mortality in patients wherein the time elapsed between the onset of symptoms and admission were equal.

Therefore, one must conclude there is something inherent in the operation which in a very decisive way, influences the ebb and flow of the mortality curve in the treatment of acute intra-abdominal obstruction of the intestine.

The inherent something, as already pointed out, is traumatism of the greatest of all allies in abdominal surgery,—the peritoneum.

1606 FREEMAN AVE.

## Typhoid Fever, Its Treatment and Mortality\*

By HOWARD JONES, M.D., Circleville

*Editor's Note.*—Dr. Jones compares series of typhoid fever cases under the older method of poly-pharmacy, the drugless treatment and the caloric diet and calomel abortion therapy. Of these methods the last has given by far the best results and Dr. Jones presents typical charts by way of illustration. His experience leads him to investigate other diseases in the same way to secure the lowest possible mortality rate. In so doing he hopes to discover some elementary principle applicable to the treatment of all diseases. Therapeutic fears should not let us create a fetish and worship it as truth, nor should the iconoclast tear down unless he is ready to build up.

**T**HERE IS an old saying that seeing is believing, and undoubtedly the saying is true, but it does not follow that the belief is true. Observation of a given phenomenon over a long period of time has often resulted in a belief which was absolutely false as to the nature of the thing observed.

For untold ages men saw the sun, moon and stars rise in the east and set in the west, and by common consent all agreed that this earth was fixed and that the sun, moon and stars revolved around it. It was not until the 16th century that any man seriously questioned what all could so plainly see.

#### GENERAL CONSIDERATIONS

Any belief supported by mere observation should always be open to question until the scientific method has demonstrated its truth. With this prologue in mind I wish to relate some observations on typhoid fever. In the years 1876 and 1877 I heard the great teachers of medicine at the College of Physicians and Surgeons in New York City, and the brilliant

Bartholow at the Ohio Medical College of Cincinnati, lecture upon typhoid fever, and I left medical college feeling that medication was an essential in the disease and at best the mortality rate was necessarily large. Different observers of that day stated the mortality as low as 25 and as high as 40 per cent. according to age, and a long siege of sickness was to be expected.

In the years referred to and afterward, a country doctor often had a bill for attendance upon a single case of \$200.00 or more, and the bill at the drug store was sometimes as large or larger. The list of drugs prescribed in a given case was astonishingly long. I have known the following drugs to be prescribed for one person with one case of typhoid fever—quinine, Norwood's tinct. veratrum, gelsemium, serpentaria, belladonna, calomel, epsom salts, bismuth subnitrate, digitalis, aconite, pepsin, chicken gizzard, castor oil, turpentine, opium, gallic acid, tannic acid, eucalyptus, ammonium carbonate, mustard plaster, capsicum plaster, onion poultice, lime water, hydrochloric acid dilute, blackberry wine, sassafras tea and plenty of that now unfashionable drug whiskey. Each of these medicines, there were probably some others which I have forgotten, was given to meet a

\*Read before the Medical Section of the Ohio State Medical Association, during the Seventy-Sixth Annual Meeting, at Cincinnati, May 2-4, 1922.

symptom which worried the doctor, the patient or the patient's friends at some period of the five or six weeks of sickness. The sickness was so long drawn out and the symptoms so kaleidoscopic that the interested doctor had a great chance to use his therapeutic knowledge and his imagination. Yet this particular patient referred to survived the disease.

When I took typhoid fever and was well along in the second week, many drugs had been given me before it was decided to try quinine. That day, the record shows, my temperature was at noon 106°. Accordingly sixty grains of sulphate of quinine were given at one dose and a few hours later forty grains more were administered. The one hundred grains undoubtedly paralyzed the bacilli typhosis but at the same time it stirred up in my anatomy such a buzzing rebellion that I chose to die rather than take any more.

#### DRUGLESS TREATMENT OF TYPHOID

After some years spent in trying to recover from, let us say typhoid fever, I again began the practice of medicine, and as typhoid was the paramount malady, with the customary high mortality, I determined to carry some cases along without any drugs and thus, if possible, find out for myself what the natural course of the disease would be if left alone. In a period of about six years I had complete records of one hundred cases of typhoid attended in the very unorthodox way of giving plenty of water without drugs or poultices. Absolutely no drugs whatever were given by mouth, by hypodermic syringe, by injection intravenous or by rectum and not even a placebo was administered. This method would not be so difficult to accomplish today but then it was startling, and as I look back over that time I marvel that patients had the confidence to submit to such irreverent handling.

I was attentive, I charted every case myself as there were then no trained nurses available. I usually made two visits a day taking morning and evening temperature, respiration and pulse together with such other data as at the time appealed to me. The patients were fed exclusively upon a milk diet and they seldom would take more than 1,000 calories a day. I thought I learned something about the type of typhoid fever then prevailing when it was allowed to run a natural course. The mortality in this one hundred cases was one per cent.

This should have satisfied me but it did not for the disease was too severe and too protracted. There was too much obstinate constipation or diarrhea with exasperating intestinal distension, delirium, dry tongue, coma, hemorrhage and in fact every distressing symptom from pneumonia to piles which could worry the patient and confound the physician. There were often days of distressing doubt, days in which the patient hovered between life and death and there were

often relapses, sometimes two or even three, but the astonishing thing to me was that the mortality was one per cent.

#### CALORIC DIET AND CALOMEL

The community began to pay attention to the drugless plan of handling typhoid fever and the doctor, who at first was looked at askance, was employed with less suspicion. It did not take as many years to get the second hundred cases, but had I learned anything about the disease from the first hundred which were left to run their course except for diet and nursing? Whether correct or not I thought I had reason to believe that the drug treatment of the day was worse than useless. Also that an exclusively milk diet was wrong and harmful. I believed that the patients were fed inadequately and that the diet was largely responsible for the impactions, dry tongue for bowel distention and other bad effects. Accordingly I began to experiment with different plans of nourishing patients, and the second hundred cases, while showing three per cent. mortality, upon the whole ran their course with less distention of the bowels, less impaction, less delirium and coma, but still the dry tongue and other severe symptoms continued too frequent.

About this time my father told me that in the late forties he had treated many cases of typhoid fever along the Ohio river with large doses of calomel at the start and then repeated smaller doses and he believed with great advantage. Some features of this purgative treatment appealed to me, and accordingly I adopted a plan of having the bowels moved from five to six times or more every twenty-four hours, with the hope of washing out the intestinal canal so often that the accumulation of gas would be diminished and impaction prevented.

I have records of eighty-seven cases treated on this plan together with plenty of water and a mixed and easily digested diet of sufficient caloric value. I wish to show you four charts from this series of cases together with a composite chart from uncomplicated and untreated cases, in order that you may see the changes in temperature which are characteristic of the cases treated by this plan as compared with untreated cases.

It is generally conceded that all infectious diseases show abortive forms. I think I have observed aborted cases of typhoid in families in which four or five members have been taken with the disease about the same time and no treatment was used in any of them. However this may be, if it is admitted that the cases, temperature curves of which I am showing, were typhoid fever and not self-aborted, then the charts speak for themselves as to the efficiency of the treatment.

It is not contended that every case can be aborted, but it is contended that many can be and that all can be favorably influenced by keeping the bowels moving freely.

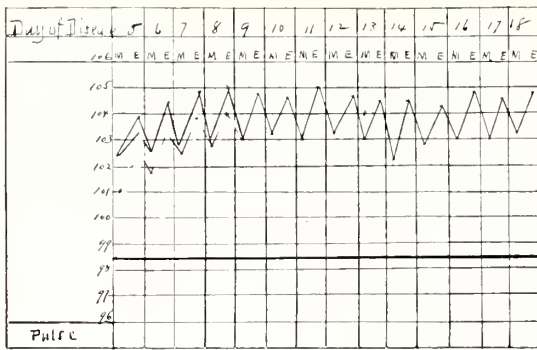


Chart 1. A composite chart of typhoid fever running its course without treatment over the period covered by the charts showing the effects of treatment. Recovery in 28 days as a rule.

Chart 1 shows the temperature curve made from a number of untreated cases of typhoid beginning on the 5th day of the disease.

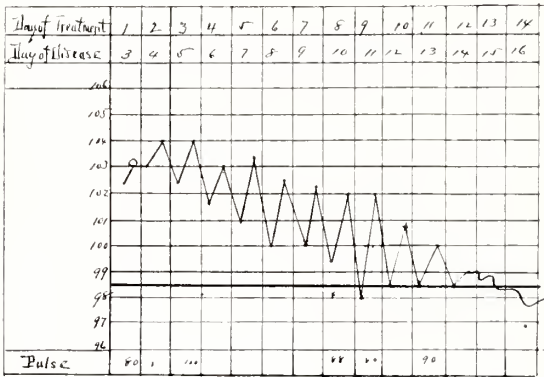


Chart 2. Miss O. L., aged 24, typhoid fever, result recovery. Treatment begun at O, probably the third day of the disease. A sister in the same house was sick with typhoid fever in the fourth week, at the time this case began. This case is especially characteristic of the result of the treatment, and after the eleventh day had no temperature above normal.

Chart 2 shows the temperature curve of a case in which treatment was begun on the third day of the disease. The patient was a woman twenty-four years of age, a sister in the same house was ill with the disease at the time. Note

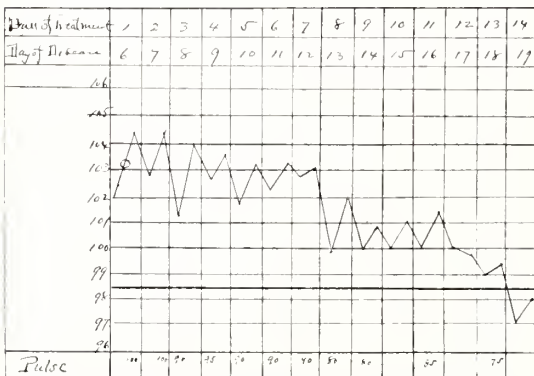


Chart 3. Mr. H., aged 32 years, typhoid fever, result recovery. Treatment begun at O on probably the sixth day of the disease. Patient made a rapid recovery. The course is a very typical one.

the drop on the ninth day and return to normal on the twelfth day of treatment. Recovery rapid and complete.

Chart 3 shows the temperature curve of a case in which the treatment was begun on the 6th day of the disease. The patient was a woman thirty-two years of age. Note the drop on the eighth day and return to normal on the thirteenth day of treatment. Recovery rapid and complete.

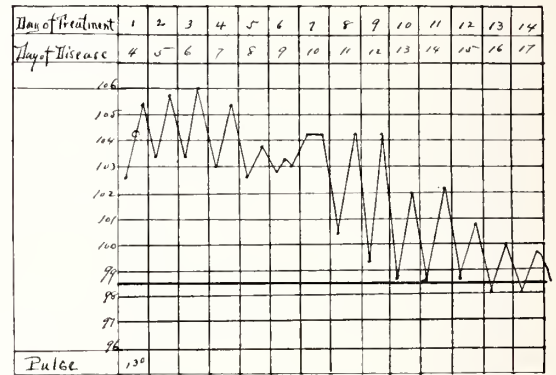


Chart 4. Harry W., aged 9 years, typhoid fever, result recovery. Treatment begun at O on the fourth day of the disease. There were two other cases of typhoid well along in the disease when this child was taken sick. The start was a bad one but the recovery was rapid. The drop to normal temperature was several days later than in some patients.

Chart 4 shows the temperature curve of a case in which treatment was begun on the fourth day of the disease. The patient was a boy nine years of age. There were two other cases in the home. The case promised to be a severe one. Note the drop on the eighth day with a swing until the fourteenth day of treatment like that of the fourth week of the disease. Recovery complete.

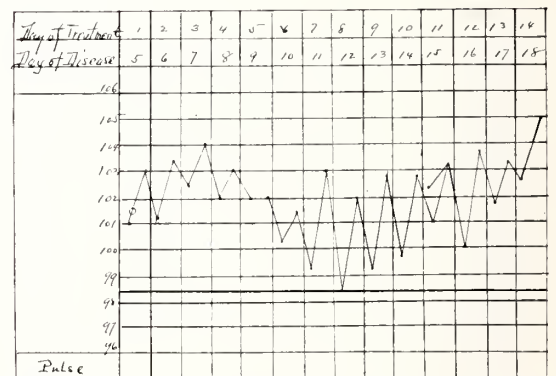


Chart 5. Miss G., aged 23 years, typhoid fever, result recovery. Treatment begun at O on the fifth day of the disease. Treatment discontinued on the eighth day. Fever continued 15 days longer or about 21 days from the day that temperature was normal. After three days of normal temperature another relapse came and the disease ran 21 days longer. This case shows clearly the same effect of treatment as in other cases which were aborted.

Chart 5 shows the temperature curve of a case in which treatment was begun on the sixth day of the disease. Note the drop to normal on

the eighth day of treatment. Unlike the others shown the case was not aborted and the temperature rose to 105° degrees. The disease continued three weeks. The temperature remained normal for three days and then ran a relapse lasting three weeks, with final recovery of the patient.

The striking thing about this treatment is the drop to normal or nearly normal on the eighth to the tenth day and the general improvement in all the customary bad symptoms. This characteristic change in the temperature curve takes place even when the case is not aborted. Of the whole number of cases not quite half were aborted, but all were influenced for good. The dry tongue, bowel distension, delirium, coma and other unpleasant symptoms were largely if not entirely eliminated.

An eminent internist of Cincinnati once told me that none of the cases referred to today were typhoid. This may be your criticism. The point of this paper, however, is not to insist that typhoid fever can be aborted with certainty, but rather that the train of serious symptoms can be largely diminished by flushing out the intestinal tract so frequently that its flora has small chance to grow unmolested. I know there is a type of individual so susceptible to the poisons of typhoid that no plan yet proposed will with certainty prevent death, and these patients, who

are a small per cent. of the total, will be met with occasionally to swell the mortality table.

#### CONCLUSION

Typhoid fever is not the common and serious malady of former years before the days of sanitation and immunization, but there are other diseases which are on the increase and it will repay us to learn what some of these will do if untreated. It is a fine thing to know what to expect from a disease when it is let alone. Some time in the future I hope to present a series of cases of lobar pneumonia which have run their course unmolested by drugs, poultices or jackets, in which the mortality is so low as to be surprising when compared with the published mortality from this disease.

There must be some elementary principle applicable to the treatment of all diseases and this let us hope may yet be discovered. The modern physician should be an iconoclast. Also he should be ready to build up where he tears down. Neither ancient nor modern practices should convince him, simply because old or new. If they do we stand like the ancients for thousands of years, firm in a belief that our medical earth is flat and our medical sun, moon and stars revolve about it because we can see them do so. Our fears should not let us create a fetish and worship it as truth.

## Pyelitis in the Puerperium\*

By ANDREWS ROGERS, M.D., Columbus

*Editor's Note.*—Pyelitis is of more frequent occurrence than is commonly supposed. In 1000 combined private and clinical cases, Dr. Rogers has observed pyelitis in the puerperium 12 times, and in pregnancy 7 times; of the 12 puerperal cases two went on to multiple abscess and required nephrectomy. All of these began on the right side and in two the left side subsequently became involved. Sub-involution, with its rapid development of germ life in the lochia, and obstruction of the urinary passages, especially the right ureter, are important causative factors. The onset and course is that of a typical acute infection and the condition usually responds to supportive and symptomatic medical treatment. Should pyelo-nephritis result operative removal of the kidney may be necessitated.

**I**N THIS little study of complications in the puerperium that do not belong to infections of the genital tract, *per se*, I have previously considered endocarditis and obscure auto-intoxication—probably from the gastro-intestinal tract. This year I wish to call your attention briefly to a consideration of *pyelitis in the puerperium* which I think may also be of some interest "to the observing and conscientious obstetrician."

"During the last few years it has become recognized that inflammation of the pelvis of the kidney is a not infrequent complication of pregnancy and the puerperium and produces symptoms which in the past have led to many errors of diagnosis. The literature of the subject prior to 1904 is very meager and mostly in French,

but since that date many articles have appeared reporting individual cases so that now the list of recorded cases is large and steadily increasing.

The condition was first recognized and described in 1841 by Rayer, whose *Traite's de maladies des Riens*, Vol. III, pp. 112 et 241, contains a chapter on *Rapport's de la pyelite de la grossesse*. He evidently recognized pregnancy as a cause of renal distention and inflammation but contrary to the present accepted view, considered the pyelitis as secondary to a cystitis.

#### ETIOLOGY

Reblaub, at the Surgical Congress in 1892, first gave the true etiology and pathology, *i. e.*, ureteral compression and infection. As early as 1877, Chamberlain called attention to the fact that in pregnancy the kidney is congested and the ureter dilated and for this reason is more liable to infection. The fact of frequent ureteral

\*Read before the Section on Obstetrics and Pediatrics of the Ohio State Medical Association, during the Seventy-Sixth Annual Meeting, at Cincinnati, May 2-4, 1922.

dilatation in pregnancy has been verified at autopsy by many observers, among whom may be mentioned Stadfeld, Olshausen, Loelein and others. Stadfeld in 16 autopsies on pregnant women, found the ureter dilated on one or both sides in 9. Olshausen in 34 autopsies on pregnant women, found dilated ureter in 25 cases.

Ureteral compression and consequent dilatation is much more apt to occur on the *right* side than on the left. In the twenty-five cases in which Olshausen found dilated ureters, the dilatation was bilateral in thirteen, and unilateral in twelve and of these twelve there were ten right-sided and two left-sided. This is of importance in connection with the marked predominance of right as compared with left-sided pyelitis in pregnancy.

Experiments on animals by Halbertsma and others have shown that the urine is excreted under low pressure. Halbertsma showed that the weight of five grams compressing the ureter of a dog over a surface of eight mm. is sufficient to hold back a column of urine four hundred mm. in height. Ludwig demonstrated that the pressure in the renal pelvis normally does not exceed ten mm. of mercury. It requires, therefore, but little compression of the ureter to retard the current and favor ureteral dilatation.

To explain the greater frequency of dilatation of the right ureter over the left, many suggestions have been made:

1. The rotation of the uterus on its long axis from left to right, forward, places the uterus and its contents more in the right oblique diameter of the pelvis than in the left and thus exerts more pressure upon the right ureter than on the left. As to the causes of this rotation of the uterus, it may be mentioned that as the uterus rises out of the pelvis it is deflected from the median line by the promontory of the sacrum and, therefore, lies in one or other oblique diameter. The presence of the rectum on the left side of the pelvis naturally favors deflection to the opposite side. Also, as the uterus rises into the abdomen the sigmoid flexure of the colon, often distended, tends to lie behind the left side of the uterus and still further favors the right obliquity of that organ. According to Guyon, uterine and ovarian tumors, when movable, tend to be displaced to the right.

2. The greater prominence of the right over the left common iliac artery at the brim of the pelvis exposes the right ureter to greater pressure between the uterus and the iliac artery of that side.

3. In the later months of pregnancy the greater frequency of the foetal head in the right oblique diameter of the pelvis increases the frequency of pressure upon the right ureter.

4. The pregnant uterus as it grows tends to displace the uterus to the sides of the pelvis against which it compresses them. As the uterus usually develops more to the right than to the

left, the compression is usually greater on that side.

It has been noted that anything tending to increase the size of the pelvic contents, *i. e.*, twins, hydramnios, uterine or ovarian tumors associated with pregnancy, favors the tendency to ureteral compression and dilatation.

#### INFECTION OF THE URINARY TRACT ABOVE THE POINT OF COMPRESSION

From the frequency with which the *Bacillus typhosus* appears in the urine of typhoid fever patients and from experiments on animals it would seem that in many infective processes, provided the urinary tract is unobstructed, organisms may be eliminated by the urine without appreciable injury to the renal tract. On the other hand, the experiments on animals by Reblaub and Bonneau show that after an aseptic ligation of the ureter the injection of either streptococci or colon bacilli into a distant part of the body can produce a pyonephrosis. From this it seems evident that a renal tract, in which there is compression of the ureter or ureters is much more liable to infection than one which is unimpeded.

In pregnancy we have on the one hand a urinary tract which is compressed as shown by the frequency of dilated ureters in that condition and on the other hand we have a larger amount of toxic material than normal to be eliminated. Hence the frequency of pyelitis. In most cases of pyelitis complicating pregnancy and the puerperium the disease is primarily right-sided although if the attack is severe and prolonged the left kidney is occasionally involved secondarily.

*Illustrative Case Report.*—As bearing on this subject the case reported by Kouwer is one of interest. In *Case 1* of his series the obliquity of the uterus at seven months was distinctly to the left and here the pyelitis was primarily left-sided. When the position of the uterus was corrected the symptoms of the pyelitis suddenly disappeared. In a series of sixty-two reported cases the left sides were primarily infected but six times. In a few cases it has been bilateral.

The infecting organism in the pyelitis of pregnancy is usually the colon bacillus and often a diarrhea or intestinal disturbance has preceded the attack. Vinay on the other hand found in one of his cases the streptococcus; in a case reported by Lop the gonococcus was found."

#### PYELITIS IN THE PUERPERIUM

This brief historical and etiological resumé has been taken from Cragin because it is brief though comprehensive and because he has so far as I know devoted more time and consideration to it than any other writer on obstetrics. But Cragin, like all the rest has practically confined himself in his discussion to pyelitis in pregnancy, a very important subject but one with which we

will not concern ourselves at this time. Our field being limited to the complications of the puerperium. But the etiological factors brought out—compression, and stasis, infection from above and below, cover the subject just as well for pyelitis in the puerperium, with the possible exception of one additional factor brought out by Polak in his discussions of pelvic infections, *namely* that the lymphatics of the vagina, cervix, and uterus lead upward in the retroperitoneal area, and therefore, for a certain distance come in relation to the ureters unprotected by peritoneum, and so offering a great opportunity for the spread of infection from slight wounds or abrasions in perineum, vagina, or cervix that may have become infected. As is well known the usual infecting organism of such wounds is the colon bacillus, and this is also the usual organism found in pyelitis.

Polak has also carried out bacteriological experiments that seem to prove conclusively that the lochia is germicidal in its activity in a diminishing ratio. That for the first forty-eight hours it is practically sterile, and that in each succeeding twenty-four hours it is increasingly less so; so that by the fifth or sixth day it has become loaded with active organisms: much more so than is the ordinary vaginal secretion. It is for this reason that he advises that good retraction and contractions be promptly secured and maintained, to prevent infection. And, *ipso facto*, it may be that the practically universal sub-involution that accompanies puerperal infection, is a cause rather than an effect as hitherto considered. In this connection the compression and stasis, that as Cragin explains usually affects the right ureter, at least to a greater degree, would account for the undoubted greater frequency of right pyelitis, at least at first.

#### THE CLINICAL COURSE OF THE DISEASE

This may follow a mild or a severe form, differing only in the degree of severity of the symptoms and their constitutional effects. In the mild form these may be so slight as to escape attention entirely, and indeed it should be here noticed that it is entirely within the bounds of possibility that a certain number of the cases that are noticed in the puerperium may have had their origin earlier; though I think that the recent findings of Polak would point largely to the contrary.

The cardinal symptoms are pain in the lumbar region (usually the right), chills and a rising temperature accompanied by an increase in the pulse rate. But there are some interesting things about the way these symptoms may appear, and behave, after making their appearance. In the first place pain may be late in making its appearance, not occurring until after several days of chills and fever. This is very misleading, especially as the clinical findings of pus and pelvic kidney cells occurring in an acid urine are

not apt to be present for several days, frequently not until after marked diminution or disappearance even of a lumbar pain that has lasted for several days. The pain may diminish markedly, or even disappear, and then recur again in a very severe form. All this depends of course upon distention of the kidney pelvis, and drainage of the same through the ureter and bladder.

This *pain* and tenderness in pyelitis, when present, is characteristic and practically pathognomonic. One or two fingers passed beneath the patient lying on her back, and upward pressure made in the costo-vertebral angle, will often literally lift the patient in the horizontal position she is occupying.

The *chills* that accompany the rise in temperature are apt to be severe in proportion to the temperature and the appearance of the patient, and are generally followed by profuse sweating; the patients literally soak the bed. The rise of temperature usually occurs in the afternoon or evening, though not always. It may occur irregularly, in severe cases it may occur twice a day, each rise accompanied by a chill, and in two cases I have seen the temperature and chill recur regularly, but an hour later every day; like the old malaria cases. In these the *Plasmodium Malariae* could not be found though carefully searched for, and in each subsequent clinical findings in the urine made the diagnosis of pyelitis undoubted.

The temperature averages around 103°-104½° for the highest points, and follows the usual up and down characteristics of pus fever. These patients often look pretty sick, and it is a comfort to know that the trouble is extra-genital, and that the outlook is good. In between the rises in temperature and chills the patients may appear normal in appearance and differ here very markedly from the endocarditis patients in that they are usually cheerful and will eat, and are not fretful, querulous and faultfinding.

The onset is usually about the third to the fifth day, but may, on account of the complex etiology likely, occur any time in the first ten days or so. It usually runs its course in one to three weeks, or if it continues longer than this has usually run over into a pyelo-nephrosis or multiple abscess of the parenchyma of the kidney. Of course if the second kidney becomes involved, the disease is prolonged until it has run its course here as well, just as we are apt to have happen in the phlegmasia alba dolens cases.

#### DIAGNOSIS

The diagnosis is made from the characteristic pain and tenderness in the costo-vertebral angle on one or both sides, and the finding of large amounts of pus and kidney pelvis cells in an acid urine. The urine is acid, with a specific gravity of 1,008 to 1,012, and at first may contain only a trace of albumin and a few casts, to be soon followed by pus cells, kidney epithelium

and bacteria. The pus cells, as stated above are usually more abundant as pain and temperature subside. The urine after filtration often shows no albumin. The urine often contains pus cells for a month or more after the symptoms subside.

It is because cystitis and consequent urinary troubles are practically always secondary, that the ascending form of infection has been so largely discarded as an etiological factor. But as has been pointed out the pain and tenderness may not appear until after several days of temperature and chills, and the finding of the characteristic kidney cells in the urine may be delayed also, as well as requiring a sort of microscopical examination some of us do not care to give.

Of course abdominal complications must be excluded. Tube and ovarian inflammations have their own areas of tenderness as well as other characteristics of temperature and so forth. Appendicitis usually gives some definite gastrointestinal symptoms. The temperature is usually not so high, and especially the leucocytosis is usually much more marked for appendicitis. The tenderness over McBurney's point is not to be so greatly relied upon, the abdominal wall of a recently delivered woman is apt to have tender spots in it, from various causes. The displacement of the pelvic viscera, tubes, ovaries, etc., by the growth of the uterus in pregnancy has not yet been corrected by complete involution. And if infection is arising by way the retroperitoneal lymphatics, this might cause an area of tenderness on abdominal palpation that would be extremely misleading.

In the meantime we may as well be thinking about puerperal infection, for we can be very sure that some one else will.

#### TREATMENT

This divides itself naturally into medical and surgical treatment. The *medical treatment* is supportive and symptomatic in a general way. Fluids aid in elimination and drainage, and urotropin or hexamethylenamin in full dosage, 40 to 60 grains *per diem* seems to have here a real effect. Since the urine is acid, I have not found it necessary to combine it with the acid sodium phosphate. I have not had the brilliant results from ureteral catheterization that have blessed some of us, and also I have hesitated to subject these patients to this form of treatment that requires removal to a specially equipped room.

If the condition persists in severe form it runs over into pyelo-nephritis and as such may require operative removal of the kidney. If both kidneys should become thus affected the situation would indeed be grave.

As has been said ordinarily the condition runs its course in from one to three weeks, though pus

may be found in the urine for months following the subsidence of all other symptoms.

#### PROGNOSIS

So the prognosis may be said to be good providing multiple abscess of the kidney does not supervene, a relatively rare outcome. The tendency to a recurrence claimed by some would not seem to be borne out by the facts, though certainly a subsequent pregnancy should not be encouraged until the urine has been pus and bacteria free for a year, and when one does occur it should, needless to say, be very carefully controlled.

As to the frequency with which the complication appears, well statistics as you know mean but little—but I would only ask you to recall the history of appendicitis or duodenal ulcer. For the sake of completeness I will add that in one thousand combined private and clinical cases pyelitis in the puerperium has occurred twelve times, and in pregnancy seven times; of the twelve puerperal cases, two going on to multiple abscess and nephrectomy. Of these twelve all began as right sided, in two the left side subsequently became involved.

In closing I wish to say that I think there is a growing interest on the part of obstetricians in general towards this condition and a tendency to believe that there is more of it than has hitherto met the professional eye.

188 E. STATE ST.

---



---

#### PROPAGANDA FOR REFORM

*Afsal*—Afsal is being marketed by S. Lewis Summers. It is stated to be "diacetyl methylene disalicylic acid". The product was formerly marketed by the Organic Chemical Manufacturing Co. (S. Lewis Summers, president) as Urasol. Urasol was one of a number of the "Forma-Sol Compounds" marketed by the Organic Chemical Manufacturing Co. and stated to be compounds of methylene-disalicylic acid. Sollmann reported in 1908 in an investigation made for the Council on Pharmacy and Chemistry that he had been unable to confirm the claims that were made for these compounds. A subsequent examination confirmed Sollmann's findings. (Jour. A. M. A., Sept. 7, 1922, p. 1264).

*Clearo*—This was a "patent medicine" sold by C. E. McCuiston, Dallas, Texas, doing business as "The Clearo Co.," as a cure for tuberculosis, asthma, bronchitis, hayfever, serious throat and lung troubles. An investigation by the post office authorities led to the conclusion that the product was worthless for the purposes claimed and that the Clearo Co. was engaged in a scheme for obtaining money through the mails by means of fraud. The Clearo Co. has been denied the use of the mails. (Jour. A. M. A., Oct. 21, 1922, p. 1445).



# The Feeding of Infants Based On Recent Experience\*

By S. D. GIFFEN, M.D., Toledo

*Editor's Note.*—Dr. Giffen is convinced from an analysis of records that past performance has by no means achieved the possible efficiency of the modern breast, and that the fault has lain not in disinclination or a lack of nursing ability on the part of the mothers, but in our ignorance of the physiology of the secreting glands of the breast and of the art of breast feeding. Dr. Giffen also warns against too prolonged periods of starvation based on abnormal appearing stools, which not infrequently can only be brought back to normal by proper food. He discusses in detail all the varieties of artificial foods and methods of feeding and raises the question as to whether goat's milk is not a solution for many of the problems involved. He has also noted a very intimate relation between marasmus and sub-acute or chronic otitis.

**I**NFANT MORTALITY has been reduced by improving both maternal and dairy milk supplies, and also by state and private welfare work. But there are still many infants to be saved by intelligent feeding. Not that the problem of the feeding of infants has been fully solved, despite the earnest efforts of laboratory workers and clinicians alike, but knowledge of the subject is widening.

The feeding of most babies is, and will continue to be, directed by obstetricians or general practitioners. They, on the one hand have not the time or opportunity to work out new procedures or to try out newer formulas, but on the other hand are confused by the multiplicity of feeding schemes and some are prone to depend on half-remembered mixtures of a decade or two ago, or turn the whole feeding management over to the nurse, practical nurse, grandmother, or neighbors.

A practical experience with certain feeding problems and foods is herewith presented, with the hope that thought and discussion may be stimulated which may result in some good to the babies.

## BREAST FEEDING

In studying the problem as to the ability of the modern mother to nurse her infant, it was deemed worth while to run over office records for the past 18 months to see what the mothers had been doing in this respect, where the end results were known; and 344 case-records were analyzed as follows:—

Average time babies were fed solely from breast, 21 weeks. This included 20, or roughly 6 per cent. who nursed over one year, leaving 94 per cent. who averaged 17 weeks; 58, or 17 per cent. nursed from 8 months to 1 year, making 23 per cent. who continued for 8 months or longer, and leaving the balance, or 77 per cent. who averaged 12 weeks.

In none of these cases did the history elicit any of the reasons for this deplorable failure to give nature's food so often encountered some 10 or 20 years ago, such as inconvenience of nursing, social aspirations and aesthetic considerations. But there is disclosed a woeful ignorance

on the parts of mothers, nurses, and, with shame be it said, of some physicians as well as to the possibilities of the breast.

For example, 104 mothers, roughly 30 per cent. were allowed to wean their babies, in whole or for the most part, after 2-1/3 weeks trial. How often one hears the story that there was an abundance of milk at first but that it neither satisfied nor agreed with the baby, or, failed in a week or two. Or again, that there was no milk by the end of the 3rd or 4th day, so baby had to be put on a bottle.

If the laity, yes, and some obstetricians too, could be brought to realize that crying and "eating the hands", are merely evidences of discomfort, one of the forms of which is hunger, 'tis true, but which many times is caused by too frequent intake of food; that some breasts are slow in rounding into form, taking as long sometimes as 6 weeks and then functioning splendidly; that a single examination of an ounce or two of expressed breast milk rarely means anything at all; and finally that never is it more true that a "half-loaf is better than no bread" than in the matter of breast milk; then we would see less weaning in the first days or weeks, and, consequently less mad scrambling for the right bottle feeding and fewer cases of marasmus.

*The above analysis proves conclusively that past performance has not by any means achieved the possible efficiency of the modern breast, and, that the fault has lain not in disinclination or a lack of nursing ability on the part of the mothers, but in our ignorance of the physiology of the secreting glands of the breast and of the art of breast-feeding.*

Sedgewick<sup>1</sup>, and his co-workers have added much to our knowledge by proving that the breast tends to meet proper demands made upon it; that by making sure the breast is completely emptied, at regular intervals, its secretion is kept up (manual expression was found the best way of emptying and stimulating the breast); that cases with abundance of milk at first but losing it in a week or a month are due, in most cases, to the fact that breasts have not been regularly emptied. His almost 100 per cent. successful record has not been possible in my experience, probably due to lack of trained workers to teach the proper technique of breast expres-

\*Read before the Section on Obstetrics and Pediatrics of the Ohio State Medical Association, during the Seventy-Sixth Annual Meeting, at Cincinnati, May 2-4, 1922.

sion, but many infants today are still wholly or in part on the breast who would have been on the bottle in former times.

The *proper nursing interval* has been found to be an individual problem (as is always the case in feeding infants) depending upon the individual mother and infant and the degree of successful team-work between them. When there is an abundance of milk and a normally developed and hungry baby, the 4 hour interval, 5 feeds in 24 hours, works beautifully. But if the infant cannot, or for some reason will not, take a sufficient amount, or, if the breast fails to supply it (both determined by weighing baby before and after nursing), it is obvious why the infant does not thrive on the 4 hour interval, but may if fed oftener. It has been years since I have found it necessary to feed as often as every 2 hours, but quite often 3 hour intervals, and, at times, nursing both breasts at each feeding, for a variable time have given best results.

*Artificial feeds after nursing*, when needed, have been more successful than when given as substitutes for two or more breast feedings, due, probably, to the stimulating effect on the breast glands of regular and not too infrequent nursings. Difficulties of two kinds have been encountered in using these complemental feedings:

(1) Uncertainty of amount to feed, readily determined when accurate before and after nursing weighings can be made, but where dependable scales are not available, amount must be found by trial, which means the quantity the infant will take and keep down.

(2) The tendency of some babies to forsake the breast for the bottle from which they more readily and easily satisfy their appetites. Hence it has been found best to be in no hurry to offer additional food to the new-born unless there is a marked loss of weight, over the usual initial loss, and to hold off from 3 to 6 weeks where we have a slight gain, since it at times takes that long for the child and the mother to become adapted to each other, when satisfactory gain occurs. However, normal babies, who show more than the usual losses the first few days post-partum, must be given water, about 1 ounce every 2 hours, and if loss continues another breast or artificial food must be temporarily given.

#### WEANING

At, or soon after, the end of the third month, normal healthy infants have been prepared for weaning by starting one artificial feeding a day, usually in place of the mid-afternoon nursing, so as to more equally distribute the stimulation of the breasts. The advantages of this procedure are briefly as follows: gradual adaptation to a foreign food when all is going well; should anything happen to the mother or her milk, necessitating sudden weaning, and, at all events, when natural time comes to wean, baby has become accustomed to taking and handling arti-

ficial food, and thus the struggle that all of us can recall, to get the baby to take anything but the breast, when nothing else has been offered until the later months, can be avoided; and, lastly the freedom of 6 to 8 hours makes it possible for the mother to get relaxation and diversion and results in her being able to nurse more successfully and for a greater number of months. Babies have been weaned gradually from the 10th to 12th month, regardless of the time of year, since clean milk and reasonable asepsis in the handling of infants has robbed the second summer of most of its terrors, and, the dangers from inanition usually manifest in infants nursed over one year, are greater than from artificial food.

#### ARTIFICIAL FEEDING

In healthy normal infants simple dilutions of whole milk, using some cereal water and adding sugar, have in general proved most satisfactory. Cream or top-milk mixtures have occasionally been necessary to secure proper gain, and in other cases of impaired fat tolerance completely or partially skimmed milk mixtures have been indicated.

On the principle that a baby cannot derive more growth and energy from a formula than exists in it, a minimum of 1½ oz. of milk protein and 40 calories per pound weight have been fed. Orange juice or strained canned tomato juice (which acts just as well, and at times better) has been started at 2 to 3 months in daily doses of ½ to 2 teaspoons and increased to 2 tablespoons at 5 or 6 months.

Green vegetables cooked until very soft and mashed through a sieve, 1 teaspoon to 2 tablespoons, have been regularly started at 5 to 6 months, at times earlier. Well cooked cereals, 1 to 2 tablespoons, served with a little sugar and part of the bottle poured over it, have been begun at 7 or 8 months. Soon thereafter, a piece of Zwieback or hard toast crushed and served as the cereal, has been given. Aside from the food-value of these semi-solid foods is the great advantage of training the infant, before they are set in their ways, to take food from a spoon, thus avoiding the frequent endless worry and trouble later on by the children refusing anything that does not come from their bottles, if nothing is offered until 1 year of age.

Unfortunately some infants are born with abnormal digestions and many others acquire them, so various special formulas have been used.

*Lactic Acid Milk (Artificial Butter-milk):*—Following Marriott's report of success with whole lactic acid milk, a series of some 20 hard-feeding cases at the Maternity and Children's Hospital, Toledo, were placed on this feeding with corn syrup. A large majority of them did remarkably well. Since then recourse has been had to this formula quite often and with great success in suitable cases.

*Fat-free lactic acid milk* has proved extremely valuable in cases of fermentative diarrhoea and carbo-hydrate indigestion, as, for example, upsets due to various sweetened condensed milks and sweetened powdered milks. Severe cases were started on dilutions of from 1 to 3, to equal parts, with water and sweetened with saccharin, and strength rapidly increased and sugar cautiously added, as improvement occurred.

*May I digress for a moment to warn against too prolonged periods of starvation based on abnormal appearing stools. A starvation stool should be recognized for what it is, as it is very abnormal in appearance—often a dark greenish, slimy, flecked and stringy mass. How often do we see little sufferers kept for days, yes, weeks on end, dosed with medicines, waiting for the stools to return to normal, when proper food only can bring this about.*

*Albumin Milk.*—This milk has been of great value in cases of acute sugar indigestion, some acute fat indigestions, and in some mixed types difficult to differentiate sharply, such as indigestion with fermentation, fermentative diarrhoea and infectious diarrhoea. One great advantage of *albumin* milk in these conditions is that it can be fed (diluted) almost from the beginning of the attack thus eliminating the old-time prolonged starvation periods, when babies were kept for days and weeks on barley water, rice water, or albumin water, which contributed largely to the fatal outcome in a considerable number of cases.

Practically the method followed has been that employed when beginning simple dilutions, starting with 1/4 or 1/3 albumin milk, diluting with water, and sweetening with saccharin, except that the food has been strengthened more rapidly. Dextri-maltose No. 1 is added as soon as possible to reinforce the food value as albumin milk alone in full strength values but 13 Calories per ounce. The preparation used for the most part has been the powdered albumin milk, which proved more uniform than any prepared outside of a regular milk laboratory, and is available for dispensary and private practice.

Powdered casein such as Larosan and Casec have also been successfully used.

*Dry Milk.*—Only the partially skimmed preparation, "Dryco", has been used. It has the advantage over other prepared foods such as Malted Milk, Nestle's Food, sweetened Condensed Milk, Allenbury's Food, etc., in that nothing has been added to the original milk, leaving us free to add that form and amount of carbohydrate indicated in the particular case. Also, it is ethical as no directions come with the can. Each level tablespoon figures 16 calories so 2½ to 3 tablespoons per pound weight, per day, are required to furnish 40 to 48 calories per pound. One level tablespoon to each ounce of diluent makes practically a sterile whole milk minus a little over one-half of its fat. I have not used it stronger

than this and have generally found it better to keep the number of tablespoons one less than the number of ounces of diluent as a maximum strength, as 3 tablespoons to 4 oz., 4 tablespoons to 5 oz., etc. In the stronger mixtures instead of diluting with plain water, various cereal gruels have rendered them more digestible and afforded one means of combating constipation which is apt to occur on this feeding. Dextri-maltose has been the sugar most frequently added, though occasionally cane sugar, or milk sugar, or a combination of sugars has been found necessary.

Many infants of all ages who did not thrive on ordinary milk mixtures were fed on dry milk; most of them did well, some exceedingly well, and some poorly. Efforts have always been made to put these infants on fresh cow's milk as soon as a satisfactory gain had occurred and usually with success. In some cases, however, an upset would follow each attempt so that some infants have practically been raised on this feeding, plus orange juice or tomato juice, vegetable mash, and cereals as with simple dilutions, and have developed normally. No scurvy developed, but a few cases of rickets occurred on Dryco, just as happens with all foods, even breast milk. Among other conditions benefitted were certain cases of vomiting; also of diarrhoea when albumin milk or lactic acid milk was not convenient or obtainable; where the purity of cow's milk was under suspicion, especially in hot weather; as complementary food for breast babies; and as a food for travelling.

Constipation, erythemato-macular and fine papulo-vesicular rashes and red buttocks have resulted in not a few instances. The use of Dextri-maltose No. 3, sodium bicarbonate 1 to 2 drams in day's feeds, calamine lotion for the rashes, protecting the buttocks with melted mutton tallow or exposing the buttocks, have been tried with varying success.

*Evaporated Milk.*—This product has proved valuable in the tropics where good fresh milk was not to be had. It has occasionally served well within the past year as a temporary feeding in difficult cases and two babies, who had been unsuccessfully tried on most of the other foods, did very well indeed over several months, until they became able to take other food. At various intervals attempts were made to feed fresh milk but upsets resulted, although the percentages of evaporated milk were paralleled and formula boiled 20 minutes to 1 hour. The average composition of evaporated milk is: fat 9%, carbohydrate 10%, proteid 7%, so that dilutions used, from 1 to 4 to 1 to 2, had a composition of approximately from fat 1.8%, carbohydrate 2%, proteid 1.4% (calories 11 per oz.) to fat 3%, carbohydrate 3.3%, proteid 2.6% (calories 18 per oz.), sugar, being added as indicated up to 6 to 8%. The evaporated milks with sugar added, as you can see, come much nearer meeting growth and nutrition needs than the popular

brand of sweetened condensed milk, which averages about fat 9%, carbohydrate 54%, proteid 7%, and in order to avoid excess of sugar must be diluted at least 8 times, giving fat 1.1%, carbohydrate 6¾%, proteid 0.8%.

*Goat's Milk.*—Experience, beginning in Mexico 14 years ago, has convinced me of the great value of goat's milk for an infant deprived of mother's milk. Recent experience has been limited to two infants having an anaphylactic reaction to cow's milk, with perfect results in both cases.

The composition is quite similar to that of cow's milk, so similar dilutions were used. Had there been an associated marked fat intolerance the milk would have had to be put through a separator, since usually there is no cream line formed on goat's milk as the fat is in a state of finer emulsion.

Goat's milk has a large and important field of usefulness in the feeding of infants and young children. Since about 10 per cent. of raw non-certified milks contain living tubercle bacilli (goat's milk practically never) besides various pathogenic bacteria at times, and since the heating of milk may cause far-reaching deficiency diseases, as pointed out by Mc. Carrison,<sup>3</sup> would it not be ideal, as well as economically practicable to feed infants and young children in the country and small towns on goat's milk? It seems to me to be the only way to secure a safe and wholly nutritious milk in those localities.<sup>4</sup>

*Cereal Gruels.*—Such as have been described by Sauer,<sup>5</sup> Porter,<sup>6</sup> and Mixell,<sup>7</sup> with varied modifications, have been used with excellent success in certain types of cases. The two main indications noted were persistent vomiting, including pylorospasm and marked malnutrition or failure to gain on ordinary milk mixtures. For the control of vomiting, nothing in my experience has been so nearly uniformly successful as the thick cereal feedings. Stomach washings were rarely necessary, where indicated before, and several cases of pylorospasm have recovered on thick cereal gruel. Two such cases were rebellious, dragging along, better then worse, until atropin, as advised by Kaiser,<sup>8</sup> was given in conjunction and vomiting ceased. In marked cases of pylorospasm, especially in the early weeks, it was found best to start with a gruel made simply from farina and water, cooked down to a thick paste, which is fed from a spoon or Breck feeder, milk and sugar being added gradually, as indicated. I venture the opinion that if more vomiting infants were treated early in this way, there would be fewer operations for pyloric stenosis. As to the second indication, babies who are not gaining or who are markedly under weight, but have no grave parenteral infection, if they are able to take this food, gain well, for example:—

Age Started	Time Continued	Gain
2 mos.	28 Days	26 oz.
2 mos.	7 Days	10 oz.
2 mos.	23 Days	32 oz.

2½ mos.	19 Days	33 oz.
3 mos.	10 Days	10 oz.
3 mos.	7 Days	14 oz.
3 mos.	60 Days	52 oz.
3½ mos.	105 Days	92 oz.
4 mos.	4 Days	7 oz.
4 mos.	73 Days	72 oz.
4 mos.	5 Days	8 oz.
4 mos.	120 Days	137 oz.
5 mos.	19 Days	16 oz.
9 mos.	30 Days	32 oz.
10 mos.	42 Days	37 oz.
14 mos.	60 Days	80 oz.

Fruit juices and vegetable mash were given in conjunction as described under simple dilutions. Besides the two types of cases just mentioned, thick cereal gruels have acted well in some cases of colic in nurslings, when given ½ oz. to 1 oz. before the breast, and also to complement an insufficient breast, or as a supplementary feed during gradual weaning.

*Preparation.*—Farina was used for the most part, but also barley flour, oat flour and rye flour were employed, in like amounts. For the very thick gruels one level tablespoon of the cereal for every 5 ounces of milk or water, called for in the formula, was used. The mixture is boiled over the stove, for 20 minutes (stirring to prevent scorching) and then for 1 hour in a double boiler, boiling water being added as needed to replace loss by evaporation. This preliminary boiling over the flame for 20 minutes is of great importance as demonstrated by Quilligan who found microscopically that the cereal starch granules are more completely and uniformly ruptured after this than after 3 hours in a double boiler. Most often skimmed milk, alone or partly diluted with water, is used at the beginning, and, if babe stays on this food any considerable time, the milk used is gradually less and less completely skimmed. It has been found better to add the sugar at the end of cooking, as prolonged boiling tends to change sugar into caramel.

*Sample Formula (Mixell)*

- Skimmed Milk..... 30 oz.
- Farina..... 5 to 6 level tablepoons.
- Dextri-maltose..... 2 level tablepoons.
- Cane Sugar..... 2 level tablepoons.

This formula has been satisfactory in many cases but such modifications as using part water and part skimmed milk in varying proportions (generally best when starting young infants), changing the cereal, and varying the sugars have been indicated quite often. Constipation occurs often which at times yields to substituting rye flour for a part or all of the farina (suggested by Porter), or increasing Dextri-maltose No. 3 while reducing the cane sugar. Fermentation and distention is another source of trouble at times. Mixing the guel with lactic acid milk, as suggested by Payne, has helped in some cases; milk of magnesia, mineral oil, colonic flushings, or the addition of vegetable mash and fruit juices have benefitted others. There still remain, however, a considerable number of cases unrelieved and who have to be taken off this feeding. Diarrhoea

has rarely occurred. On the contrary, some cases of infectious diarrhoea, with mucus and blood in the stools, which was epidemic with us last Fall, did extremely well on thick cereal gruel.

Water-logging of the tissues rarely occurred and then in cases suffering from infections outside of the digestive tract. Scurvy has not occurred, but a few cases of rickets began to develop in institutional babies deprived of direct sun rays.

While in some cases on this feeding unchanged starch can be demonstrated by iodine, most of them show no other abnormality.

*Czerny Kleinschmidt Butter Flour Mixture.*—This food was used in cases that were upset by the fat in ordinary milk mixtures and in some markedly underweight infants. The formula used (modification suggested by Griffith) was:

Flour .....	20 gms.	3½ tablespoons.
Butter .....	20 gms.	1½ tablespoons.
Cane sugar....	15 gms.	1 tbsp and 1 teaspoon.
Water .....	300 cc.	10 oz.

The flour is first well browned in a skillet, as in making gravy; butter is then added and stirred until all odor of volatile acid is driven off (3 to 5 minutes); the water is then added and the mixture cooked for 5 minutes more. The sugar is then added. This is called the butter-flour stock and contains fat 5%, carbohydrate 10%, proteid 0.5%, and values 26.6 calories per oz. This butter-flour stock is mixed with milk as follows:

For babe under three kilos, butter-flour stock 2/3, milk 1/3, and over 3 kilos, butter-flour stock 3/5, milk 2/5. This feeding is designed to correct indigestion caused by the fat of cow's milk, based on the fact that cow's milk fat contains 5 times the amount of volatile acids found in mother's milk fat. These are the volatile acids driven off by heat in preparation of the food. We have not used this feeding extensively but in selected cases there was prompt and steady gain of 1 to 2 oz. a day, bowels regular 1 to 4 times daily, and there was no distention. In those in whom it did not agree vomiting and sometimes diarrhoea occurred promptly. It is not a food for acute indigestion. Griffith reports particularly good results in premature infants and in cases of marasmus under 3 months, as well as 2 cases of pylorospasm that did well.

#### PARENTERAL INFECTIONS

Those of us who are in the habit of making rounds in the wards and scanning weight charts, are familiar with the sudden cliff-like descent of the weight-line when an infant picks up an acute infection, such as a rhinitis, rhino-pharyngitis, tonsillitis, otitis, bronchitis, pneumonia, pyoderma, sepsis or umbilical infection of the newborn, or any of the acute contagious diseases. This fall in weight may precede the external

signs and symptoms of the disease. Again we are familiar with the effect on digestion and nutrition of certain chronic infections, such as tuberculosis and syphilis, and of constitutional diseases such as rickets, scurvy, and the exudative diathesis, as causing loss in weight or failure to gain. Hence, every infant that we are called upon to feed should be thoroughly examined, including the ears and urine, as well as a detailed history taken of previous diseases and feedings, before writing out a formula.

In a large number of autopsies performed on athreptic infants at Ancon Hospital, Panama Canal Zone, Dr. C. H. Clark found pus in the ears of over 90 per cent. M. Renaud<sup>9</sup> states that in 39 autopsies on athreptic infants he found only 2 with normal ears and expresses the opinion that subacute or chronic otitis is one of the causes of marasmus.

In several hard feeding cases, recently under the writer's care, satisfactory gain in weight followed paracentesis of ears that had given no sign of acute inflammation but were found to contain pus. Likewise, in many cases, usually girl babies, no food agreed until pyuria had been recognized and treated.

We should bear in mind in feeding infants, that the entire organism must be taken into consideration, then, as Jacobi has said, "Mix our formulas with brains."

#### REFERENCES

1. Sedgwick, J. P. A.: Preliminary Report of the Study of Breast Feeding in Minneapolis. *Am. J. Dis. Child.*, 1921, Vol. 21, pp. 455-464.
2. Marriot: Artificial Feeding of Athreptic Infants. *Jour. A. M. A.*, October 8, 1919.
3. Mc. Carrison: Studies in Deficiency Diseases.
4. Calvin: Goat's Milk. *Arch. Ped.*, September, 1921.
5. Sauer: *Arch. Ped.*, July, 1918.
6. Porter: *Arch. Ped.*, July, 1919.
7. Mixell: *Arch. Ped.*, August, 1920.
8. Kaiser: *N. Y. Med. Jour.*, December 18, 1920.
9. Renaud, M.: *Bulletins de la Société Médicale des Hopitaux*, Paris, October 21, 1921.

#### NEW AND NONOFFICIAL REMEDIES

Tuberculin (Old) and Control for the Pirquet Test.—A preparation of tuberculin-Koch (see New and Nonofficial Remedies, p. 293) marketed in packages containing three sealed glass tubes of tuberculin, each tube containing tuberculin sufficient for one test and three tubes of control material. Parke, Davis & Co.

Tuberculin Ointment for the Moro Test.—A preparation of tuberculin-Koch (see New and Nonofficial Remedies, 1922, p. 293) marketed in collapsible tubes containing 2 Gm. of an ointment consisting of 520 per cent. of tuberculin-Koch and 50 per cent. of anhydrous wool fat. Parke, Davis and Co., Detroit. (*Jour. A. M. A.*, September 9, 1922, p. 897).

Novocain Solution 1 Per Cent. Ampules.—Each contains novocain, 0.06 Gm. (1 grain), sodium chloride, 0.036 Gm. (½ grain), and distilled water, 6 cc. (90 minims). H. A. Metz Laboratories, New York.

# Treatment of Disease of the Accessory Nasal Sinuses\*

By HAROLD I. LILLIE, M.D., Rochester, Minn.

*Editor's Note.*—Dr. Lillie does not consider the prognosis in disease of the accessory sinuses to be hopeless. Patients may need to be under observation for a considerable length of time; but careful attention to diagnostic measures and preoperative observation will increase successful management. Individualization of each case is preferable to routine procedures and well chosen conservative surgical measures will effect relief in the majority of cases. Radical surgery should be reserved for obstinate cases and meddlesome postoperative measures defeat the purpose of well directed surgery and too frequent lavage delays resolution. Pathologic study of the disease processes will greatly benefit clinical judgment.

**A**NATOMICAL VARIATIONS and disease conditions of the accessory nasal sinuses were recognized by the very earliest observers. For those who are interested in a rather detailed description of the historical facts, Wright's "*History of Laryngology and Rhinology*" will prove interesting and profitable reading. The function of the accessory sinuses has been largely a matter of conjecture and the past and present day attitude was well summed up by Veslingius, who said, "There is much doubt as to their use. Each one forms his own conjectures." Schneider, as early as 1655, revolutionized ideas with regard to the function of the nose by his histologic description of the mucous membrane. The early surgeons were familiar with wounds of the accessory sinuses, but it is apparent that they had little knowledge of the disease processes. Highmore mentions a case of suppurative disease of the antrum in a woman who had carious teeth in the upper jaw. About this time the Cooper operation was devised for the treatment of suppurative conditions of the antrum. In 1765, Jourdain, a dentist of Paris, first suggested intranasal drainage for empyema of the maxillary sinus. In the latter part of the eighteenth century Callisen advised trephination on the frontal and maxillary sinuses.

Information gained by the experience of early observers gradually accumulated and the management of disease of the accessory sinuses became better directed. It has only been in the last half century, however, that our present knowledge has been acquired. Disease of the sinuses offers a fertile field for much earnest, painstaking effort, and is probably the most interesting problem before the present day ear, nose, and throat specialist. It is probably true that anyone interested in diseases of the accessory sinuses believes our present grasp of the subject is quite elementary. The pendulum of enthusiasm seems to have swung from destructive radical surgical measures to more conservative, well directed procedures, with far better results from the patient's standpoint. The era of practice of intranasal surgery from a physiologic, rather

than from a purely anatomical viewpoint, seems to be at hand. Stein has said, "It is comparatively easy for some operators to remove a part, or even all of the interior of a nose, but a difficult matter to do so and leave it in a condition of physiologic effectiveness. Many an operator has in mind only the 'drainage and ventilation' idea to the exclusion of a normal lining membrane and, by his operative propensities, substitutes new symptoms for the ones complained of first. A more general conservation of the soft parts will lead to better ultimate results." Hajek has said that minor operations will effect a cure in 95 per cent. of the chronic cases. Hurd has said, "The more familiar we are with the anatomy of the sinus, the more can we do through the nose, with less destruction of the normal tissue." Stucky has said, "I learned after many disappointments that if I treated my patient half as long and half as carefully before operating as I did after operating, frequently operation was not needed." He further warned against the great harm that may result from overtreating the patient postoperatively. Skillern has warned against the ill effect of misdirected treatment of the ethmoid labyrinth. Mithoefer has given many logical reasons for failures following operative procedures. Much has recently been written on the effects of involvement of the posterior ethmoid and sphenoid sinuses in relation to certain conditions of the eye. Cushing has warned, in no indefinite way, against misdirected interference from the rhinologist's standpoint.

## PRACTICAL CLASSIFICATION OF THE DISEASES OF THE ACCESSORY SINUSES

For practical purposes, diseases of the accessory sinuses may be divided into two large groups, *suppurative*, and *hyperplastic*. Patients in whom these two conditions coexist have empirically been classed in the "combined group". There is little doubt that another group is encountered in patients with marked hypertrophic rhinitis, with a tendency to hypersecretion; this might be called the "catarrhal group", but so far as this condition is not primarily in the accessory sinuses, I believe it should be considered under hypertrophic rhinitis. In general, patients with pure suppurative processes will respond to the more conservative type of ventilation and drainage; those with the hyperplastic

\*Annual address delivered before the Eye, Ear, Nose and Throat Section of the Ohio State Medical Association, in opening the Symposium on Nasal Accessory Sinuses, during the Seventy-Sixth Annual Meeting, at Cincinnati, May 2-4, 1922. From the Section on Otolaryngology and Rhinology of the Mayo Clinic.

or combined type of disease need more radical measures to accomplish satisfactory results.

#### ACCESSORY SINUSES IN RELATION TO FOCAL INFECTION

The rhinologist is often confronted with the problem of advising the internist with regard to the probabilities of involvement of the accessory sinuses in cases of focal infection origin. The tonsils, in which infection may be concealed and absorbed, and the teeth, with periapical abscesses, which have no opportunity for resolution other than absorption are the usual sites of focal infection rather than the accessory sinuses in which open drainage occurs. Although in many patients draining accessory sinuses have apparently been causative factors in other disease processes, this does not occur so commonly as in the tonsils and teeth. Patients with nephritis, arthritis, bronchiectasis, gastro-intestinal disturbances, bronchial asthma, and disease of the eye, and so forth, have been treated by all rhinologists. Dean has shown the effect that paranasal sinus disease may have in children. Such excellent results have often followed well directed measures that there has been a tendency to investigate more or less radically, the accessory sinuses in patients without definite evidence. Hence some patients have not been relieved and new symptoms have been added to the original ones. Fortunately, this tendency to exploration is becoming less general and, the pendulum of enthusiasm is swinging more toward conservatism.

The use of statistics as a basis for advising surgical measures without careful study of each patient as a distinct problem will not be productive of many successes. Accessory sinuses vary widely and must be managed individually and not in groups. This has lead operators to adopt a certain reported technique and apply it to all cases encountered. Patients with marked chronic disease of an accessory sinus should be informed that considerable time may be necessary in order to effect relief. Much time is gained by attention to preoperative measures.

Some physicians still depend on transillumination and roentgenograms for diagnosis in disease of the accessory sinuses. Such aids, particularly the roentgenogram, are useful adjuncts, which indicate the type of skull, the type of sinus, anatomical variations, size, and often the type of disease. No doubt all rhinologists have observed instances of negative roentgenograms in the presence of definitely positive clinical findings. The converse is also true. A diagnosis, therefore, is not complete, unless the clinical findings and the information to be derived from the roentgen-ray examination have been taken into consideration. Transillumination is notoriously untrustworthy. It commonly happens that a diagnosis can be made after one examination, particularly in frank types of in-

volvement of one or more sinuses, such as the maxillary and frontal sinuses. It may be necessary to study another type of case over a long period before any definite conclusion can be reached with regard to the type and extent of involvement. The symptoms are not particularly trustworthy in establishing a diagnosis of disease of any one sinus, although symptoms may give a clue to the presence of such disease.

I believe that before any operative interference is instituted by a rhinologist, he should become thoroughly acquainted with the particular nose in question and should know exactly the measures necessary to accomplish a definite result. He should not operate unless he has carefully studied the case himself. I have done little nibbling operations at times on a patient observed over a period of several months, and seen at certain intervals. I noted the change that had taken place, and then employed some other conservative measures, with the final result that the patient was in excellent condition at the completion of the observation period, and had not had any type of true conservative operation.

#### SURGICAL PROCEDURES IN GENERAL

All rhinologists recognize the marked tendency for spontaneous resolution in acute suppurative processes in the accessory sinuses and realize that surgical procedures are seldom indicated and are dangerous in acute processes. Many operative procedures have been advised for various types of conditions, but each operator uses a technique and procedure to which he is best adapted. In general, the maxillary, frontal, and sphenoid sinuses respond well to properly directed intranasal operative procedures. This is due to anatomic reasons or normal shaped sinuses. Failures occur largely, as Mithoefer has said, because of anatomic causes, or because the case has not been sufficiently individualized in the mind of the operator and, hence, the surgical procedure for that particular patient has not been well chosen.

Primary external operations are rarely employed in disease of the maxillary or frontal sinuses. Failures occur after operations on the maxillary sinus because the intranasal procedure does not insure patency to the opening in the lateral nasal wall, or the type of sinus dealt with has not been recognized. Patency results from the careful removal of the bony spicules above, enlarging the opening forward with suitable bone biting forceps, and taking down the lower part of the wall, as near as possible to the floor of the nose, by means of a hand burr, right or left cutting, as the case may require. It has been my experience that it is not necessary to sacrifice any part of the inferior turbinate but infraction upwards will give ample space. This operation is preferred to the so-called preturbinal method. I cannot agree with Skillern in believing that the opening should not remain

after the disease is apparently cured. The frontal sinus responds more kindly after the fronto-ethmoid cells (if they exist in the agger nasi) are flattened to the lateral wall with a suitable biting forceps and a burr. The naso-frontal duct can be entered more readily with a Freer frontal sinus curette and enlarged with a forward-cutting rasp. Care must be taken to remove all shreds of membrane and to smooth the bony spicules to as flat a surface as possible. I find a hand burr most suitable for this purpose. It is not often necessary to sacrifice any part of the middle turbinate, but it may be necessary to do so in order to see sufficiently well, the anterior wall of the sphenoid sinus. After the natural ostium has been enlarged, with powerful bone-cutting forceps, the anterior wall can practically be removed, if necessary.

From the surgical standpoint I find operations on the ethmoid labyrinth most unsatisfactory. Operations have been described for removal of the entire ethmoid labyrinth, but I have never felt that this has been accomplished satisfactorily. In case of ethmoid involvement I prefer to use very conservative measures, opening perhaps only a few cells at a time and waiting to see what the procedure accomplishes.

#### POSTOPERATIVE COURSE

There is little question but what too much postoperative treatment has defeated the purpose of well directed operative procedures. If the operative field is left largely undisturbed for several days following interference, the results seem to be better. Since the discontinuation of daily lavage the postoperative course has been greatly shortened in our cases. The water-logged appearance of the membrane is not observed so often and the amount of discharge is greatly lessened. Mechanical means of cleansing the nose by the use of cannula suction has seemed preferable, as there is less trauma and less reaction. This is followed by drying with air. We choose to call this method of postoperative treatment "scientific neglect." It has been our experience that patients who are treated daily postoperatively do not react so well as those treated every other day. Moreover, patients on whom instruments have been used and particular care has been taken to remove every small amount of crusting and secretion, have not done so well as those who have been allowed to go without such interference. In other words, a chance has been given in the latter cases for the nose to care for itself.

Efforts on the part of all operators to study pathologically the tissue and bone removed will, in a large measure, be the great factor in placing the management of disease conditions of the nasal accessory sinuses on a firm scientific basis. The disease conditions of the mastoid cells and the nasal accessory sinuses simulate each other closely. Mastoid disease processes have been

carefully studied because the part is accessible, consequently the treatment is well directed. If the mucous membrane within the middle ear and mastoid alone is involved one does not immediately institute operative interference, but attempts to remove the causal factors. The same is true with the involvement of the membrane in the sinuses. If the periosteum and bone are involved in the disease process, for example, if there is caries, necrosis or porosis, it is at once evident that more radical procedures will be necessary to eradicate the disease. Clinical judgment will cause the proper surgical interference to be chosen.

#### CONCLUSIONS

1. The prognosis in disease of the accessory sinuses is not hopeless.
2. Patients may need to be under observation for a considerable length of time.
3. Careful attention to diagnostic measures and careful preoperative observation will increase successful management.
4. Individualization of each case is preferable to routine procedures.
5. Well chosen conservative surgical measures will effect relief in the majority of cases.
6. Radical surgical procedures should be reserved for obstinate cases.
7. Meddlesome postoperative measures defeat the purpose of well directed surgical procedures.
8. Postoperative lavage employed too frequently, delays resolution.
9. Pathologic study of the disease processes will greatly benefit clinical judgment.

#### BIBLIOGRAPHY

1. Callisen: Quoted by Wright, p. 174.
2. Cushing, H.: Accessory Sinus Disease and Choked Disk. Jour. Am. Med. Assn., 1920, Vol. lxxv, pp. 236-237.
3. Hajek, M.: Pathologie und Therapie der entzündlichen Erkrankungen der Nebenhöhlen der Nase. Wien, Deuticke, 1915, pp. 495.
4. Highmore, N.: Quoted by Wright, p. 172.
5. Hurd, L. M.: Discussion. Jour. Am. Med. Assn., 1921, Vol. lxxvii, p. 1150.
6. Jourdain: Quoted by Wright, p. 173.
7. Mithoefer: Personal communication.
8. Schneider, C. V.: Liber de osse cribiformi, et sensu ac organo odoratus, et morbis ad utrumque spectantibus, de coryza, haemorrhagia narium, polypo, sternutatione, amissione odoratus. Wittebergoe, imp. heraed., D. T. Mevii and E. Schumacheri, 1655, pp. 531.
9. Skillern, R. H.: Personal communication.
10. Stein, O. J.: The Treatment of Intranasal and Accessory Sinus Diseases. Illinois Med. Jour., 1918, xxxiv, pp. 202-204.
11. Stucky, J. A.: Discussion. Jour. Am. Med. Assn., 1921, Vol. lxxvii, p. 1150.
12. Veslingius: Quoted by Wright, p. 168.
13. Wright, J.: A History of Laryngology and Rhinology. Philadelphia, Lea and Febiger, 1914, p. 357.

#### NEW BOOKS

*Physiology and Biochemistry in Modern Medicine*, by J. J. R. MacLeod, M. B., Professor of Physiology in the University of Toronto, Toronto, Canada; formerly Professor of Physiology in the Western Reserve University, Cleveland, Ohio, assisted by Roy G. Pearce, A. C. Redfield and N. B. Taylor, and by others. Fourth Edition. With 243 illustrations including 9 plates in colors. Price \$11.00. C. V. Mosby Company, St. Louis.



## Some Physical Intra-Nasal Conditions Favoring Involvement of Nasal Accessory Sinuses\*

By MYRON METZENBAUM, M.D., Cleveland

*Editor's Note.*—Physical conditions within the nares preventing sinus drainage or directing nasal secretions toward the sinus openings, or permitting nasal secretions to build up toward the sinuses, in the experience of Dr. Metzenbaum, favor infection of one or more of the nasal accessory sinuses. Some of the physical intra-nasal conditions favoring sinus infections are a high-up deviating or bulging septum, a normal middle turbinate close to the sinus wall, or a shelf-like inferior turbinate. Dr. Metzenbaum prefers fracturing either the middle or inferior turbinate to exenteration or the removal of any portion, as the former does not interfere with their function.

**A**N INFECTION may be carried (1) by the blood stream to a sinus. (2) The antrum is often directly infected by the root of a carious tooth. (3) Just as the forcing of nasal secretion up the Eustachian tube may be accompanied by an acute ear pain resulting in an otitis media, so the forcible blowing of the nose may be accompanied by an acute pain in the region of the frontal sinus or antrum, which pain may not entirely subside for two or three days or until there is a spontaneous flow of mucopurulent secretion from the infected sinus or until the sinus is opened. (4) During some of the recent epidemics, the mucous membranes of the lungs were especially involved and those of the head and sinuses remained relatively immune. While during the other more recent epidemics, the mucous membranes of the head and especially those of the sinuses, were involved so frequently, that it seemed as though the air, which ventilated the sinuses carried an infection directly to them.

### PHYSICAL FACTORS

There are many other ways in which the sinuses may become involved. There are also physical factors which favor sinus involvement; of the many physical factors I wish to point out four, which are generally recognized, but which are not often corrected, unless there are other conditions of the nares demanding surgical interference.

These physical intra-nasal conditions are factors directing the flow of the nasal secretions from the frontal cells toward the ethmoid cells and antrum, and from the antrum upward toward the ethmoids and frontal cells.

1. A superior, posterior deflection of the septum.
2. A bulla middle turbinate, usually accompanied by polypoid degeneration.
3. A middle turbinate, normal in size, close to the sinus wall.
4. A shelf-like inferior turbinate, lying across the nares.

1. The anterior, and all of the lower portion of the septum may be relatively straight, but

superiorly and posteriorly it may be convexed to such a degree, as to virtually hide the middle turbinate. After shrinking the nasal tissues with cocaine-adrenaline, the middle turbinate can be viewed only through a narrow slit. Such a deflection of the septum may force the middle turbinate quite firmly against the sinus wall, and while there may be no interference with the ventilation and the drainage of the sinuses, when the nose is in a normal condition, as soon as this individual develops a nasal cold, he will experience, in a lesser or greater degree, a sense of fullness, pressure or pain in the region of the frontal and ethmoid sinuses. This may result from an engorgement of the mucous membranes of the surrounding tissues and the middle turbinate and the pressure they exert upon each other. The bulging septum will restrict the engorged middle turbinate from expanding and will often force it so tightly against the sinus wall, that an application of cocaine-adrenaline will not cause sufficient shrinkage to permit the passage of a probe between the sinus wall and the middle turbinate, where the ostia of the frontal anterior and posterior ethmoids and antrum lie.

During periods of congestion and inflammation of the nares, this proximity of the middle turbinate, with the region of the sinus ostium must interfere with the normal ventilation and drainage of one or more of the sinuses. The markedly convex septum in the region of the middle turbinate, favors the retention of mucous in the middle meatus. This retained secretion by its pressure irritates the mucous membrane resulting in a hypertrophy. The mucous may be retained in such quantities as to fill the middle meatus and cover the ostium. The mucous is often of such consistency and in such quantities, as to give the appearance of polyps and can only be removed from the middle meatus after considerable effort.

A superior-posterior deflection of the septum in combination with deflections in other portions of the septum or when existing alone, should be corrected by a submucous resection operation.

2. The bullus middle turbinate is usually made up of one huge bulla cell, covered with a hypertrophied mucous membrane, portions of which have undergone polypoid degeneration. Such a

\*Read in a Symposium on Nasal Accessory Sinuses before the Eye, Ear, Nose and Throat Section of the Ohio State Medical Association, during the Seventy-Sixth Annual Meeting, May 2-4, 1922.

massive middle turbinate will crowd the middle meatus so tightly that cocaine-adrenaline is not effective in shrinking it sufficiently to establish but a slight separation between it and the sinus wall. After such a turbinate is exenterated there can often be seen a smooth, slightly concave surface, where it pressed against the sinus wall. Such a massive middle turbinate and those of lesser size, by their location, during periods of nasal congestion and colds interfere with the ventilation and drainage of one or several of the nasal accessory sinuses, as is evidenced by the fullness, sensitiveness and pain in the sinus region. The removal of large polyps is of marked benefit. The removal of the anterior polypoid portion establishes a better sinus ventilation and drainage but leaves part of the bulla cell. This remaining mass keeps up a rather foul secretion. Since the bulla polypoid degenerated middle turbinate has lost most of its function, the exenteration in its entirety removes all that is pathological from the sinus region.

3. A middle turbinate may be normal in size, may even be somewhat smaller than normal, but may lie so firmly against the sinus wall, that after the application of cocaine-adrenaline, a probe cannot be passed between the middle turbinate and the outer nasal wall. These patients have a rather constant sense of pressure and often neuralgic pains in the area of the ethmoid cells and during periods of nasal congestion and head colds this feeling of pressure is changed to one of pain. The very close proximity of such a middle turbinate to the sinuses will readily interfere with their normal ventilation and drainage. The treatment for this condition is simple. After cocaineization, any straight instrument or strong applicator is passed between the edge of the middle turbinate, or further back if possible, and the outer wall. The middle turbinate is then fractured a sixteenth of an inch toward the median line. A small piece of cotton or gauze is inserted between the turbinate and the outer wall and is removed next day. After this, the middle turbinate will never again lie as rigidly against the outer wall. This simple procedure often gives instant relief to chronic pressure pains. It insures thereafter better ventilation and drainage to the sinuses in this region, during periods of nasal congestion and colds.

4. The inferior turbinate may project from the antral wall toward the septum and form a shelf on which the mucus will build up in such quantities as to fill the middle meatus with a tenaceous mucus, difficult to remove and often resembling polyps. This tenaceous mucus may fill the middle meatus so completely, that it covers some of the sinus openings. The constant presence of the mucus, results in the hypertrophy of the inferior turbinate. The corrective procedure, here, is just the opposite to that applied to the rigid middle turbinate. After

cocainization the inferior turbinate is fractured against the antral wall and with gauze packing held there for 24 hours, after which time the inferior turbinate remains closer to the outer wall than before. The mucus, having no shelf to rest upon, will lessen in a relatively short time. This procedure of fracturing either middle or inferior turbinate is simple as compared to the exenteration or the removal of any portion and in no way does it interfere with their function. On the contrary, it is possible for them to functionate better than before. The middle turbinate, because it has sufficient room, and the inferior turbinate, because it is not constantly bathed in mucus.

#### CONCLUSIONS

The foregoing are conservative procedures for the correction of physical factors, which may interfere with the ventilation and drainage of one or more of the accessory nasal sinuses during periods of nasal congestion or colds. This interference with the ventilation and drainage of the sinuses may result in a catarrhal or purulent sinusitis.

736 ROSE BLDG.

---

#### NEW BOOKS

*Physical Diagnosis*, by W. D. Rose, M.D., lecturer on Physical Diagnosis and Associate Professor of Medicine in the University of Arkansas; Visiting Physician Little Rock City Hospital, Baptist Hospital, and St. Vincent's Infirmary, Little Rock, Ark. Third Edition. Three hundred nineteen illustrations. Dedicated to Morgan Smith, M.D., Dean of the Medical Department of the University of Arkansas. Price \$8.50. C. V. Mosby Company, St. Louis.

*The Elements of Scientific Psychology*, by Knight Dunlap, Professor of Experimental Psychology in the Johns Hopkins University, Baltimore; author of "Mysticism, Freudianism and Scientific Psychology," "Personal Beauty and Racial Betterment," etc. Illustrated. Price \$3.50. C. V. Mosby Company, St. Louis.

*Animal Parasites and Human Disease*, by Asa C. Chandler, M.S., Ph. D., Instructor in Biology, Rice Institute, Houston, Texas. Second Edition, revised. John Wiley and Sons, Inc., New York. Price \$4.50.

*Text-Book of Human Physiology*, including a section on Physiologic Apparatus, by Albert P. Brubaker, A.M., M.D., LL.D., Professor of Physiology and Medical Jurisprudence in the Jefferson Medical College; formerly Professor of Physiology in the Pennsylvania College of Dental Surgery; formerly lecturer on Physiology and Hygiene in the Drexel Institute of Art, Science and Industry. Seventh edition, revised and enlarged; with 367 illustrations. P. Blakiston's Son and Co., 1012 Walnut St., Philadelphia, Pa.

## On the So-Called Angioneurotic Eruptions\*

By A. RAVOGLI, M.D., Cincinnati

*Editor's Note.*—According to Dr. Ravogli anaphylaxis plays a leading rôle in so-called angioneurotic eruptions. Toxines from faulty metabolism get into the circulation and are carried to the periphery where they irritate the sensory and trophic nerve filament, causing itching, hyperaemia, and cutaneous exudation. Urticaria, angioneurotic oedema, dermatitis herpetiformis, pruritis and recurrent eczema are leading types of vasomotor anaphylactic skin eruptions. Protein sensitization is very useful for diagnosis and in the treatment of these distressing conditions, Dr. Ravogli has found calomel and alkalies the most helpful remedies.

I FEEL GREATLY HONORED to fill this year, for the second term, the office of chairman of this section, and it is with pleasure that I welcome you at this meeting.

I will talk to you in a general way of the eruptions of the skin from vasomotor disturbances. It seems that the part played by the nervous system in the production of skin eruptions like erythema and urticaria, at present is not considered so important, and it is believed that they are of an inflammatory nature, produced by the direct action of the toxins on the blood vessels and tissues.

Yet we agree with the opinion expressed by Wolff, Eisner and others, who maintain, that the phenomena of hypersensitiveness results from the irritation of the nervous system. Urticaria, oedema giant and pruritus are explained from food and drug poisoning from the action of heterogeneous albumin upon the vasomotor center. As these eruptions urticaria, lichen planus and dermatitis herpetiformis are accompanied by itching sensation they are considered to be the result of nerve disturbance. On the other hand it is also possible, that the itching sensation may be due to the last ramifications of the sensory nerves, which are irritated by the same toxic elements which have produced the eruption through the blood vessels.

We stop for a moment to consider the eruption caused from vasomotor disturbance.

### URTICARIA

This eruption in the form of wheals, (pomphi) is so-called from the likeness to the pomphi produced in the skin by the contact with nettle, hence the common name *nettle rash*. It affects the skin in different parts of the body and is accompanied by itching sensation. The wheals in some cases are small as pearls, whitish, and nearly coalescent. In other instances they are as large as the palm of the hand and are scattered in different parts of the body. Urticaria attacks persons at different periods of life, but often in childhood.

It seems that in the urticarial eruption there is an irritability of the blood vessels through the vaso-motor nerves. We are inclined to believe that this irritability may be the result of

poisonous products, or of toxines in the blood. G. Singer, in these cases found an increase of *indoxyl* in the urine as well as *sulfureted hydrogen*, with relative increase in the quantity of *aromatic oxycyanids* and *phenols*. Freund confirmed these findings and pointed out to the increased quantity of indoxyl and skatoxyl.

Lately, urticaria has been considered as a complex of symptoms from protein sensitization, *anaphylaxis*. Among the supporters of this theory, Wolff Eisner can be looked upon as one of the foremost and he considers urticaria of an anaphylactic nature and as caused by seropathologic alterations. Highman, Michel and Towle,<sup>1</sup> following the views of Wolff Eisner, considered urticaria in one group as angio-neurotic disturbances together with angio-neurotic oedema. It is conceded that the anaphylactic manifestations are the results of albumin sensitization. This can be proved by the local reaction provoked by intradermal inoculation of protein. The allergic reaction of the skin is considered to be an expression of existing anaphylaxis.

In reference to the exudation of the serum from the blood vessels into the tissues, Wright thought it related to the coagulative quality of the serum, and to the increased permeability of the tunics of the blood vessels. According to his views the quantity of calcium salts contained in the serum would be the cause of diminished or increased coagulability of the blood serum, and to the greater or lesser permeability of the capillary blood vessels. It has been observed that some types of urticaria follow the ingestion of plants containing acids, which absorb calcium salts, such as oxalic and citric acids. Kollert has referred to cases of urticaria following the ingestion of sour apples, vinegar and formic acid.

In a case of recurrent urticaria, when the body was covered with wheals, Pulay<sup>2</sup> found that the patient was an excessive cigarette smoker. In the chemical analysis of his blood the quantity of calcium salts had greatly diminished, with marked increase of uric acid, sugar and cholesterolin. The increase of uric acid would place urticaria in the line of those affections caused by acidosis from uric acid diathesis, or gouty condition. It is to the production of acids that H. J. Hamburger ascribed the cloudy swelling of the cells. The abnormal content produces increased absorption of water and increase in the size of the

\*Chairman's Address presented before the Section on Dermatology, Proctology and Genito-Urinary Surgery of the Ohio Medical Association, during the Seventy-Sixth Annual Meeting, at Cincinnati, May 2-4, 1922.

cells. The swelling of the cells represents an oedema and the absorbing power of the tissues is increased by the presence of the acids.

Herbert Elias considered any acid poisoning, either endogenous or exogenous, as capable of causing irritation of the nerves from the diminution of calcium salts. In a case of highly pronounced dermographism with recurrent attacks of urticaria, Pulay found a slight increase of cholesterolin, but the uric acid greatly increased.

Gudzent has demonstrated experimentally that uric acid is increased in the blood, it is also increased in the organic tissues. The tissues in the presence of the acid swell up exerting a compression on the fine terminations of the sensory nerves. Their irritation is revealed by the perversion of the sense of touch as an itching sensation or pruritus. In the same way pressure from the swollen tissues and of the exudation on the axis of the vasomotor nerves, and the irritation therefrom produces hyperaemia by reflex action. The swelling of the tissues and the increased blood pressure brings oedema, which is the base of the elementary form of urticaria, the wheal. From the diminished quantity of calcium salts in the blood and in the tissues there follows an increased permeability of the tunics of the blood and lymph vessels with the irritation of the vasomotor nerve system.

#### PRURITIS

Pruritis is also found without urticaria. It consists in a disturbance of the sense of touch, and it is more annoying and at times more unbearable than pain itself. It may be circumscribed but, usually is universal. It accompanies icterus, diabetes, albuminuria, chronic disturbances of the stomach and of the intestinal tract, and all those conditions that are considered of rheumatic origin. In many cases according to Pulay, it is accompanied by recurrent eczema; while in other instances it is an itching sensation alone. When eczema is present it is difficult to establish whether the eczema is the result of scratching, or if it is the cause of the itching sensation. In many patients with pruritus, Pulay found in the blood analyses, increased sugar, cholesterolin, uric acid and diminished calcium salts.

In general, pruritis is always due to a neurosis of the sensory nervous ramifications. It is possible that the presence of uric acid in the blood causes irritation of the sensory nervous system.

It is not easy to conceive that the increased quantity of uric acid in system may produce an increased tonus of the vagus or of the vegetative system. Toxic substances in the blood may display their activity on the capillaries through the vasomotor system by increasing their tonus. The administration of alkaline salts diminishing the quantity of uric acid in the blood, relieves the unbearable pruritus. In the same way the beneficial action of atropin shows the relation

between the disturbances of the vagus and the uric acid diathesis.

#### PERVERTED METABOLISM

In the process of normal metabolism acid products are formed from the dissimilation of proteids, fats and carbohydrates. They are intermediary bodies, some undergoing further degradation, while the others, which cannot be further oxidized, are excreted. Carbonic acid leaves the system in large quantities through the lungs, while sulfuric, phosphoric, hydrochloric and uric acid are eliminated with the urine usually combined with alkalies. Carbonic acid leaves the blood through the lungs, the alkalies remain in the blood for the purpose of saturating more carbonic acid. Alkalies are eliminated through the urine as urinary salts. This loss of alkalies is compensated for by the ingestion of alkalies in the food, and alkalies are stored in the cells of the tissues and of the blood. The protoplasm contains a large quantity of alkalies, which are combined with albumin in different modifications. Potassium salts are the chief components of the protoplasma, while the sodium salts are mostly those circulating in the blood. The alkalinity of the blood depends mostly on the presence of sodium carbonate and sodium phosphate. In this way the organism maintains its alkalinity, and if it is diminished or reduced, serious consequences follow.

When alkaline substances are removed from the food, or quantities of acid substances are given, the alkalinity of the fluids of the organism are reduced. Experimentally, in the dog, the diminution of alkalines is noted by morbid derangement of the nervous system, and by disturbances of the food assimilation. Continuing this condition the animal dies. According to Bunge, it seems that the death is due to intoxication with sulfuric acid, which is the product of catabolism of the proteids, when an insufficient quantity of alkalies is present. At the point of exhaustion of an animal subject of experiment, giving alkalies has again prolonged life.

The phenomenon of acetonuria with its modifications, according to Von Noorden, becomes comprehensible in considering acetone as a synthetic product derived from certain bodies containing a few atoms of carbon derived from different sources. Normally fragments of proteids and fat molecules, containing a few atoms of carbon, undergo further oxidation, if a sufficient quantity of carbohydrates is present. This probably is due to the fact that carbohydrates contain so much oxygen, which when carbohydrates undergo metabolism, is set free and is used for oxidative process. In the diabetics there is no lack of oxygen from respiration and acetonuria would be only a contact effect of the oxygen in statu nascendi on the carbohydrates liberated within the cells.

We can explain the local disturbances on the skin as result of faulty metabolism from the alterations of the proteids. In nutritious substances proteids are found as amino acids. They result from the combination of organic acid with one or more groups of basic elements substituting hydrogen. Elimination takes place through the kidneys, intestines and skin. Some are expelled as fatty acids—acetic formic and butyric, oxalic, glycouronic, or as nitrogenous substances, such as indol, skatol, carbonic acid, sulfocyanic, urobilin and oxyproducts. With the protein such minerals as sulfur and phosphorus are eliminated. When the tissues are not able to utilize the proteids for their nutrition, the skin is altered; it is rough and dry from lack of greasy substance as well as anhydrotic from inactivity of the sweat glands. The ferments in the tissues are the cause of the changes which take place in the glycosis of the acetonc bodies forming acetic acid. According to Horbaczewski, the increase in the nuclein metabolism has direct influence on the production of uric acid in the organism. The tissues absorb the products of the metabolic process and through the blood they are carried to the kidneys and also to the skin. The retention of the uric acid in the blood may be the result of impaired function of elimination by the kidneys, as in some eruptions such as pemphigus, lichen planus, or from the retention of it in the tissues themselves as experimentally found by Pulay.

We can agree with Gudzent that the relation between blood and kidneys has to be considered more in reference to blood and tissues. Ferments are formed in the protoplasm of the cells, which act upon glycosis. By further disintegration glycosis is changed into acetonc bodies and finally into acetic acid. The question is whether the pruritus has to be considered as a vagotonic disturbance induced by the increased quantity of uric acid, or if the increased tonus of the vagus system is capable of producing retention of the uric acid.

Any toxic substance entering the system is capable of irritating the capillary blood vessels through the nerves and causing erythematous eruptions. According to Shade the papillae of the derma are endowed with sensory nerves and with filaments of the sympathics. As a result the sensory nerves are irritated by the pressure of the exudation, this irritation causes a reflex action on the filaments from the sympathics and results in producing hyperaemia in the whole area. Exudation enters in the Vaters-Pacini corpuscles which are osmotic and regulate the osmosis. The cause of the itching sensation, according to Gudzent, is to be found in the swelling of the cells from the exudation, which compresses the sensory nerves. Moreover, the presence of the uric acid in the cells of the tissues increases the osmotic power producing compression on the delicate nerve fibers. The itching sensation, a result of the irritation, is transmitted to the fib-

ers of the sympathetic system causing hyperaemia and exudation in the area.

#### ERYTHEMATA

Between the skin eruptions which are conceded to be caused by angio-neurotic conditions, we find the group of the *erythemata*. These eruptions are of the nature of the urticaria, and often the skin reacts in the same way to the irritation. Philippson,<sup>4</sup> believes that in many of these cases the presence of toxic substances cause alterations of the tunics of the vessels, and exudations by metastatic or embolic processes. While this may be true, it is conceivable that the vasomotor centres are irritated by the same toxic material, producing hyperaemia, exudation, and itching sensation. It has to be remembered that in dermatopathology identical skin eruptions are produced by different factors. But be that as it may, in our opinion, the toxic substances are always basic causative factors. Toxic elements may be introduced in the system with the food, or may be produced in the gastro-intestinal tract from faulty digestion, or may be produced in the tissues, and in the cells from faulty metabolism and in this way are carried into the circulation.

In a short address it is only possible to mention the eruptive forms which are included in the *erythema group*—*erythema exudativum multiforme* Hebra, *erythema nodosum* (due to bacterial infection), and all symptomatic polymorphous enthemata (some caused by exogenic, others by autogenic poisonous materials). In all these affections diffused redness, swelling and papules are present, showing the exudation in the tissues, which may be so abundant as to form vesicles, bullae; and in some cases these may become purple red, or bluish on account of the presence of blood corpuscles, which have come through the lax walls of the capillary blood vessels.

For this reason the value of the elementary forms as a basis of dermatology, is at present untenable, when we see a macule changed into a papule, into a vesicle, into a bulla, all from the same pathologic process and from the same causative elements. In some of these cases together with the papules, vesicles, etc., there is an unbearable itching sensation, which compels the patient to scratch and excoriate the papules, causing hemorrhage with the formation of thick black crusts. This can be called *prurigo lichen urticatus*, or *erythema urticatum*. One form, which can be considered as of a proteiform nature, and in which we see all the skin lesions mentioned, together with itching sensation, is *dermatitis herpetiformis*, as described by Duhring. These affections may form an eruptive group by themselves. All are remarkable for the chronicity, the recurrence, the disposition of the eruptive lesions, the itching sensation and the eosinophilia. In some cases we have found trails of indican in the urine, in connection with gastro-intestinal disorders. In dermatitis herpetiformis

the mucous membranes are not spared, and frequently we have found slight increase of the temperature in the evenings. Every new attack is preceded by the increase of the itching sensation, and on this account patients lose sleep and they are rundown in their general nutrition.

In some of these forms the toxic elements display superficial activity, for instance in urticaria, or in some papular erythemata, the pomphi, or the papules, after a short time, or after a few days, disappear leaving only a slight pigmentation. While in some deep toxic erythemata, as in pellagra, the redness and the swelling deep in the tissues of the skin last for a long time and when undergoing involution the skin shows an atrophic cicatricial condition as a result of the deeply seated inflammatory process.

It is not my purpose to speak of the infectious erythemata of chemical and microbiotic origin. In such forms it is not difficult to see that the bacteria and the toxic elements are carried into circulation and on into the capillaries. Small thrombi are formed which cause the erythematous spots. This condition is met with in erythema nodosum in smallpox erythema, roseola vaccinia, roseola typhosa, and syphilitic roseola. These are outside the purview of our discussion on eruptions from vasomotor disturbances.

#### PROGNOSIS

As we have stated, these affections depend for their origin on toxic elements either introduced with the food, or from toxic elements formed in the stomach or intestines. From the condition

of these organs the degree of gravity of the eruption can easily be inferred. When the toxic elements are originated from the metabolic changes in the tissue cells, then the eruptions have deeper reason for existence, and the eruption will be chronic and of difficult treatment.

#### TREATMENT

The treatment, which has given the best results in our hands, has been the administration of calomel in small doses of 1/5 to 1/3 of a grain together with sodium bicarbonate, repeated two or three times a day. Calomel has a specific action against the yeast fungi which remain in the gastro-enteric canal, and against the Colon bacilli. At the same time the use of sulfate of magnesium with sulfate of sodium is beneficial, removing excretory substances from the system. Bicarbonate of sodium and citrate of potassium restore the alkalinity of the blood and remove acidosis.

In obstinate cases the administration of salol, together with bicarbonate of sodium as an antiseptic for the bowels, has given good results, and obstinate cases of chronic urticaria, of dermatitis herpetiformis have yielded to this treatment.

#### REFERENCES

1. Towle, Harvey P.: Protein Sensitization in the Production of Skin Diseases. Arch. Derm. and Syph., Nov., 1920, Vol. ii, pp. 531-543.
2. Pulay: Stoffwechsel—Pathologie und Hautkrankheiten Derm. Wochenschrift, Dec. 3, 1921, p. 1255.
3. Von Noorden: Diseases of Metabolism and Nutrition, Vol. iv, Autointoxications, p. 34.
4. Philippson: Über Embolic und Metastase der Haut. Archiv, 1900.

## Parkinson's Disease As a Sequela to Lethargic Encephalitis\*

By H. H. DRYSDALE, M.D., Cleveland

*Editor's Note.*—The illustrative case reports, presented by Dr. Drysdale, challenge our former conceptions that paralysis agitans is practically confined to the pre-senile period of life, as the majority of his patients were under 40 years of age. The post-encephalitic Parkinsonian syndrome seems to pursue a more rapid course than the usual type of disease and the prodromal period is undoubtedly shorter. While accurate knowledge of the etiology of this distressing condition remains indefinite, all the patients seen gave a history of having been the victims of so-called sleeping sickness. It could not always be determined whether this was some form of meningitis or lethargic encephalitis. Hyoscine hydrobromate was found of value, by Dr. Drysdale, in suppressing the tremors, but nothing proved helpful in combating the ravages of the disease.

**T**HE HISTORY of lethargic encephalitis, or the so-called *new disease* is exceedingly interesting. First appearing in Europe during 1917, the malady spread with alarming rapidity. Early in 1918, England found herself in the throes of an actual epidemic and a few months thereafter, patients similarly afflicted were encountered in far-distant Australia. Late in 1918 the identical clinical manifestations de-

scribed by the French and British observers were detected in the United States.

#### RELATION TO INFLUENZA

At first considerable confusion prevailed and many cases were regarded as poliomyelitis, meningitis or dementia praecox. A considerable number were temporarily designated as instances of cerebro-spinal lues. Finally the true classification of the condition became apparent, and at present the diagnosis of this distressing affliction is not long postponed.

\*Read before the Section on Nervous and Mental Diseases, of the Ohio State Medical Association, during the Seventy-Sixth Annual Meeting, at Cincinnati, May 2-4, 1922.

No clinical syndrome in recent years, has received more attention and thoughtful study at the hands of research workers the world over, than lethargic encephalitis, and the literature on the subject is now voluminous. Today we know that the disease is not *new*, but on the contrary has been known to the profession for at least 400 years. It has also been adequately demonstrated that it is in no wise a form of poliomyelitis as many contended. It is also reasonably certain that in some manner, sleeping sickness so-called, bears a close relationship to influenza. In any event it has never developed epidemically, except with influenza. In the majority of cases reported in the United States, lethargic encephalitis was preceded by an influenzal infection. Bassoe and others, however, have reported certain cases, in which a history of influenza was lacking. Many neurologists are convinced that time will disclose an inseparable connection between lethargic encephalitis and influenza, and to maintain their position they point out that influenza always exerts a most baneful influence upon the individual's nervous reactions. The depression and prolonged fatigue that characterizes the tedious convalescence of influenza are always pronounced. So long as the etiology of either affliction remains unsolved, a discussion of the alleged relationship will continue to be a matter of mere conjecture.

#### SYMPTOMATIC AND PATHOLOGICAL FINDINGS

Pathologically, the findings of scientific workers in France, England and our own country, are essentially similar. The brain, pons, medulla and basal ganglia are usually congested and associated with oedema. The dura seems to escape but the pia-arachnoid shows extensive engorgement of the vessels with little or no exudate. In the spinal cord, peri-vascular infiltration has been found in the gray matter with an absence of changes in the ganglion cells.

The disease develops insidiously as a rule, and is frequently interpreted by the family as merely a catarrhal affair. Very often a conjunctivitis accompanied by a partial ptosis, due to the loss of the blinking reflex, is the first significant warning. The eye-lids become heavy, vision is blurred and the patient is supersensitive to light. The personality of the individual undergoes a marked change which is generally expressed by stupidity and listlessness. In the severe attacks, lethargy exists in fully 80 per cent. of the cases. In the milder forms lethargy may be none other than dullness, and patients of this type have been known to continue at their work though greatly handicapped. One of my patients succeeded quite remarkably, in controlling her drowsiness, by taking a cold bath or a long walk. At times she was greatly annoyed by diplopia but finally passed through the entire illness without confinement to bed.

In a small number of instances actual in-

somnia rather than lethargy is the predominant symptom, but very often such patients will lie quietly in bed with their eyes closed, and thus leave the impression that they are asleep. No two cases are exactly alike, and in some the symptoms are quite changeable. Tremors and twitchings of various parts of the body, rigidity of certain groups of muscles, aphonia, cranial nerve involvement and intense restlessness with delirium are common manifestations. In others, nausea, vomiting and sometimes diarrhoea occur early and are apt to be accompanied with severe abdominal pains and chills.

Generally the facial expression is blank but in younger patients the face is flushed. The delirium may be mild or severe and is usually worse at night. When the delirium is grave, the sufferer will pick at the bed clothes, grasp at imaginary objects and is frequently subject to maniacal excitement, incoherency, mumbling and confusion. The physical investigation is not always satisfactory as the individual's replies to interrogations are often irresponsive. The reflexes will be found to be normal in the majority of cases but now and then the knee jerks are lost or exaggerated. Incontinence of urine occurred in fully 25 per cent. of our series. The Babinsky phenomena was rarely elicited. Hyperidrosis proved to be a frequent symptom at some stage of the disease, in practically all cases. In some it was confined to certain areas, especially the face, back, feet and hands. Muscular asthenia was always pronounced associated with loss of weight. In none did the ophthalmoscope disclose pathologic changes in the eye grounds. All had diplopia.

The *duration of the malady*, in our experience, covered a period ranging from seven to fourteen weeks, but for months thereafter these individuals continued to present evidence of their protracted illness. Convalescence was extremely slow and tedious and many to this day complain of ease of fatigue and lack of resistance.

#### PARKINSON'S SYNDROME

The disease may well be compared to a tornado. It spreads with unusual velocity and great force leaving death and destruction in its trail. Like similar catastrophies, disabling complications, of various sorts, followed, and it was the means of precipitating various psychoses and other infirmities which might have been avoided or at least postponed. The central nervous system seemed to be particularly susceptible to its ravages and in every large medical center, many cases of Parkinson's syndrome may be found, which have apparently developed as a direct sequela to lethargic encephalitis.

It has been my privilege to encounter a series of 23 such cases and a discussion of their clinical features constitute the subject of this thesis.

Parkinson's disease, *paralysis agitans* or creeping palsy was recognized in the past as a rather

rare malady, progressive in nature and developing usually in the pre-senile period of life. Few cases were observed prior to the age of 40 and males were more commonly attacked than women. In the majority of cases, reported prior to recent epidemics, the etiology of the disorder was most indefinite although the influence of persistent worry, intense fright, bodily and mental overstrain were considered to be important causes. In a few instances the disease has attacked more than one member of the same family and this encouraged the assumption that heredity exercised at least a predisposing element. Krafft-Ebing reported 100 cases, seven of which were attributed to trauma. Oppenheim considered it doubtful if acute infections had any causal effect. This, it would seem, is now disproved by recent clinical observations.

The *pathology of paralysis agitans* was also a matter of keen dispute and innumerable theories were advanced. In many cases no pathology was found in those dying from intercurrent disorders. Several investigators however, *i. e.*, Koller, Dana, Redlich and Burzis described certain changes in the brain, spinal cord, posterior lateral tracts and gray matter, indicative of sclerotic degeneration of the small blood vessels. Erb refuted these claims for lack of sufficient confirmation. Byschowsky took the position that the disease was a functional disturbance of the muscles. Moibus unsuccessfully attempted to associate it with changes in the thyroid. Others classified the condition as a pure neurosis on account of the changeability of the symptoms. More recently, leading authors agreed with Tesseur that *Parkinsonism* was merely a syndrome which might be produced in numerous ways.

This was our conception of the disease prior to the outbreak of the great war but is now being revised. Unless I am badly mistaken the text books of the future will not only paint Parkinson's disease in its true color, but will eliminate all doubtful factors concerning its etiology, pathology and symptomatology. Nor is it unreasonable to anticipate that out of the wealth of material now in the hands of scientific investigators, both here and abroad, may come the means of prevention and possibly the cure of a disease which has baffled the profession since 1817.

#### ABSTRACT OF CLINICAL NOTES

*Case 1.*—J. M. B—, contractor, aged 39, previously well and active, contracted influenza in March, 1919, and returned to his work while still fatigued. He became gradually drowsy and could not obtain sufficient sleep. With the appearance of diplopia a physician was called and patient passed through what was evidently a mild form of lethargic encephalitis, of nine weeks duration. In August, 1919, I first saw him after a diagnosis of *psycho-neurosis* had been made at a local hospital. The patient's attitude and gait

was at once suggestive of Parkinson's syndrome. He held himself in a stooping position and the entire body was rigid. Fine tremors of both hands were noted, which his wife stated continued during sleep. His expression was stonelike and his speech slow and monotonous. He had lost considerable in weight.

The *examination* disclosed exaggerated knee jerks but no sensory changes. Pupils were negative and eye grounds clear. Blood pressure was normal. Wassermann reactions of blood and spinal fluid were also negative. Condition has been rapidly progressive.

*Case 2.*—A. M. C—, a high school boy, aged 19, previous health good, who suffered an alleged attack of lethargic encephalitis during the spring of 1919, following a siege of influenza. The condition was regarded by the family as a severe cold but according to his history he was confined to bed for a period of 6 weeks in a dark room. Could not tolerate light and was troubled with seeing *double*. Slept continuously but was easily awakened. He never fully recovered and in August, 1919, I found him in bed, his face expressionless and the body markedly rigid. His chin rested on his chest. Tremors of the facial muscles were plainly to be seen and it was most difficult for him to express himself. When on his feet he would start to walk slowly and then increase his speed until he reached safety. Then he clumsily grasped an article of furniture and threw himself upon the bed greatly exhausted. His vital organs were not organically damaged. Pupils and eye grounds were normal. No nystagmus and no Kernig's sign were present and the Wassermann reaction of spinal fluid was negative.

*Case 3.*—Mrs. J. M. C—, aged 38, mother of three children, previously neurotic and unstable, suffered two attacks of influenza during 1918. In June, 1919, she developed what appeared to be an attack of lethargic encephalitis, as she was drowsy, *saw double* and was confused for a period of two months. The condition was regarded as a case of melancholia and she finally recovered but remained very weak. *Examination* September 10, 1919, showed moderate rigidity of face, neck and body. Her head drooped and the face was expressionless. She had to be rolled over in bed at night, and described her condition as *stiff as a board*. The tremors were confined to right hand and arm and these occasioned much difficulty in feeding herself or handling small objects. The physical functions were normal and she was adequately nourished. Eye grounds, and Wassermann reaction of spinal fluid were negative.

*Case 4.*—Mrs. E. H. G—, aged 42, mother of two children contracted a *Flu-pneumonia*, so-called, in February, 1919, and apparently recovered. Four months thereafter she became stupid and slept most of the time covering a period of 11 weeks. Said she was *out of her*



mind and lost all affection for her children. Thought it was due to the menopause. The menses ceased following the influenza. Complained of *double vision* and told how hard it was to guide a spoonful of food to her mouth.

*Examination* disclosed a mask-like rigidity of head and face and coarse tremors of both hands and arms which were intensified by excitement. Speech was indistinct and every movement slow. Writing was almost illegible. Physical examination disclosed no changes in reflexes, sensory system, pupils or eye grounds. Mentality was intact. Wassermann reactions of blood and spinal fluid were negative. The conditions remains stationary.

*Case 5.*—Fred H—, single, aged 22, a drug clerk by occupation, gave a history of influenza during the fall of 1918, and was confined to the house for a period of three weeks. In March, 1919, he found himself becoming sleepy in the afternoons and could hardly finish his supper before he got to bed. Had difficulty in getting up in the morning and finally gave up his work. For a while his parents thought the boy was cultivating lazy habits and admonished him for his apparent tardiness. Finally he developed *double vision* and kept his eyes closed. He remained in this state for practically two months. Convalescence was slow and he continued to complain of great weakness in his lower limbs. Stated that his feet felt heavy and he was unable to flex his knees without great effort.

*Examination*, October 8, 1919, disclosed a young man with an extremely rigid posture, head bent forward and a facial expression denoting stupidity. Someone who saw him as he entered the office inquired if he was imbecilic. On the contrary his mind was alert and he answered all questions coherently and correctly. No tremors were elicited in this case but the rigidity was so pronounced that he could not turn around without assistance. He was also afraid to walk for fear of falling forward. This young man had gone to the third year in high school. All reflexes were normal, eye grounds clear, pupils equal and responsive and there was no nystagmus. Systolic blood pressure measured 138 mm. Wassermann reaction of spinal fluid was negative. The heart was moderately enlarged with marked tachycardia. A prominent pulsating thyroid without exophthalmus was noticeable. Here is presented what appears to be a *Parkinson symptom-complex plus hyperthyroidism*. The condition has rapidly progressed but at times the tachycardia subsides.

*Case 6.*—Max R—, aged 15, a student in the eighth grade of public school, had lost a year of schooling as a result of chorea; otherwise his previous health was normal. In March, 1919, he contracted a severe pneumonia followed by pleurisy with effusion. Recovery gradually followed. In July, 1919, he displayed a tendency to sleep and insisted upon remaining in bed. His

family accused him of walking and acting like a decrepid old man, as his steps were short and nothing seemed to arouse his attention. A physician was summoned who interpreted the condition as *sleeping flu* and for several weeks thereafter he was constantly lethargic and took nourishment only when urged. For several days he was quite delirious and troubled with terrifying hallucinations of sight. He too had *diplopia* which continued intermittingly for some weeks after he was up and about. Patient never returned to normal and in October, 1919, the examination revealed manifestations indicative of Parkinson's disease. He was exceedingly rigid and moved about *all in one piece*, so to speak. The face was mask-like and his voice monotonous. So intense and rapid were the tremors of both hands that he could not write. A diagnosis was held in abeyance for several months but the condition has not changed. The tremors were not of the intention type and there has never been a suspicion of nystagmus or Kernig's phenomenon. The pupils and eye grounds were normal. Vital organs were apparently healthy. Wassermann reaction of the blood was negative. Spinal puncture was refused. Mental condition not disturbed.

*Case 7.*—Mrs. A. A. F—, aged 52, mother of three children, had an uneventful menopause 4 years ago, and formerly regarded as well. In January, 1919, she developed a severe cold which required medical attention for three weeks. In June, 1919, she became drowsy but would not go to bed until finally ordered to do so by a physician, who found her with fever, *diplopia*, and weakness of left face. The condition was regarded as a slight cerebral hemorrhage but all symptoms subsided within eight weeks.

*Examination* August 25, 1919, showed a woman, rigid and trembling. Two months previously her legs became stiff and this was accompanied by severe prostration. The posture was striking. She stood statuesque as if lifeless with head bent forward. Reflexes were exaggerated. Pupils and eye grounds were normal. Wassermann reaction of spinal fluid was negative.

*Case 8.*—J. M. C—, aged 37, married, mail carrier, suffered what he supposed was an attack of influenza during April, 1919, and never fully recovered. One day while on a street car he became drowsy and travelled on to the end of the line. The following day he was bumping into objects at home as a result of *diplopia*. Was confined to bed during the subsequent 11 weeks but had difficulty in sleeping. For a while he attempted to feed himself, with his eyes closed, in order to avoid spilling his food.

*Examination* on August 10, 1919, disclosed a well-nourished male, the father of three children; who had been troubled with headaches for some years but otherwise considered himself healthy and strong. His head was flexed, the entire body rigid and as he sat in a chair it seemed that every

muscle trembled. His facial appearance was wax-like, his arms pressed to the trunk and the hands in extension. He presented a pitiable sight as he asked if his nerves were beyond repair. The knee jerks were lost, the right pupil was larger than the left and both were extremely sluggish in their reaction to light and distance. Eye grounds were clear. Wassermann reaction of spinal fluid was 4 plus with cell count of 90. This man has had intensive intravenous therapy and spinal drainage, but not a single sign of improvement has ensued. His intellect remains intact.

*Case 9.*—Mrs. C. H. B—, aged 51, mother of five children, following an alleged attack of influenza, in February, 1919, became restless, drowsy and at times confused. At first she was regarded as psychotic but finally *diplopia*, lethargy and exhaustion developed. For almost three months her condition changed but little, when rather suddenly the troublesome symptoms abated and she was able gradually to resume her household duties. The husband informed me that her personality had greatly changed and she was no longer affable or interested in their family ties.

*On examination*, July 14, 1919, the usual Parkinson's clinical picture was plainly evident. The face was motionless, the head rigid and bent downward. Both hands and arms were tremulous and she was unable to change her position without assistance. At night her legs were spread apart with a pillow in order to relieve the painful locking of the knees. She was fairly well nourished but looked much older than her years. Deep reflexes were exaggerated. There were no Babinsky or Kernig manifestations. The pupils were dilated but responsive, and the grounds clear. Mentality was undisturbed. Serologic findings were negative.

*Case 10.*—Mrs. H. H. B—, 34, divorced, no children, contracted pneumonia in May, 1919, and was seriously ill for three weeks. She went to the country, June 19, 1919, to complete convalescence but found herself becoming fatigued and drowsy. Finally she took to her bed and after a short period of insomnia, became lethargic. For several weeks she had no knowledge of what transpired, except from heresy. After recovery she still was exhausted and ill at ease. Sought solitude and neglected her correspondence, some of which was important. Tremors gradually appeared in her right hand. The condition was complicated by incontinence of urine.

*Examination*, September 23, 1919. The patient at once frankly asked me if she was afflicted with creeping paralysis as her uncle was troubled in a similar manner. Evidently she was a good observer. Her gait was slow and jerky with a tendency to run, after she got started. If she had not reached for assistance she certainly would have fallen forward. She could not write her name except in large, sprawling, mis-shapen letters. The tone of her voice was whining. Re-

flexes proved to be exaggerated but there was no nystagmus. Pupils and eye grounds were normal, and mental functions alert. Wassermann reaction of blood was negative. Lumbar puncture was refused. Vital organs were healthy.

*Case 11.*—H. C. H—, a married man, aged 40, tailor and father of two children, was afflicted with a supposed influenza during February, 1919, followed by a full recovery. Returned to his work and got along well for fully three months when vision became blurred. An oculist was consulted who detected *diplopia* and advised a Wassermann test at once. This proved negative. Within ten days this man was delirious and stupid. The disease ran a course of nine weeks. Recovery was never complete, his lower limbs became rigid and he was annoyed at his clumsiness. All manner of cults were consulted but without relief.

*On examination*, October 3, 1919, the diagnosis in this case was not long delayed as the very appearance of the man was most suggestive of *Parkinsonism*. He walked with head bowed, the body tense, his facial expression statuesque and the eyes riveted to the floor, so to speak. Tremors of right hand, right face and right leg were prominent symptoms. Reflexes were normal, vital functions negative, mentality intact, and cardio-vascular tension not increased. Wassermann reactions of blood and spinal fluid were negative.

*Case 12.*—C. H. F—, a clergyman, aged 43, married, one child. Previous history contains the information that he was treated for nervousness in a sanitarium at the age of 24. He denied influenza but agreed with his wife that he suffered a severe bronchitis during April, 1919. He resented, he said, the fashion of designating every unusual cold, the *Flu*. After recovery he preached twice and became fatigued; was no longer able to concentrate and could not obtain sufficient sleep. Not until *diplopia* appeared, was a physician called. The disease, which was regarded as lethargic encephalitis ran a course of about eight weeks. After convalescence he continued listless and debilitated.

*Examination*, on November, 3, 1919, revealed a man trembling from head to foot and seemingly in great fear. The pulse rate was 120, and the body bathed in perspiration. His gait was slow with a tendency to drag the right leg. The voice was slow and indistinct and his face marble-white and expressionless. He declared he could not write or even make his mark as he had no control of his fingers; nor could he arise from his chair without assistance. All reflexes were exaggerated and a fairly well-sustained clonus was elicited in the right foot. There was no Babinsky. Systolic blood pressure measured 130 mm. No hyperthyroidism. Pupils were small but responsive and the eye grounds clear. Mentality was well preserved but psychic processes

were slow. Wassermann reactions of blood and spinal fluid were negative.

*Case 13.*—Mrs. H. S. D—, married, mother of 4 children, gave her age as 35 but looked fully 10 years older. I have known this woman for some time and have regarded her as psychoneurotic and always unstable. Her mother was insane and a brother epileptic. According to her history (personally related) she was the victim of two attacks of influenza during 1918-1919; had never returned to normal and was regarded as nervous. During May, 1919, her vision became blurred and glasses were prescribed. Soon thereafter she had intermittent attacks of *diplopia* which soon was followed by lethargy and slight fever. The condition was complicated by diarrhoea and chills.

*Examination* on November 19, 1919, found patient in bed, rigid and tremulous, with head intensely flexed and the facial expression stone-like. Previously she was affable but not a single sign of recognition occurred as I sat beside her. When I attempted to lift her, the body moved *en masse*. Reflexes were sharp, eye grounds and pupils normal and vital functions not impaired. Mentality was clear. Wassermann reactions of blood and spinal fluid were negative.

*Case 14.*—Mrs. F. E. K—, aged 40, married, 4 children, was previously healthy and robust, and gave no history of influenza. She passed her menopause uneventfully at the age of 44. In October, 1919, she became listless and sleepy but continued with her household cares for at least two weeks. When I first saw her on November 12, 1919, she was lying quietly in bed; her eyes were closed but she answered all questions correctly. Several physicians had seen her and various diagnoses had been made, including *melancholia*. The patient had an *unmistakable diplopia* and this, plus the other clinical findings, was strongly suggestive of lethargic encephalitis. I was asked to see her again on February 10, 1920, when I learned that her previous illness had practically subsided but she was now unable to use her limbs or feed herself. The *examination* then disclosed general rigidity, the head bowed and her facial expression statuesque. No tremors were detected. All reflexes were sharp and sensibility was well preserved. No nystagmus and no pupillary changes presented. Wassermann reaction of the spinal fluid was negative.

*Case 15.*—J. B. S—, a married man, aged 46, tailor by occupation, was formerly well and alert, and does not believe he ever contracted influenza. During December, 1919, he presented the usual signs of lethargic encephalitis. For a week he was delirious with visual hallucinations. The acute manifestation subsided in 7 weeks but he never recovered sufficiently to leave his bed.

On *examination*, May 3, 1920, the patient was found bedridden, intensely rigid and much

emaciated. The knees were flexed, the face was wax-like and his head and trunk were bent forward. He was barely able to move his limbs and answered only a few of my questions. Reflexes were sharp, pupils negative, eye grounds clear. No Babinsky and no Kernig's sign presented. Wassermann reaction of spinal fluid was negative. The patient has since died of *marasmus*.

*Case 16.*—M. B—, an unmarried woman, aged 55, during the past three winters had been subject to severe *colds*, but always recovered promptly without apparent ill-effects. Menses ceased at the age of 46 years. During November, 1920, she found herself becoming tired and troubled with painful sensations in both legs and nape of neck. This was followed by fever, drowsiness and *double vision*. She gradually recovered but never fully regained her former strength and vigor.

On *examination*, February 23, 1921, the usual *Parkinsonian syndrome* was plainly noticeable in this case. She was extremely rigid and resistant to all passive movements. Tremors were confined to the right hand and were aggravated by exertion. The speech was nasal and the face immobile. All reflexes were prompt and sensibility was well preserved. The pupils and eye grounds were normal and mentality was correct. Wassermann reaction of blood was negative. Lumbar puncture was refused. Condition remains stationary.

*Case 17.*—J. E. O—, draftsman, aged 42, contracted pneumonia in 1918 and influenza in December, 1919. Recovery followed in both instances. During February, 1920, he again developed *grip-like* symptoms followed by muscular jerkings, headache and slight fever, went to bed and became delirious. The disease continued over a period of 6 weeks and *he was not troubled with diplopia until permitted to sit-up in bed*. Convalescence was tediously slow but he finally gained what he considered an almost complete recovery. During the summer of 1920, his legs became stiff, then his arms and finally tremors of both hands appeared. He could not pick up small articles and frequently dropped his knife and fork.

On *examination* July 29, 1921, the right hand was tremulous, the body stiff and the gait uncertain. When he attempted to walk he almost pitched forward. The voice was slow and the face expressionless. His eyes however were bright and his mentality undisturbed. Reflexes were normal, cardio-vascular tension was not increased; pupils and eye grounds were healthy and serologic findings negative.

*Case 18.*—Mrs. H. B. G—, a widow, aged 46, with no children, and nothing important in her past history, whose menopause occurred at the age of 41 years, thinks she had influenza during the spring of 1919, while in Florida. No complications ensued and she regarded herself as recovered. On June 30, 1920, she rather sud-

denly developed fever with nausea, followed by drowsiness and partial stupor, was admitted to the hospital and classified as lethargic encephalitis. The attack was mild but she continued weak and nervous.

On *examination* August 7, 1921, her gait was slow and each step short, her head inclined forward, both hands and right side of face were tremulous and the facial expression was unmistakably Parkinsonian. She was fairly well nourished, and expressed her ideas coherently and connectedly. All reflexes were exaggerated. The eye grounds clear, and the pupils responsive. Wassermann reaction of spinal fluid was negative. Babinsky and Kernig signs were absent.

*Case 19.*—C. E. B.—, aged 51, a widow and mother of 4 children, according to her history contracted pneumonia during the winter of 1919 and recovered. She remained well until May, 1920, when she developed symptoms indicative of lethargic encephalitis and was treated in the hospital.

*Examination* on September 3, 1921, found the patient a poorly nourished woman, with statue-like posture and stone-like face; her body was intensely rigid, the head bent forward and every movement slow and clumsy. She could not walk without assistance nor could she sit long in one position. All reflexes were normal, sensibility was intact, speech monotonous; pupils were prompt and equal and eye grounds clear, and no Kernig's sign present. Wassermann reaction of spinal fluid was negative. The condition has been exceedingly progressive.

*Case 20.*—C. F. S.—, aged 43, married, mother of two children, contracted a severe cold in December, 1919, which was diagnosed as influenza. Otherwise her previous history throws no light upon her present condition. During February, 1920, she rather suddenly became lethargic and confused, followed by *diplopia*, muscular twitchings, vertigo and finally hallucinations. These symptoms persisted over a period of 6 weeks. The condition slowly abated but she never regained her former strength and vigor.

On *examination*, November 27, 1920, the very appearance of this woman was strikingly typical of Parkinsonism but without tremor. The expressionless face, the slurred speech, staring eyes and general rigidity were exceedingly suggestive. All reflexes were sharp but no Babinsky, clonus or Kernig's sign was elicited at any time. Eye grounds were clear, pupils normal and serologic findings negative. The condition has grown progressively worse.

*Case 21.*—F. H. Z.—, aged 39, butcher, unmarried, was formerly an alcoholic; but otherwise his previous history is unimportant. In March, 1919, he contracted a severe bronchitis which was recognized as influenza. This condition was closely followed by severe headaches, muscular jerkings, *diplopia* and drowsiness. During the height of the disease he was wildly delirious and

developed a troublesome hiccough. The acute manifestations were controlled within seven weeks but he remained a semi-invalid, complaining of pronounced exhaustion, stiffness of limbs and somnolence.

On *examination* January 3, 1921, the patient stood rigid, the face motionless, the muscles of throat, neck and spinal column tense, with characteristic stooping posture. The eyes however were bright and the mind active. The head could not be extended. As he walked, his steps were short and rapid with a tendency to stumble. The tendon reflexes were normal, sensibility unchanged, pupils regular, and eye grounds clear. No Kernig and no Babinsky signs were elicited. Serologic findings were negative.

*Case 22.*—M. E. D.—, aged 44, married, accountant, gave a history of an alleged influenza during the winter of 1917-1918. It was a mild attack and left no unusual ill-effects. Early in 1919 he found himself complaining of pains, more or less general, but especially severe in the nape of the neck. This was followed by increasing weakness of lower limbs and depression. He was admitted to hospital and soon thereafter presented the distinctive features of lethargic encephalitis.

On *examination* February 18, 1921, a mere glance at this patient was almost sufficient to warrant a classification of paralysis agitans. The bowed head, the tearful facial expression, the tremulous hands, the intense rigidity, and the short, reluctant steps, were truly typical. All reflexes responded promptly, also both pupils. Speech was slow and usually in monosyllables. Systolic blood pressure measured 130 mm. The body was fairly well nourished. Serologic findings were negative. Condition has remained unchanged during the past year.

*Case 23.*—F. E. Z.—, a married man, aged 47, contractor by occupation, had previously enjoyed robust health, with the exception of a severe influenzal illness, complicated by otitis media, during January, 1919. A partial recovery followed, and he returned to his usual occupation but never succeeded in regaining his former vitality and alertness. In August, 1919, he found himself becoming extremely awkward and no longer able to do things in his former skillful manner. His fingers were stiff and he was uncertain on his feet, especially when working on a ladder or scaffold. In December, 1919, he developed an acute illness with symptoms of slight fever, drowsiness, apathy, insomnia and *double vision*, and was confined to bed four weeks and has done no gainful work since.

On *examination*, November 27, 1921, this patient stood with the trunk and head stooping forward, and the elbows semi-flexed. All voluntary movements were slow and stiff, the face statue-like, and the arms did not *swing* as he walked. His gait was festinant. When he turned, his body moved *en masse*. Tremors of the *pill-rolling*

type were prominent in both hands and I was informed that this was the first symptom of his present disability. All reflexes were sharp but no Kernig or Babinsky sign was elicited. Pupils were round and active and eye grounds clear. Systolic blood pressure was 120 mm. Serologic investigations were negative.

#### CONCLUSIONS

These cases are reported merely for their clinical interest. They apparently disprove our former conception that paralysis agitans is practically confined to the pre-senile period of life as the majority of patients are under 40 years of age and two are under twenty. Post-encephalitic Parkinsonian syndrome seems to pursue a much more rapid course than the usual type of the disease and the prodromal or developmental period is undoubtedly shorter. Several of these cases were unmistakably atypical and if they are not actual instances of Parkinson's disease, it would be interesting to know to what classification they belong? One patient

(*Case 15*) died after eight months invalidism and during the progress of the malady, the possibility of a basilar meningitis was entertained. Unfortunately necropsy was denied.

Our knowledge of the etiology of this distressing situation remains indefinite, but the evidence serves to indicate that infections are active in no small degree. Whether or not these patients would have developed paralysis agitans, regardless of lethargic encephalitis, I am, of course, unable to ascertain. All of them gave a history of having been victims of sleeping sickness so-called, but in a few this information lacked adequate confirmation. It is, therefore, possible that their former illness was some other form of encephalitis or a meningitis, as conditions of this character have been erroneously confounded with lethargic encephalitis. The treatment of this new problem has been most disheartening. Hyoscine hydrobromate is of value in suppressing the tremors but nothing has proved helpful in combating the ravages of the disease.

THE ROSE BUILDING.

## DEATHS IN OHIO

*Benjamin F. Baker, M. D.*, Starling Medical College, Columbus, 1865; aged 78; died at his home in St. Paris, October 24, after a long period of illness. Dr. Baker was a veteran of the Civil War. His father was a pioneer physician of Champaign County, and followed by the son, the two had practiced medicine in St. Paris for more than 80 years. Dr. Baker was also proprietor of a drug store in St. Paris. He leaves his widow and two sons.

*Arthur Monteith Cole, M. D.*, University of Wooster, Medical Department, Cleveland, 1875; aged 67; member of the Ohio State Medical Association; died at his home in Akron, November 8. Dr. Cole had retired from medical practice. He was, however, one of Akron's leading citizens, prominent in business and civic affairs for many years.

*George H. Colville, M. D.*, Columbus Medical College, 1879; aged 67; member of the Ohio State Medical Association; died at Grant Hospital, Columbus, October 25. Death was due to blood poisoning resulting from an injury sustained when he accidentally struck his knee on a surgical knife while performing an operation in his office in Circleville four weeks earlier. Dr. Colville established his practice in Circleville in 1899, coming to that city from 20 years practice in Harrisville. For a number of years he had served with the utmost efficiency as treasurer of Pickaway County Medical Society and his death is a distinct loss to medical organization. Dr. Colville was active in fraternal

circles and in civic affairs, serving at the time of his death as president of the city council. He had been recently honored by the bestowal of the 33rd degree in Masonry. His wife, three daughters and one son survive.

*Alvin Edwin Drach, M. D.*, Cleveland College of Physicians and Surgeons, 1912; aged 33; died, November 5. Dr. Drach's home was in Cleveland, where he was at one time connected with the teaching staff at Western Reserve University. He served for fifteen months in the Army at Camp Upton.

*John F. Hobson, M. D.*, University of Wooster, Medical Department, Cleveland, 1868; aged 79; member of the Ohio State Medical Association and Fellow of the American Medical Association; died at his home in Lakewood, near Cleveland, November 7, after a brief illness. Dr. Hobson was actively engaged in practice until the day of his death. He was a veteran of the Civil War and a member of the Memorial Post, Grand Army of the Republic. For many years he was president of the Lakewood board of education. Surviving are his widow, one son and two daughters.

*Ralph Charles Kendig, M. D.*, Miami Medical College, Cincinnati, 1902; aged 46; member of the Ohio State Medical Association and Fellow of the American Medical Association; died at the Akron City Hospital, October 19, following an operation. Death resulted from acute dilatation of the heart. Dr. Kendig was a member of the staff of the City and People's Hospitals, besides being physician for a local rubber company and engaging in private practice. He served as coroner for Summit County from 1910 to 1914. His widow, father and one brother survive.

*George M. Kinsey, M. D.*, University of Wooster, Medical Department, Cleveland, 1878; aged

78; former member of the Ohio State Medical Association; died at his home in Cleveland, October 23. Dr. Kinsey studied abroad extensively, and at one time was a teacher of anatomy at Western Reserve Medical School. He is survived by his widow. Dr. Ralph K. Updegraff, Cleveland, is a nephew of the deceased.

*Henry A. Mackaman, M.D.*, University of Wooster, Medical Department, Cleveland, 1877; aged 76; died at his home in Bowerston, recently. His wife survives.

*Benjamin McDowell Sharp, M.D.*, Columbus Medical College, 1879; aged 78; member of the Ohio State Medical Association and Fellow of the American Medical Association; died at his home in Sidney, October 29, after an extended illness. Dr. Sharp, a native of Shelby County, began practice in Sidney the year he graduated from medical college. He took an active and constructive part in medical organization and at the time of his death was treasurer of the Shelby County Medical Society. He was a veteran of the Civil War. Surviving are his wife and one son.

*Frank Ernest Stokes, M.D.*, Hahnemann Medical College and Hospital of Chicago, 1882; aged 65; former member of the Ohio State Medical Association; died at his home in Marietta, September 8. Dr. Stokes practiced in Des Moines, Iowa, until 1917, when he located in Marietta. He leaves his wife and one son.

*Thomas Lynn Sutton, M.D.*, Johns Hopkins University Medical Department, Baltimore, 1916; aged 32; member of the Ohio State Medical Association; died at Grant Hospital, Columbus, November 4, from injuries sustained in an automobile accident near Columbus the night before. Dr. Sutton was a life-long resident of Zanesville and the son of Dr. H. T. Sutton, of that city, who for many years has been actively identified with the Ohio State Medical Association. At the news of Dr. Sutton's death the medical profession of the entire state bowed in grief for he was held in the highest esteem and affection, a young man of unusual promise, whose early success in his profession gave assurance that a brilliant future awaited him. At the conclusion of his medical studies Dr. Sutton entered the Navy and served with distinction as a surgeon on transport ships during the war. Since that time he had practiced in Zanesville. He was a member of the staff of Good Samaritan Hospital and in October had attended the convention of the American Hospital Association in Atlantic City as a delegate from that institution. Dr. Sutton was laid to rest in his Navy uniform and his body was accompanied by the entire Muskingum Academy of Medicine and a military escort consisting of his closest friends in the profession who had been in the service. Besides his parents, he is survived by five sis-

*Richard Whiteford, M.D.*, McGill University Faculty of Medicine, Montreal, 1857; aged 86;

died at his home in Toledo, October 10. Dr. Whiteford had practiced in Toledo 42 years. At one time he was professor of materia medica at the Toledo Medical College, and later served many years as city physician.

*Curtis Carrington Williams, M.D.*, University of Michigan Medical School, Ann Arbor, 1890; aged 59; member of the Ohio State Medical Association and Fellow of the American Medical Association; died at his home in Niles, November 11, from heart disease. Dr. Williams had practiced in Niles for 30 years. For eighteen months he served as a surgeon in the Army during the war, at Fort Riley and later at Camp Pike. He was the founder of the William McKinley Camp of the American Legion in Niles. He leaves his wife and two daughters.

*Ida Woolsey, M.D.*, University of Michigan Homeopathic Medical School, Ann Arbor, 1892; aged 69; died at her home in Xenia, October 13, from apoplexy. Dr. Woolsey had practiced in Xenia continuously since her graduation from medical college.

*Albert O. Zwick, M.D.*, Medical College of Ohio, Cincinnati, 1902; aged 56; died at his home in Cincinnati, October 22, from heart disease. Dr. Zwick was active in politics in Cincinnati and at times was a candidate for vice mayor of the city and for Congress on the Progressive ticket. He leaves his wife and one son.

*John Beall, M.D.*, Columbus Medical College, 1889; aged 61; died at his home in Detroit, October 23. Dr. Beall was a native of Cadiz, Ohio, the son of the late Dr. John S. Beall.

*F. Milton Friend, M.D.*, Ohio Medical University, Columbus, 1894; aged 77; died in Lamar, Colorado, October 23, from strangulated hernia.

*Winfield Scott Marshall, M.D.*, Medical College of Ohio, Cincinnati, 1872; aged 73; died in Chicago, October 4, from heart disease.

*Walter H. McKay, M.D.*, Ohio State University College of Medicine, Columbus, 1912; aged 32; former member of the Ohio State Medical Association; died in Monrovia, California, October 25, from tuberculosis. For four years Dr. McKay was assistant physician at the State Institute for Feeble-minded, Columbus. During the war he served as first lieutenant on a hospital train in France for two years and was later promoted to captaincy. He is survived by his wife and a son.

*Daniel Cook Moor, M.D.*, Toledo Medical College, 1898; aged 48; died at Punta, San Juan, Cuba, October 11, following an operation for appendicitis. Dr. Moor was a veteran of the Spanish American and World wars. He formerly resided in Toledo, but had lived in Cuba for many years. His wife and six children survive.

*Harry Milton Smith, M.D.*, Ohio Medical University, Columbus, 1903; aged 49; died in McKeesport, Pennsylvania, September 8, from chronic nephritis.

# Annual Inventory of Membership Strength Shows Hopeful Prospects for 1923 Through Concerted Team Work

Cleveland, Columbus, Rah! Toledo, Cincinnati, Rah!

Every member of the Ohio State Medical Association should cheer heartily for the "big four" who have attested their faith in medical organization and their purpose to uphold its cause in no uncertain terms in the past year. Together these four have added sixty-nine new members to the State Association membership roster, leading all other component societies in this activity.

Individually, the Cleveland Academy gained 32 members, rising from a 1921 enrollment of 600 to 632 in 1922; Columbus Academy annexed 14 to its 1921 certification of 363, bringing this year's total to 377; Toledo brought in 12 to swell the figure of 273 which marked its accomplishment in 1921; and Cincinnati added 11 to last year's total of 285.

Credit for this splendid record goes to the officers of these organizations who have charge of this important work—Dr. Lester Taylor, secretary-treasurer of the Cleveland Academy; Dr. James A. Beer, secretary-treasurer of the Columbus Academy; Drs. W. W. Alderdyce, treasurer of the Toledo Academy; and Dr. A. G. Drury, treasurer of the Cincinnati Academy. These men have been untiring in their efforts and sincere appreciation is due them.

The collective gain made by the four large academies of the state is even more significant in view of the fact that the total State Association membership in 1922 failed to reach the high mark established in 1921. On November 15, the 1922 enrollment stood at 4828, showing a loss of 39 members from the 4867 figure in 1921. While this slight loss is regrettable, it is not attributed to lack of enthusiasm for medical organization, but to the deaths of former members and the removal of a considerable number from the state.

The accompanying tabulation of comparative memberships for the two years shows that the large academies were not alone in the campaign to enlist new material. The thirty-five counties, printed in black face type, equalled their 1921 enrollments, and many of them made substantial gains, ranging from seven in Butler County; six in Sandusky; five in Ashtabula, Clermont and Defiance; four in Preble; three in Brown, Crawford and Muskingum; two in Fairfield, Hancock, Medina, Montgomery and Van Wert; to one each in Ashland, Athens, Campaign, Fayette, Lorain, Madison, Noble, Portage, Shelby and Williams counties.

The seven counties marked by the asterisk should also be considered as having attained one hundred per cent. membership. They have been unable to certify the number enrolled the previous year because of deaths or removals from the county and the fact that no new physicians have moved in who could be secured.

Like any live-wire business organization, the State Association has taken inventory of its achievements during the past year and its prospects for the coming year. It is hoped that the component society officers will do likewise and immediately take steps to insure future success by securing as many members as early as possible. Each member should respond promptly with a check for his own dues and do what he can to get others in line. There is no such thing as a step backward or a standstill in an efficient organization.

At this writing 219 members had been certified for 1923 and Hamilton County led the procession with 170 paid-up members. Practically all counties had reported favorably on prospects of qualifying their entire membership, with some additions, before December 31st.

County	1921	1922	County	1921	1922	County	1921	1922	County	1921	1922
Adams	14	15	Fayette	13	14	*Logan	38	36	Preble	16	20
Allen	88	86	Franklin	363	377	Lorain	77	78	Putnam	31	29
Ashland	23	24	Fulton	28	26	Lucas	273	285	*Richland	55	53
Ashtabula	42	47	Gallia	28	31	Madison	17	18	Ross	39	39
Athens	49	50	Geauga	9	9	Mahoning	126	118	Sandusky	39	45
Auglaize	31	29	*Greene	37	36	Marion	58	55	Scioto	56	53
Belmont	61	49	Guernsey	29	26	Medina	22	24	Seneca	31	27
Brown	11	14	Hamilton	485	496	Meigs	13	12	Shelby	22	23
Butler	74	81	Hancock	34	36	Mercer	27	22	Stark	135	128
Champaign	24	25	*Hardin	23	21	Miami	46	45	Summit	251	229
Clark	72	71	Harrison	12	11	Monroe	8	7	Trumbull	52	49
Clermont	18	23	Henry	26	21	Montgomery	184	186	Tuscarawas	45	39
Clinton	24	23	Highland	23	21	Morgan	15	13	Union	17	17
Columbiana	82	75	Hocking	11	9	*Morrow	11	10	Van Wert	24	25
Coshocton	22	20	Holmes	13	13	Muskingum	58	61	Vinton	8	7
Crawford	33	36	Huron	25	20	Noble	8	9	Warren	27	25
Cuyahoga	600	632	Jefferson	20	20	Ottawa	16	13	Washington	38	35
Darke	50	44	Jefferson	49	45	Paulding	21	20	Wayne	35	33
Defiance	13	18	Knox	25	23	Perry	21	20	Williams	26	27
Delaware	18	17	Lake	26	18	*Pickaway	25	24	Wood	42	40
Erie	35	33	Lawrence	28	26	*Pike	9	8	Wyandot	8	8
Fairfield	33	35	Licking	49	47	Portage	24	25			
									Total	4867	4828

## PUBLIC HEALTH NOTES

Declaring that 13 per cent. of the public school children in Cincinnati are not of average mentality and are suffering from some form of nervous disorder, being either epileptic, feeble-minded, "nervous" or mentally ill, Dr. Emerson A. North, superintendent of Longview Hospital, in a recent address before the City Club urged the immediate establishment of a public psychiatric clinic as the logical way to attack the mental hygiene problem. Fully half of this number can either be cured definitely, corrected or trained to such an extent as to prevent them from becoming public menaces and charges, according to Dr. North.

—Youngstown's birth rate last year was surpassed by that of only two cities over 100,000 in population in United States, according to figures contained in a bulletin issued by the Department of Commerce, on infant birth and mortality statistics for 1921 for the entire country. The 1921 birth rate for Youngstown is 28.7 per 1000 population. Two Massachusetts manufacturing towns, Fall River and New Bedford, showed higher figures, with respectively 30.7 and 29.2 per 1000.

—To curb vice and prevent the spread of social diseases are the objects of a health institute being advocated by the chief of police of Toledo, for health training and educating the people to live clean lives. Such an institute in Chicago is said to reach 1,000 persons daily.

—One of the big projects to be pushed by the public health department of the Columbus Woman's Club this year is the establishment of public baths, swimming being recognized not only as a recreational sport but a valuable aid to health.

—"The Reward of Courage", an educational film dealing with cancer as a curable disease, was exhibited by the State Department of Health during the Cancer Week campaign, November 12-18.

—Tuscarawas County has a new public health nurse, Miss Anna L. Virtue, of Detroit, employed by the local Red Cross chapter. The county board of health also plans to employ a nurse who will work in conjunction.

—A clinic for cripples was conducted at Lima under the auspices of the Lion's Club, and the Allen County Medical Society, with Dr. J. C. Ryerson, Chicago, as diagnostician. In the evening Dr. Ryerson addressed the physicians on "Infantile Paralysis".

—A survey of all free clinics in Dayton is being made by a committee from the Montgomery County Medical Society. The purpose of

the survey is to aid those in charge of the clinics to provide treatment for worthy persons and determine a fair rate of fee for persons who are able to pay for services.

—Dr. D. R. Kline, Cleveland registrar of vital statistics at but \$1,800 a year, resigned rather than comply with the recent ultimatum of the mayor that all city employes must work full time. Dr. Kline declared the registrar's duties were supervisory and required about two hours a day. Dr. R. J. Ochsner, in charge of the division of baby welfare, has taken over the registrar's work.

—More than 7,000 Ohioans suffered from smallpox during 1921, and during the first nine months of the present year 2,045 cases have been reported, according to Dr. F. G. Boudreau, chief of the division of communicable diseases, State Department of Health. The disease has been endemic in Ohio since 1916, Dr. Boudreau points out, and little progress in prevention has been made for two reasons—lack of vaccination and indifference of the public to the present mild form of the disease.

—During the last seven years, 162 Columbus residents have died of cancer, according to statistics made public by Dr. J. A. Beer, city health commissioner, in connection with an appeal for the observance of cancer week, November 12-18. Of these deaths, 214 occurred in 1916, 229 in 1917, 228 in 1918, 266 in 1919, 250 in 1920, 245 in 1921 and up to date this year, there have been 240 deaths from the same cause.

—Following a meeting of representatives of the Cincinnati and Hamilton County health departments, board of education, College of Medicine of the University of Cincinnati, General Hospital, and Public Health Federation, October 30, to discuss the prevention and treatment of heart disease, it was announced that a branch of the National Association for the Prevention of Heart Disease would be organized in Cincinnati. It is estimated that more than 8,000 persons in that city, many of whom are children, are afflicted with diseases of the heart. Its first aim will be the establishment of clinics for the treatment of children, according to the announcement of the local organization.

### Antivivisectionists Routed

The Antivivisection forces in Colorado went down to decisive defeat in the November election, when an endeavor was made to terminate animal experimentation by making it a criminal offense. The proposal was defeated by a six to one vote.

Under the terms of the drastic measure which the Antivivisectionists proposed, it would have been unlawful even for farmers to employ serums in combating hog cholera or tuberculosis in milk cows.



## Enormous Costs for "Welfare", Dangers of Socialization, Problems in Taxation, Public Health and Child Hygiene Are Illustrated at Welfare Conference

Topics pertaining to public health, adult dependents, delinquents, community organization, taxation, industrial relation and children were discussed at the thirty-second annual meeting of the Ohio Welfare Conference, which was held in Columbus during the first three days of November, with more than eight hundred delegates attending. No official endorsement of any of the proposals advanced in the papers read was given, with the exception of the feeble-minded situation. In this instance, a resolution was adopted urging the state to furnish adequate care and treatment for the feeble-minded of Ohio.

The conference, which is announced as a "forum for open discussion of problems of public welfare, a means of disseminating information concerning philanthropic endeavor and to prompt social reform", was established by an act of the General Assembly several decades ago so that officials of the various county and city institutions might meet with representatives of private agencies interested in welfare work and discuss common problems.

Perhaps no single statement better illustrates the remarkable extent of "welfare work" than the assertion of Prof. H. L. Lutz, economist of Oberlin College, that approximately 84 per cent. of the average expenditures of the 48 states of the union goes for welfare work and but 16 per cent. is applied to the cost of administering government. In 227 cities with population over thirty thousand for last year, 32 per cent. of the expenditures goes to pay government costs and 68 per cent. to maintain welfare work. Such is the dangerous economic tendency in "socialization."

### COUNTING THE COST

It is Prof. Lutz's belief that either the welfare activities must be limited, or new means devised for raising revenue. He pointed out that for the year 1920, over \$993,000,000 was reported for federal income and profit tax in Ohio. Of this, 70.6 per cent. was represented in the form of salaries and wages. It would seem from these figures that here indeed is a direct example of "too much government."

A state income tax, he says, would materially assist in raising additional revenue. In view of the large amount reported from personal earnings, he said that the professions were "heavily subsidized" if these incomes were spent and not invested in taxable property. If this policy of state income tax is to be adopted there will be a penalty on individual effort and initiative.

Judge John R. Cassidy, of the Ohio Tax Commission, urged citizens to take a more active in-

terest in taxation. For the year 1921, he said \$220,000,000 were raised for state and local purposes and \$289,000,000 for federal purposes, making a total of over a half billion dollars for Ohio, or \$100 for every man, woman and child in the state. A rather high cost for the privilege of citizenship.

Prof. C. D. Laylin, of Ohio State University, believes that no real solution will be arrived at in Ohio's tax trouble until the 48 states of the union get together and adopt a uniform system.

The section on health, which was under the direction of Bleecker Marquette, of the Cincinnati Council of Social Agencies, had an extensive program.

### A VIEW OF NURSING

"In their need for nurses to care for patients," Dr. C. G. Parnell, Director of the University of Michigan Hospital, said in discussing the Rockefeller Foundation report on Nurse Education, "hospitals have pretty largely neglected to provide proper instruction for student nurses. The hours of duty have been long and living conditions often have been far from ideal. The situation at the present time is changing decidedly for the better and increased numbers of applicants are asking for admission to the better training schools."

A paper on the nursing problem as it affects the family of moderate means was read by Norma Selbert, of the College of Medicine, Ohio State University.

Less than 5 per cent. of confinement cases, she stated, are cared for in hospitals. The inadequate number of modern hospitals and the reluctance of patients to use beds procured at low cost, contribute to this condition. The small number of public health nurses available for visiting homes, superstitions, traditions and ignorance regarding agencies which provide nursing care are further factors to be considered, she said.

The solution suggested by the speaker contemplated a high school course in preventive medicine and first aid which would initiate a movement that would gather momentum and achieve the desired end. Local institutes in home nursing, use of the department of nursing in the extension service of the State university would also assist, it was said.

### HIGHER PRELIMINARY STANDARDS

"In the seven years of existence of the Ohio laws regulating the education of nurses," Caroline V. McKee, of the State Medical Board asserted, "the schools of nursing have been climb-

ing gradually toward the high school graduate as the proper person to take up this profession."

"At the present time," it was pointed out, "over 87 per cent. of the pupils in nursing schools that are accredited by the Ohio Medical Board, are high school graduates, yet we would like to say that the state is ready now to adopt the pre-requisite education of four years' high school as recommended by the Rockefeller Foundation."

"At present, there are many schools that do not admit a student with less education and could, with a little readjustment of their curriculum give the 28 months' course. There is nothing written in the statutes of Ohio regulating the practice of nursing that will need to be changed before this recommendation can be adopted."

Dr. Anna E. Rude, Director of the Division of Hygiene, Childrens' Bureau, U. S. Department of Labor, Washington, explained the purposes and intent of the Sheppard-Towner Maternity act. This act, she said, clearly specified educational work and not care and treatment. Dr. J. H. J. Upham, Chairman of the Public Policy and Legislation Committee of the Ohio State Medical Association, discussed Dr. Rude's paper.

#### A HEALTH POLICY

The first requisite in a health program for Ohio, Dr. R. G. Paterson, Director of the Ohio Public Health Association explained, is the recognition of health work as a state function of major importance and a state responsibility to be born by taxation, and to be successfully performed by the state, must be assured a continuous policy.

"This principle," he feels, "is so self-evident as to only need mention to be accepted, and yet health workers throughout the state are faced today with the statement enacted into law that the official health work of the state can be efficiently and authoritatively performed under a change of governor and director of health or a mayor and health commissioner every two years. Anyone who is at all conversant with the facts, knows that such a proposal is fatal to the whole cause of health in this state or any other state where such laws prevail," he said.

#### MENTAL HYGIENE PROBLEM

Because of the inability of Dr. V. V. Anderson, Director of the Division of Delinquency, National Committee on Mental Hygiene, to attend, Bleecker Marquette took his place on the program and explained what Cincinnati was and expects to do in the mental hygiene field. Dr. E. A. Baber, Superintendent of the Dayton State Hospital, discussed the paper.

"Insanity as a specific term," Dr. H. S. MacAyeal, Director of the State Department of Welfare, told the Health Section, "is gradually becoming obsolete by public education and in its place we are learning to define the different

forms of mental affliction in terms of malady.

Ohio has appointed a special committee to study the mental hygiene problem and submit recommendations. This committee which is composed of Dr. E. A. Baber, Superintendent of the Dayton State Hospital; Dr. C. W. Stone, of Cleveland, Professor of Mental and Nervous Diseases at the Western Reserve University; Dr. T. A. Ratliff, Cincinnati, Chairman of the Mental Hygiene Committee of the Ohio State Medical Association; Dr. E. M. Baehr, Director of the Bureau of Juvenile Research; and Dr. E. J. Emerick, Superintendent of the Columbus Institution for Feeble-Minded, is expected to make a report soon.

The aim of public health, as viewed by Dr. MacAyeal, is for physical fitness and good health, but he asserts that he does not "look for much progress to society by advocating fitness and good health for all so long as the mental side is ignored. It would be of but little use to develop a race of physically strong but mentally weak."

Tests conducted "on the hill," he pointed out, indicate that between 8 and 10 children can be expected in four generations of a normal union, while between 45 and 70 can be expected in four generations from a union between sub-normals.

The feeble-minded female, he declared, was the chief offender and one of the first steps for custodial care would be to "put out a drag net and bring together and segregate all of the feeble-minded females in the state.

All of the state institutions, he feels, should give complete mental and physical examinations and permit each patient to have advantage of all therapeutic agents, etc.

#### INSTITUTIONAL SERVICE

Medical and surgical facilities at the institutions are being developed, he explained. At first this work proceeded slowly, but it is expected to be pushed in the immediate future. One eastern hospital, he stated, spent \$1.50 per patient, per year for medical and surgical supplies. This figure was scoffed at by the speaker who added that the Ohio institutions were not far ahead of this inadequate expenditure.

Most of the medical supplies, he added, are purchased by a person who does not have the remotest idea of their uses and importance and in consequence often inferior chemicals are furnished medical officers to use in treating patients. The law, he said, was partly responsible for it provides for the purchase of supplies from the lowest and best bidder.

A resume of the development of the care and treatment of the mentally afflicted was given by Dr. C. W. Stone, Cleveland. He compared the per diem cost of patient care in private and state institutions. In a Cleveland hospital, the cost varies between \$3.50 and \$4.50 a day against approximately 60 cents at the state institutions.

Patients, he advocated, should be taught some useful employment so that they might be occupied and assist in their maintenance costs.

Dr. R. G. Leland, Director of the Division of Hygiene, State Department of Health was elected chairman; Dr. Walter Brown, National Child Health Council, Mansfield, Vice Chairman; and Jesse L. Chapman, Ohio Public Health Association, secretary of the Health Session for the coming year.

At the final session of the conference, Dr. Walter Brown, who is in charge of the five-year health demonstration now being conducted at Mansfield under the auspices of the National Child Health Council explained the development of the work.

Judge Charles Hoffman, of the court of domestic relations, Cincinnati, was elected president of the 1923 conference, which is to be held at Lima next fall.

## Term "Injury" in Ohio Workmen's Compensation Law Construed by Supreme Court

The Supreme Court of Ohio has decided that the term "injury" in the Workmen's Compensation Law does not include diseases contracted in the course of employment, and accordingly holds that death from typhoid fever is not compensable. The question of the compensability of occupational diseases was not involved in the case. The following is a portion of the court's opinion:

\* \* \* But in view of the constitutional interpretation, in view of the fact that during the eight years that the compulsory compensation law has been in force, the industrial commission has given the term "injury" an interpretation which excludes diseases which are contracted as distinguished from diseases which are occasioned by or follow as a result of some physical injury, and in view of the fact that to interpret the term "injury" as including diseases generally would enlarge the scope of disabilities compensable to such an extent as to either bankrupt the fund or require a complete readjustment of premiums upward, we hold that, if the scope of cases compensable is to be extended, it should be done by unambiguous legislative enactment rather than by judicial construction. For it must be recognized that if the term "injury" is to be construed to include typhoid fever contracted in the course of employment, it may as well include influenza, pneumonia, tuberculosis, smallpox, ordinary colds, rheumatism, and practically every disease which may be contracted by workmen in the course of employment, and the workmen's compensation department will become a health and life insurance department for workmen, compulsorily supported by employers, and the constitutionality of the whole scheme be endangered.

This decision reverses the judgment of the Court of Common Pleas of Hamilton County and the Ohio Court of Appeals in the case of the Industrial Commission vs. Cross et al., the history of which, briefly, is as follows:

Ezra Cross, son of Mary A. Cross, and brother of Maize Cross, defendants in error, died on May 21, 1920, his death being caused by typhoid fever. Defendants in error filed an application with the industrial commission of Ohio claiming that they were dependent upon Ezra Cross, and that he died as a result of injuries received in the course of his employment. The industrial commission of Ohio denied compensation. An

appeal was thereupon taken to the Common Pleas Court of Hamilton County.

The amended petition alleged that the city of Cincinnati, through its park department, was a contributor to the insurance fund of the state of Ohio; that Ezra Cross was an employe of the park department, and in April, 1920, contracted typhoid fever by drinking water from a spring located in the park near the point where he was employed; that he died on May 22 of such fever; and that neither Ezra Cross nor the city of Cincinnati knew the water was contaminated with typhoid fever germs.

A demurrer was filed to this petition, which was overruled. Trial was had and judgment rendered against the industrial commission. Error was prosecuted to the Court of Appeals, where the judgment was affirmed; whence the case was carried to the Supreme Court of Ohio.

The decision does not, however, abrogate the sections of the law which enumerate definite occupational diseases which are now included under the workmen's compensation law; but even as to those diseases listed as definitely "occupational" they must be shown to have developed directly from the special hazards of the particular industry in which the employe is engaged.

### RED CROSS ROLL CALL

The American Red Cross annual roll call closed November 30th after an intensive drive to secure "Every American Everywhere a Member of the Red Cross."

The fundamental work of the Red Cross, as emphasized in the campaign for funds includes:

1. Home service work for ex-service men and their families.
2. Public health nursing service in rural communities.
3. Preparedness for relief in disaster.
4. Continuation of the Junior Red Cross work.

A meeting of the Advisory Committee on Health of the American Red Cross, of which Dr. J. H. J. Upham, Columbus, is a member, will be held in Washington, December 2.

## ACADEMIES AND COUNTY SOCIETIES

### Cincinnati

(L. H. Schriver, M.D., Secretary)

"The Capillary Circulation" was the subject of an address by Dr. August Krogh, professor of physiology, University of Copenhagen, Denmark, delivered before a joint meeting of the Daniel Drake Society and the Cincinnati Academy of Medicine, October 30, at the College of Medicine, University of Cincinnati.

Dr. Krogh, a winner of the \$40,000 Noble Prize for his contributions to science, is considered a world authority on the subject of physiology. The medical profession of southern Ohio were invited to attend this meeting.

Preceding the lecture a dinner in honor of Dr. Krogh was given at the Queen City Club by members of the Cincinnati Academy of Medicine. Dr. Kenneth D. Blackfan was in charge of arrangements for the meeting.

### Columbus

(J. A. Beer, M.D., Secretary)

Columbus Academy of Medicine had as its guest, October 17, Dr. Clifford G. Grulee, of the department of pediatrics, Rush Medical College, who gave a splendid address on "Unaccounted Factors in Infant Feeding".

### Cleveland

(Lester Taylor, M.D., Secretary)

Cleveland Academy of Medicine, in regular session, November 17, enjoyed an address by Dr. James T. Case, of the surgical staff of Battle Creek Sanitarium, on "A Discussion of the Effects of the New Deep Roentgen Therapy". The second item on the program was the showing of the cancer film, "The Reward of Courage." Nominations for the coming annual election were announced, adding to the enthusiasm of the meeting.

#### FIRST DISTRICT

*Warren County Medical Society*, in regular monthly session at Lebanon, October 3, elected the following officers for the ensuing year: Dr. Edward Blair, Lebanon, president; Dr. Henry M. Brown, Kings Mills, vice-president; Dr. N. A. Hamilton, Franklin, secretary and delegate to annual meeting; Dr. Mary Cook, Waynesville, treasurer; Dr. B. H. Blair, Lebanon, legislative committeeman, and Dr. S. S. Stahl, Franklin, medical defense committeeman.

#### SECOND DISTRICT

*Darke County Medical Society* had as its guests at a meeting in Greenville, October 12, Drs. L. R. Courtright and S. H. Ashmun, of Dayton. The former spoke on "The History as an Important Factor in the Diagnosis of Gall Bladder, Ulcer and Appendix", and the latter on "Some Phases of Tuberculosis in Infancy and Early Childhood".

No better papers have been presented before the society, both being thoroughly practical and helpful to the general practitioner. Attendance 30.

The annual election of officers, held on November 9, resulted in the selection of Dr. J. A. Clark, Savona, as president; Dr. W. T. Fitzgerald, Greenville, vice-president; Dr. A. F. Sarver, Greenville, reelected secretary-treasurer; Dr. S. A. Hawes, Greenville, legislative committeeman; B. F. Metcalfe, Greenville, correspondent; Dr. C. F. Puterbaugh, Paint Creek, censor.—B. F. Metcalfe, Correspondent.

*Montgomery County Medical Society's* bi-weekly meetings have been featured by programs of wide interest. On October 20, "New Ideas of Thyroid Toxemia" was the subject considered, with the division of topics as follows: pathological, Dr. Curtis Ginn; medical, Dr. Leonard Stutsman; surgical, Dr. Robert C. Austin. Drs. W. H. Delscamp, F. I. Shroyer, R. A. Bunn, L. G. Bowers, W. A. T. Ryan and F. C. Payne participated in the discussion.

On November 3rd a symposium on "Prevention of Heart Lesions as Sequelae of Diseases of Childhood" was given, including: (1) "Diseases Peculiar to Children", Dr. T. H. Dickinson; (2) "Diseases of Nose and Throat", Dr. R. S. Binkley; (3) "Focal Infection—Medical", Dr. H. F. Patten; (4) "Focal Infection—Surgical", Dr. A. F. Kuhl; (5) "Child Hygiene", Dr. S. H. Ashmun.—H. H. Williams, Secretary.

#### THIRD DISTRICT

*Hancock County Medical Society* had an interesting meeting at Tiffin, November 9. There was a spirited discussion of the Sheppard-Towner Act and the proposed program of the State Department of Health in carrying out its provisions. The society has raised its yearly dues to \$10.00. In December a committee will be appointed to publish educational medical columns in the county papers to offset the quack articles that are constantly appearing. This committee will work in connection with the local board of health.—Nelia B. Kennedy, Secretary.

*Logan County Medical Society* held its regular monthly meeting in Bellefontaine, November 10. Twenty-two physicians were present. In the annual election of officers Dr. F. R. Makemson, Bellefontaine, was chosen president; Dr. F. E. Garver, Degraff, vice-president; Dr. W. H. Carey, Bellefontaine, secretary-treasurer; Dr. W. W. Hamer, Bellefontaine, legislative committeeman; Dr. E. R. Henning, Bellefontaine, delegate, and Dr. W. C. Pay, Bellefontaine, alternate. Dr. Wells Teachnor, Columbus, ex-president of the State Association, read a very able paper on "Chronic Diarrhea and the Office Treatment of Ano-rectal Diseases", which was especially instructive and emphasized the practical points met with in daily practice.—M. L. Pratt, Secretary.

#### FOURTH DISTRICT

*Sandusky County Medical Society* members

were guests of the Bellevue Medical Society at a chicken dinner at Hotel Bourdette, October 26. The guests of honor were Drs. McGavran, Columbus, and Herrick and Placak, Cleveland.

Dr. Chas. McGavran read an excellent paper on "Diabetes Mellitus, Management and Care," in which he demonstrated by means of charts the course of the disease and relative values of various articles of diet. These must all be learned if one is to take intelligent care of a diabetic. With this care an average of two years is added to the life of each and every diabetic which means a saving of 2,000,000 years for our nation annually.

Dr. Fred C. Herrick's paper on "Symptomatology and Diagnosis of Surgical Disease of Upper Urinary Tract" was a masterpiece. His discovery of new points in the anatomy of ureter was heartily received. The clearness with which he made his differentiation of diseases at various levels was marvelous. His emphasizing the fact that every case of hematuria should be minutely examined should be carefully noted by all practitioners.

Dr. Placak rounded out the evening with a detailed discussion of "Consideration of Diseases often mistaken for Tuberculosis." He showed that the presence of rales has been discovered in patients with diseased teeth, adenoids and tonsils, which rales promptly disappeared when foci were removed. Nasal disease is another, also influenza. Cracked-Pot sound has been noted in emphysematous subjects and has misled the best of clinicians. Other diseases, abscess of lungs, cancer of lungs, chronic appendicitis, cardiac disease, syphilis and hyperthyroidism. The differential diagnosis was carefully outlined and everybody felt the necessity for brushing up on all conditions mentioned.—C. I. Kuntz, Secretary.

#### FIFTH DISTRICT

*Lorain County* Medical Society had an enthusiastic meeting at the Lorain Public Library, October 10, with 20 members present. The subject of "Grave's Disease", presented by Dr. E. E. Sheffield, Elyria, in very scholarly manner, was well received and thoroughly discussed. While the society appreciates the speakers from outside, it is gratifying to have its own members present worthy papers and they are always given good discussions.—W. E. Hart, Secretary.

*Trumbull County* Medical Society convened in Warren, October 26. Dr. H. N. Cole, Cleveland, gave an address on "Industrial Dermatoses", with stereoptican illustrations. Dr. Ralph W. Elliott, of the medical department of the National Lamp Company, Cleveland, also gave a talk on "Health Education in Industries", illustrated with stereopticon and motion pictures. Both papers were much appreciated. Preceding the meeting Dr. Cole conducted a skin clinic.—News Clipping.

#### SIXTH DISTRICT

*Portage County* Medical Society, in session on October 3, heard an excellent paper by Dr. R. D. Worden on "The Significance of Albumen in Urinalysis". Dr. L. A. Woolf, Ravenna, reported a case of rubber poisoning with unusual mental symptoms, and Dr. G. J. Waggoner, Ravenna, a case of actinomycosis of the lung, which he had diagnosed after the young man had spent three years in New Mexico undergoing treatment for tuberculosis.—E. J. Widdecombe, Secretary.

*Summit County* Medical Society's meeting at the Peoples Hospital, Akron, November 7, was attended by 71 physicians from Rittman, Peninsula, Wadsworth, Barberton, Akron, Cuyahoga Falls and Doylestown. An illustrated lecture on "Lesions of the Lower Spine" was given by Drs. J. H. Selby and A. H. Stall, and discussed by Drs. W. A. Hoyt, H. R. Conn, W. S. Chase, and R. H. McKay. The new constitution received its second reading and was adopted after several changes were made.—A. S. McCormick, Secretary.

#### EIGHTH DISTRICT

*Licking County* Medical Society met at the Hotel Warden, Newark, October 26. Dr. James M. Fassig, Zanesville, was the essayist of the occasion and his subject, "The Roentgenologist's Relation to General Medicine and Surgery". Discussion was opened by Dr. W. E. Boyer.—W. E. Shrontz, Secretary.

*Muskingum County* Medical Society, meeting at the Zanesville Chamber of Commerce, November 1, had 23 members in attendance. Papers were read by Dr. W. A. Samuell and J. M. Pedicord, one technical, the other humorous and touching on subjects which should be close to the hearts of all medical men. Both papers were heartily received. Refreshments followed the program.

The society responded with a full attendance to a call for a special meeting, November 5, to take action on the death of its valued member, Dr. Thomas L. Sutton. The following resolutions were adopted:

"In this separation, the words, 'In the midst of life, we are in death' are truly proved. It comes in the twinkle of an eye. Dr. Tom, as he was so familiarly known, was in the full vigor of his youth, with a powerful mind, strengthened by education so thorough that he was above small and petty short-comings. He was ever ready to give uplift and sympathy. A true man, a man among men, and by his genial manner, which in itself was characteristic, endeared himself to all with whom he came in contact. Today, we as fellow members, who acutely feel our loss in this untimely death, are trying to express one thought, one word, that may assuage the grief in his home circle, but we feel helpless to reach the inner confines of his home.

"We, therefore, call on a Higher Power, a power to whom we all must bow, to strengthen his father, who is also a fellow member, whose loss is so overwhelming; his mother, with her ever ready care and tender love; his sisters,

whose lives have been so intertwined with that of an only and well beloved brother; to help and sustain them in this great sorrow which has come so suddenly, without warning. Our words fail us. The medical profession is proud of Dr. Tom Sutton and we, individually resolve to devote ourselves to silent and reverential meditation, as a compact to his memory."

—Beatrice Hagen, Secretary.

#### NINTH DISTRICT

*Gallia County* Medical Society's monthly meetings are better attended than formerly. At the September meeting Dr. E. R. Shafer of the State Department of health gave a lecture on diphtheria and a demonstration of the Schick test at the Gallia County Children's Home. The reactions following were in accordance with the usual percentage of cases indicating susceptibility to diphtheria. The subject discussed at the previous meeting was "States of Mental Deficiency."—Milo Wilson, Secretary.

#### Sixth District Entertained at Massillon

The 194th session of the Union Medical Association of the Sixth Councilor District was held at the Massillon State Hospital, November 8, with Dr. J. P. DeWitt, Canton, the president, in the chair.

Dr. H. W. Welland, Canton, gave a paper on "The Treatment of Syphilis." He made it very evident that he did not handle his cases with a tack-hammer, but with a trip-hammer. In brief he said (1), be sure you have made a proper diagnosis; (2), have a thorough understanding of the pathology of every case; (3), administration and treatment should be governed by the pathology; (4), the etiology and prophylaxis of syphilis should be taught in our public schools; under the supervision of the State Department of Health; (5), the average initial case requires three courses of Salvarsan, not less than 20 in all, with Mercury and mixed treatment as outlined above; (6), if erring in the treatment of syphilis, do so on the side of too much rather than too little; (7), the patient should be under careful observation for five years.

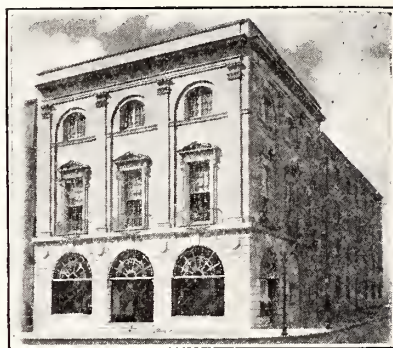
Dr. Ray S. Friedley, Akron, in a paper on "Congenital Syphilis", gave a resume of the various causes which led up to this disease, and of the methods whereby it may be modified or controlled. He ventured the assertion that congenital syphilis is more prevalent today than was formerly thought. He said there is really no time when it cannot be transmitted; that it cannot be transmitted to the ovum and live; the Wassermann test is not always positive in definitely known cases, and at times is of no value before two months of age; that Profeta's Law has been proved quite often of late, and that until we will have ALL death certificates signed correctly, we will not know the percentage of syphilitic cases.

In the course of discussion which followed these few points were brought out:—That 10 per

cent. of the population of the United States is syphilitic. The reason we know of more cases today than formerly is because of more accurate methods in making diagnosis, hence we are liable to err that certain conditions, or methods of treatment may be the cause. Warning was given against the use of unproved remedies, whether new or old, as exploited by the manufacturers.

Dr. Henry C. Eyman, former superintendent of Massillon State Hospital, was on the program for a paper on "The Psychology of Diseases in General", but owing to a recent throat trouble he was obliged to forego the attempt, much to the disappointment of the society which is always glad to hear Dr. Eyman.

The afternoon program, given by the staff of the hospital, was extremely interesting and helpful throughout. Dr. Arthur G. Hyde, superintendent, first read a paper on "Some Sidelights on Dementia Praecox." He was followed by Dr. Fred L. Rhodes on "Modern State Hospital Methods". Dr. Rhodes said over 4,500 cases of the late war are now in state hospitals taking treatment; over 100 children are borne each year in Ohio by mothers who were at one time inmates of state hospitals, and that on an average 12 patients a week are admitted to the state hospital. Dr. W. E. McVay then presented six cases of parencis, different types; Dr. Harriet E. Adams, three cases of melancholia, different types; Dr. W. W. Young, pathologist, two cases of paresis; Dr. Julia Donahue, six cases of mania, different types; Dr. R. R. Reynolds, eye and ear specialist, three cases of traumatic psychosis. The next meeting which is the Annual Meeting, and usually full of interest, will be held in Akron on February 13.—J. H. Seiler, Secretary.



Above is the new home of Hynson, Wescott and Dunning in Baltimore, Md. The sales department of this national drug firm comprises 19 men who visit physicians in all parts of the United States but do not sell goods. Thirty-five of their products have been accepted by the Council on Pharmacy of the A. M. A. and are advertised in this *Journal*. None of their preparations are offered direct to the public but are introduced to the medical profession for the use of physicians and their patients.

## The Pay Clinic—An Investigation and Recommendations on Policy by a Joint Committee

The following report was submitted to the New York County Medical Society as the product of a joint committee, representing the Yorkville Medical Society, the Eastern Medical Society, the Harlem Medical Society and the New York Surgeons Association, under the auspices of the New York County Medical Society. The report covers an investigation of the activities and operation of the Cornell Pay Clinic which was chosen as the subject for study because of its type, size and standing in the great community in which it has been established. So far as present advices go, this was the first report by a committee representing a medical society or a combination of medical societies on the subject covered, which has come to be a subject of widespread interest among the medical profession throughout the United States.

### REPORT OF THE COMMITTEE

Because a movement toward pay clinics has already taken definite shape in this city in the form of the Cornell Pay Clinic; because the public at large is deeply concerned and because the activities of the pay clinic must inevitably touch every physician—general practitioner and specialist—it was deemed advisable to have the combined economic and legislative committees of several of the larger local medical societies study the subject impartially, and formulate such recommendations and suggestions as seemed appropriate. The studies of the committee were considerably facilitated by the courteous and frank attitude of the heads of the Cornell Pay Clinic. The committee deemed it best to state frankly the faults in medical and dispensary practice which have, perhaps, accelerated the movement for pay clinics and to indicate suitable remedies, when possible.

### FAULTS IN MEDICAL PRACTICE

1. *Inordinate Fees of the Specialist.*—It is common knowledge that a patient is often sent, by the practitioner, not to one but to several specialists, with a net result of conflicting opinions and inordinate expense. Private diagnostic institutional groups have not lessened this evil—for evil it is—because their combined fees are large and the correlation of examinations by various specialists is by no means always correct.

Although it is not the function of the committee to regulate the specialist's fee, it should be indicated that people treated should be charged in accordance with their income. The referring physician is usually the most competent person to give reliable data on the financial status of the patient. When indicated, the organization of group practice, with less expensive overhead, and a moderate lump charge for all necessary types of special examination, would be more equitable to the patient than the usual diagnostic institution examination. The committee suggests further concrete study of this as a problem for the Committee on Civic Policy.

2. *Improper or Careless Treatment at Dispensaries.*—The examinations here are, of necessity, often incomplete. The patient's self-respect is frequently hurt by lack of privacy, hurried examination and lack of detailed information as to his condition.

3. *Inefficient, Improper or Nonprogressive Medical Services on the Part of the Practitioner.*—The fact must not be blinked that there exists a certain proportion of poorly trained physicians who do no clinical work, who have not been able or willing to keep pace with the more important advances in medicine. From the medical standpoint, such physicians cannot give proper and efficient service to their patients.

The pay clinic, with certain restrictions to be defined later, undertakes to care for the poor who have become disgruntled or dissatisfied with their physicians, and who seek more thorough and systematic examinations and therapy.

### PROPER OBJECT AND SCOPE OF PAY CLINICS

1. The pay clinic aims to segregate comparatively needy patients referred by the physician, patients who can pay something but who are unable to pay private physicians and specialists. This seems to us the essential function of the pay clinic.

The patient should be returned to the physician with a succinct report of the findings and with suggestions as to therapy. Treatment is to be given at the pay clinic only on the approval of the referring physician. Even then, the patient must come within certain specified financial classification.

2. We consider it difficult to prepare a fixed income classification for patients suitable for examination or treatment by a pay clinic. We suggest the following schedule: The maximum income of all patients, referred or coming voluntarily, should conform to the following: (a) persons without dependents and with an income up to \$1,200 per annum; (b) persons with three dependents and an income up to \$1,700 per annum.<sup>1</sup> Special or mitigating circumstances, such as nonemployment, exhaustion of savings, chronic illness or care of large families must be taken into account.

3. All attending physicians at pay clinics should receive reasonable remuneration for their services. This, above all things, makes for proper attendance and for responsibility for service rendered.

### DEFECTS IN, AND OBJECTIONS TO, THE PAY CLINIC

1. It is not a proper function, per se, of the pay clinic to seek clinical material for instruction of students. Such aim immediately makes for large numbers of patients and destroys the assurance of privacy and confidential relationship between physicians and patient. While it is of undoubted advantage to the students, it almost inevitably leads to improper economic distinction among patients in the desire for "clinical material." Incidentally, it may be mentioned that there is an unhealthy tendency to strive for large attendance at all clinics.

2. The pay clinic will, like any other clinic, tend, in a measure, to reduce and minimize need for, and expense connected with, hospitalization and nursing, by treating disease in its incipency, and will also do its share to advance scientific investigation. These aims are common to all

<sup>1</sup> The committee was guided in choosing the latter figure by the Report of the National Industrial Council for 1909.

clinics, both free and pay, and cannot be regarded as special virtues inherent in, and peculiar to, the pay clinic. In fact, the committee found the Cornell Pay Clinic not different from other well conducted clinics.

3. It is not the function of any pay clinic to direct persons who are able to pay to any one physician or any group of physicians, no matter how competent or well qualified these physicians may be. We believe that patients dissatisfied with their physicians or those who do not belong to the financial groups mentioned before should be referred for private care to a well conducted clinic nearest their houses, there to obtain the name of a properly qualified physician. The committee believe that such patients should be referred to clinic physicians, whether such physicians be paid or not.

4. Where diagnostic and instrumental paraphernalia are so accessible, their use yielding additional revenue, and where restraint exercised by one of broad judgment is absent, the temptation is great to refer patients from one department to another. This seems an inherent evil in all large diagnostic and hospital institutions.

5. Since the greatest defect of the pay clinic, as at present conducted, is its competition with the practicing physician, there is a strong and definite undercurrent of medical opinion that, in addition to its properly limited spheres, the pay clinic also treats those who should and can be properly taken care of by the private practitioner. Indeed, most physicians, both general practitioners and specialists, gain their livelihood, in a large measure, by treating people in modest circumstances.

THE INTERESTS OF THE PHYSICIAN MUST BE  
CONSIDERED

The pay clinic claims to have considered the

public need; but it has not sufficiently considered the physician. It should be one of the laudable aims of the pay clinic to improve the scientific status of the physician. This must go hand in hand with his economic status. The committee believes that there is a sufficient supply of well trained physicians, especially among the young men, who would gladly treat poorer people for moderate fees.

Assuming that the pay clinic, as at present organized, becomes a large and general movement among the clinics and hospitals of today, one may well ask where the practitioner and specialist are to get their patients if the pay clinic is to absorb, diagnose and treat the cases of the great proportion of individuals from whom, ordinarily, the vast number of physicians draw their practice and livelihood. In its final outcome, it must almost inevitably lead to state medicine.

In all this, there is the warning that the physician must view medicine in the light of progress, and from, perhaps, unaccustomed angles. The public is slowly but surely taking an active interest in the doings of the medical profession. New movements are fraught with danger and friction, if improperly directed. It cannot be the wish of sponsors of pay clinics to despoil the physician's legitimate sources of income. It should be the desire of the sponsors of pay clinics and of physicians to work harmoniously, so that the good may be emphasized, and the bad discarded. The recommendations of this committee aim toward this end.

S. NEUHOF,  
Chairman, Yorkville Medical Society.  
C. HERRMANN, Eastern Medical Society.  
L. I. HARRIS,  
Harlem Medical Society.  
J. BROWN, New York Physicians Association,  
Committee.

"Whither Are We Drifting?"

(Continued from page 812)

imperative. The best medical thought of the day well united must guide and direct the destiny of the profession. This can only be accomplished through the earnest and sympathetic cooperation of the physicians through medical organization. For sad will be the day, and unfortunate the consequences from any changes which interfere with the individual relationship between the physician and his patient.

Every qualified physician should be a member of his local society, not only for the purpose of assisting in solving the problems that arise through economic changes, but also for the fellowship of his associates, for contact with the modern advances made in the field of medicine and surgery, and for the prestige that accrues from community respect.

Another year is on the horizon; another twelve months has arrived, filled with sinister forebodings. A united front will be necessary to combat the forces that are working against the well-being of progress and success of medicine.

Physicians can materially assist by the early payment of dues to their local society secretaries; by taking part in the activities of these societies; and by cooperating in the solution of the common problems.

Health Worker's Creed

In an article on the subject of "The Creed of the Professional Health Worker", in the November 15th issue of *The Survey*, Dr. Haven Emerson summarized the attitude of the American Public Health Association in regard to animal experimentation, a uniform educational standard for all those who treat the sick, and a policy on physical inspection and education in the schools. On these points, he says:

"The American Public Health Association records its conviction that experiments on living animals have proved of the utmost service to the public health in the past, and therefore to civilization, and are indispensable to future progress."

"It is the sense of the American Public Health Association that there should be but one standard of fitness for all who desire to practice the healing art, and but one channel through which persons desiring to practice that art may obtain licenses to do so.

"The American Public Health Association urges all schools to adopt and put into practice a systematized, graded practical course in health habits, and health instruction, persistence in one, and progress in the other to have the same relation to general scholastic standing as adequacy in any other major subject in the school curriculum."

His discussion on preventive medicine is also interesting, on which he says in part:

"If we had for the moment to turn ourselves to Russians or Hindus with an expectation at



birth of about twenty-seven years of life, how would our very structure of government, schools, marriage, religious faith, go crashing about our heads! We see a little now the relation of the great house of science to the social structure, and the dependence of each material aim upon an ever increasing margin of safety, the increment of lives saved. Until the handicap of sickness that cripples or kills can be held off while the man-child and the little woman are making ready to take their places at the earning and the housekeeping, we are still but clinging to life, not living it."

"When we have accomplished in our greater cities and in the industrial states, what our west coast communities and some of our little towns have done in infant life saving, we shall add three years to our present average life span. When scarlet fever, measles, diphtheria and whooping cough are as obsolete as typhoid fever and smallpox are in a fair way of becoming, we will be adding another six to eight years. While we cannot quote by the record the exact extent of syphilis in the nation, we can prove already a reduction in some of its fatal consequences, and we have a right to expect a still further abatement in the prevalence of this great killer of babies and destroyer of minds.

"Continuance of the present rate of reduction in tuberculosis will see us saving half our present deaths from this disease in the next twenty years. Salvaging of mental derelicts, or rather the guidance of these special risks through and past the conflict of youth and adolescence, has still to record its triumphs. Even the increase of cancer with longer spans of life will cease to play its present dominant role when we pass by the decade up to 65 and go into the next, where its incidence sharply declines."

#### Collecting Agencies

Before assigning accounts to private agencies for collection, the American Medical Association suggests that physicians give the printed contracts submitted twenty-four hours consideration.

Then if the proposition seems plausible, the physician is less liable to annoying situations and exasperating conditions.

Usually, the agencies that are inclined toward chicanery resort to lengthy, close-printed agreements somewhere in which, innocent clauses are inserted requiring the physician to pay the agency the full commission on each account should any be withdrawn for professional reasons.

Often delinquent patients are subjected to a barrage of crude form letters designed to extract cash, regardless of the ill-feelings that might be engendered. When an attempt is made to stop such procedure, full commissions are demanded.

Accounts are sometimes secured through misrepresentation. A representative of the agency offers every assurance that his concern makes personal collections. Then after the account is acquired, the physician finds that form letters are being used and upon protest, is informed that the manner of collection is not specified in the contract. There are no witnesses to the verbal assurances, so the doctor must either pay, or permit the letter barrage.

Close attention to the written agreement, and

insistence upon a contract may eliminate misrepresentation and embarrassing situations.

#### "Patent" Interests Busy Again

The "patent medicine interests" are again showering the physicians and lay and medical editors with a reprint of a paper upon "Why the Medical Profession and the Medicine Man Should Pool their Ideals and Work Together to Benefit Humanity", written by one Irwin G. Jennings and published originally in "The Glass Container."

The envelope in which the reprint is mailed bears a Chicago postmark, while the return address was to a New York office. The Postal Permit shows that it belongs to the Standard Remedies Publishing Company and the Standard Remedies Publishing company represents the "patent medicine interests".

Some camouflage!

#### Full-Time Teachers in Medical Schools

In an address delivered at the Seventeenth Commencement Exercises of the Woman's Medical College of Philadelphia, Professor Florence R. Sabin closed with the following:

"I may say that I do not think that all the problems associated with the practical extension of the full-time scheme to the clinical side have been solved. Adjustments may have to be made, perhaps radical ones, but I profoundly hope that the plan will be given an adequate trial and that it can win the support of those who are teaching in our medical schools, because I believe it of the utmost importance to the community to range the ablest minds in the medical profession on the side of preventive medicine. Besides an occasional school of hygiene and public health we need to have all the leaders of medical education engaged in research to advance medicine. It is my sincere conviction that the opposition to extending the modern standards of professional education to clinical medicine will yield readily to sound constructive leadership on the part of those who desire this reform."

This subject of full-time teachers in medical schools has been under consideration for several years. Prominent practitioners and teachers have discussed the subject from every angle, but without unanimity of opinion. Practically everybody is agreed that the laboratory sciences require full-time teachers, but since medicine is to a considerable extent an art founded on the sciences, one may question whether the clinical teaching may not lose some of its interest if given over to men working full time in hospitals and laboratories. The time may come when Public Health executives may practically eliminate the preventable diseases and the exact science may be applied to the cure of a larger number of ills, but at the present time the experience gained from contact with some of the unsolved problems of

medicine and the psychic phenomena of diseased persons may equip the teacher for dealing with the student's mind to some extent not otherwise obtained. The advocates of the full-time teaching service may suggest that men of sufficient ability to warrant selection for such positions have broad minds and warm human instincts and usually understand the difficulties of practice, and hence are fitted to train practitioners, or may be argued that premedical requirements demand of young persons that degree of moral and intellectual development which is sufficient for the practitioner and will enable him to intelligently use science so far as it may apply and supplement exact knowledge with that personal influence which the art of medicine requires. Leaving these questions out of the argument, one may propound another which may be asked concerning the wishes of the patient as well as his needs. Will the patients feel as well pleased with the ultimate division of medical attendance between two classes, *i.e.*, the purely scientific worker and teacher and the practitioner? And going one step farther, has not the teacher who is also a practitioner, outside of the medical school, often contributed to medicine some things which his colleague, devoted entirely to research teaching and hospital work, has missed?

These are questions worthy of serious consideration and analysis, and will in turn be solved. At present they are debatable.—*Boston Medical and Surgical Journal.*

### Eighth District Has Good Session

The annual meeting of the Eighth District Medical Society was held in Newark, October 16, and a goodly number of physicians from the eight counties comprising the district were present. Dr. D. J. Matthews, and Dr. E. M. Brown, both of Zanesville, retiring president and secretary of the society, presided at the meeting.

During the program Dr. H. J. Gerstenberger, Cleveland, read a paper on "Pediatrics"; Dr. A. J. Skeel, Cleveland, discussed "Obstetrics", and Dr. C. W. McGavran, Columbus, lectured on "Diabetes Mellitus".

In the election of officers Drs. W. E. Shrontz and J. P. H. Stedem, both of Newark, were chosen president and secretary, respectively. Dr. E. R. Brush, Zanesville, is the district counselor.

### Ohio-Michigan Sections of A. C. S.

The Ohio and Michigan Sections of the American College of Surgeons will have a joint meeting in Cincinnati, December 8 and 9. Scientific and public meetings and headquarters will be conducted at the Hotel Gibson, and the clinical program at the various Cincinnati hospitals.

This meeting has no connection with the meeting of the Indiana Section, the previous announcement to that effect being erroneous. The tentative program is as follows:

#### PUBLIC MEETING

"Experimental Medicine," by Dr. William D. Haggard, Nashville, Tenn.

"What Can Be Accomplished by Routine Prenatal Care," by Dr. Charles B. Reed, Chicago.

Dr. Malcolm McEachern, associate director for Canadian activities of the American College of Surgeons; Dr. D. A. Craig, director of Canadian Red Cross, Nova Scotia Division; Dr. Franklin H. Martin, director-general of the American College of Surgeons, and Rev. C. B. Moulinier, S. J., President Catholic Hospital Association, will also speak.

#### SCIENTIFIC MEETING

"Intraorbital Tumor," by Dr. E. C. Ellett, Memphis, Tenn.

"Tumors of the Breast; study of 255 cases," by Dr. Wm. D. Haggard, Nashville, Tenn.

Dr. Frederic A. Besley, of Chicago, and others will also speak.

### Want Anti-Vice Law Strengthened

Enactment of legislation to make more drastic the provisions of the Gorrell anti-vice law probably will be sought before the next legislature by the Ohio Women's Federation for Social Health, it developed at a meeting of the legislative committee of the organization in Columbus recently.

Directors of the state departments of welfare, health and education were asked to confer with Attorney General Price on the advisability of seeking an amendment to present laws which would provide an indeterminate sentence of not more than one year for a first offender and from one to three years for a second offender.

More adequate control of psychopaths, of the type of moral offenders who are abnormal mentally but not of sufficiently low grade to permit their classification as feeble-minded, is the purpose of the proposed amendment.

#### VETERANS EMPLOYED

Employment of rehabilitated veterans of the World War has made great progress in Ohio, according to the district employment representative of the United States Veterans' Bureau of Ohio, Indiana and Kentucky. Toledo, Cleveland, Canton, Dayton and Columbus are mentioned as having been particularly successful in this connection. Of 300 men trained in the seventh district, comprising the three states, more than 97 per cent. are said to be employed.

## The U. S. Veterans' Bureau Offers Special Post-Graduate Courses in Neuro-Psychiatry and Tuberculosis

Because it has been handicapped by a serious shortage of physicians trained in neuro-psychiatric work and the need has now become acute, the United States Veterans' Bureau has announced the establishment of a special course in this subject, open to a limited number of qualified physicians on condition that upon completion of such course they will continue in the service of the bureau for a period of at least two years thereafter.

A systematic and comprehensive course has been carefully outlined, consisting of 176 lectures and demonstrations and some 440 hours of clinical and laboratory work. Each course will occupy a period of about four months. Instruction will include the necessary reviews of the fundamentals, followed by clinics and lectures on the various forms of nervous and mental diseases, including endocrinology. Special attention will be devoted to diagnostic methods, the general care of patients, and methods of treatment. Students will have actual experience in practical work. General problems of hospital administration, medico-legal questions, rehabilitation methods, psycho-metric examinations and other related matters will also be dealt with.

The main part of this course will be given at St. Elizabeth's Hospital, a government institution for the insane at Washington, D. C., with unexcelled facilities for such work. The teaching staff will include, beside members of the staff at St. Elizabeth's, lecturers from the medical departments of the Army, Navy, Public Health Service, the U. S. Veterans' Bureau and the U. S. Department of Agriculture, and a number of other eminent neurologists and psychiatrists.

The course will start on January 4, 1923, and is open to physicians between the ages of 23 and 45 years of age, who must be citizens of the United States and graduates of Class A medical schools with at least six month's service as interne in a general hospital or its equivalent. Applications should be sent to Colonel C. R. Forbes, director, Veterans' Bureau, attention Medical Division, Washington, D. C. Ex-service men who have been honorably discharged will be given preference. Other things being equal, applicants for the course will be selected in the order of their application.

Students who are authorized to take the course who are not already in the employ of the Veterans' Bureau will receive a salary of \$166.00 per month, with no allowances, while taking the course.

On satisfactory completion of the course members will be recommended for the grade of Passed Assistant Surgeon in the Reserve Corps

of the U. S. Public Health Service, or they will become eligible for employment as Class "B" physicians under the U. S. Civil Service Commission and assignment to duty with the U. S. Veterans' Bureau. These salaries range from \$3,000 per year, upward.

The Director of the Veterans' Bureau has also announced that two post-graduate schools for the teaching of the diagnosis, care and treatment of pulmonary tuberculosis, one at Fitzsimmons General Hospital, Denver, Colorado, and the other at U. S. Veterans' Hospital No. 41, New Haven, Connecticut, will shortly be opened for physicians now connected with the Bureau and those who wish to join the service. The tuberculosis courses will last two months, and will include collateral branches of medicine such as pathology, X-ray plate interpretation, physiotherapy, etc. Applications should be directed to Colonel C. R. Forbes, Director, Veterans' Bureau, Washington, D. C., attention Clinical Director of Tuberculosis.

---

### College of Pharmacy Proposed

An offer to establish on the campus near the College of Medicine of the University of Cincinnati, a school of pharmacy to become a part of the university system, was recently made to the board of directors of the university and referred to Dr. Henry Page, dean of the College of Medicine.

A letter from Dr. Frank B. Cain, representing, it was said, a group of prominent citizens, stated that expenses of the proposed school would be met with endowments and that the university would be guaranteed against any deficit. The plan proposed is that the university contribute the site and the group of citizens interested pay the rent of the building, which would be turned over, on completion, to the College of Medicine.

---

### ABBOTT ACQUIRES DERMATOLOGICAL LABORATORIES

In the advertisement of the Abbott Laboratories of Chicago, published elsewhere in this issue, readers of *The Journal* will be interested to note the purchase by that concern of the Dermatological Research Laboratories of Philadelphia. The Abbott Laboratories acquired control of the Dermatological Research Laboratories November 1st and are continuing to operate them in Philadelphia. The Dermatological Research Laboratories were the first in United States to produce Arsphenamine during the war when there was a scarcity of this article.



## HOSPITAL NOTES

One of the greatest factors in hospital administration is the necessity for making the city hospital a broadly representative city service, directed by people selected by the mayor from among capable citizens, Dr. Haven Emerson, of Columbia University, told the Cleveland Welfare Federation recently. "No great public utility, such as a hospital, can safely be left to the shifting policies and variations in administrative control that are inseparable from the individual direction of unsupported hospital administrators", the speaker declared, in urging that the city hospital be taken out of politics.

—Cornerstone of the new seven-story pavilion of the Jewish Hospital, Cincinnati, was placed, October 22, with appropriate exercises. Erection of the new building is proceeding rapidly. The annual report of the institution for the year ending September 30, shows that 3,166 patients were cared for, receiving 41,665 days of treatment. Free patients numbered 856 with 14,295 days of treatment, and part-pay patients numbered 981, with 10,116 days of treatment.

—The Springfield Exchange Club is financing a library for the inmates of the district tuberculosis hospital. The club recently voted to add 150 new volumes for the entertainment of the patients.

—A resolution passed by Columbus city council requests hospitals of that city to assist in law enforcement by reporting to police headquarters within 30 minutes whenever a person suffering from injuries received in an accident, shooting or brawl is brought in for treatment.

—Two members of the medical staff of the Ohio Hospital for Epileptics at Gallipolis have recently resigned to locate in the east—Dr. F. P. Walter in Baltimore, Maryland, and Dr. F. T. Rivailles in Washington, D. C.

—Final plans for the U. S. Veterans' Bureau Hospital, to be built for disabled war veterans at Camp Sherman, were received by prospective bidders for various parts of the work in October. The hospital site will be in the extreme northwest corner of the camp proper.

—A drive for funds for the Maternity and Children's Hospital, Toledo, in October, netted \$158,328.60, which will be used for improvements on the present building and the erection of an addition for the care of older children as well as infants.

—The annual report of the American College of Surgeons, which has been active in raising the standard of hospital service in United States and Canada, was made public during the annual

meeting of the College in Boston. The survey of hospitals of 50 beds or more "places Ohio in the forefront of states who are active in medical progress," said Dr. Franklin H. Martin, director general of the college. "Ohio is to be congratulated on its splendid showing and on the medical men, hospital superintendents and trustees who have made this advance possible."

—Dr. Clarence Rostow, formerly of the Trenton State hospital, Trenton, N. J., has joined the staff of the Dayton State hospital.

### HOSPITAL HEADS ILL

Two heads of Ohio state hospitals were reported seriously ill in November. Dr. O. O. Fordyce, superintendent of the Toledo State Hospital, was suffering from a virulent form of typhoid. Dr. Charles H. Clark, superintendent of the Lima State Hospital for Criminal Insane, was believed to have a tumor of the stomach.

### Advance in Health Work

Definite progress in safeguarding the health of the city has been made in the two years since the Cleveland hospital and health survey was conducted under the direction of Dr. Haven Emerson, according to a report issued by the Cleveland Hospital Council.

The report is a "checking up" of progress made because of the survey. It attributes to the lessons taught by the survey the passage of bond issues for the city hospital and state appropriations for institutions for the insane and feeble minded.

It points out, however, that land has not yet been purchased for a new institution for feeble minded in northern Ohio, although \$200,000 is available for the purpose.

Conditions at Cleveland State Hospital are still "deplorable," according to the report, which cites overcrowding and lack of nurses.

Work of city sanitary inspectors in checking up on disease breeding spots is commended.

The report notes the establishment of a department of nursing at the College for Women, Western Reserve university. Improvements made in equipment, buildings and personnel at individual hospitals are pointed out.

### Assistant Physicians Meet

Dr. Isabel A. Bradley of the Columbus State Hospital was elected president of the Association of Assistant Physicians of the Ohio State Hospitals at the semi-annual meeting of that organization held at the Cleveland State Hospital, October 17 and 18. Other officers elected were Dr. L. W. Yule, Cleveland, vice-president; and Dr. J. J. McCloud, Columbus, secretary-treasurer.

A splendid program of papers brought forth

## Bonds of Hydro-Electric Power Companies

With Public Utilities furnishing electric power for lighting, commercial and other purposes, there are two methods used in generating the power, one being a manufactured force, usually steam, the other a natural force, water.

The advantages of using water instead of steam may readily be seen.

With the steam plant, coal and other material must be used, and the prices of these commodities fluctuate; with increased prices naturally the cost of production is increased.

By the use of water, the force is supplied and replenished by Nature with but the slightest dependence upon material and its cost. Furthermore, to operate a hydro-electric property but few men are required, and this to a large degree eliminates the labor factor, which under existing economic circumstances is a very important item to be considered.

The hydro-electric power company furnishes a service essential to the progressive community. Low overhead expense, low capital requirements, minimum dependence upon human labor and unbroken records of growth in earnings over long periods of time are some of the factors which insure the stability of its bonds.

*Should you care to consider such issues for investment of your surplus funds, we shall be glad to make specific offerings upon request.*

## E. H. Rollins & Sons

BOSTON  
200 Devonshire St.

NEW YORK  
43 Exchange Pl.

PHILADELPHIA  
1421 Chestnut St.

CHICAGO  
111 W. Jackson St.

SAN FRANCISCO  
300 Montgomery St.

DENVER  
315 International Tr. Bldg.

LOS ANGELES  
203 Security Bldg.

very interesting discussions and indicated that the physicians from the state hospitals are enthusiastic concerning the future of the institutions and anxious to be afforded an opportunity to make the treatment of the insane a more scientific procedure. Both X-ray and pathological laboratory workers indicated their desire to contribute their portion in this connection. The detailed program follows:

*Bulbar Paralysis*, Dr. William Vorbau, Lima. Discussion opened by Drs. J. J. McCloud and R. S. Moynan.

*Normal Child Born of a Paralytic Mother*, Dr. Katherine R. Moses, Cleveland, Discussion opened by Drs. I. A. Bradley and D. A. Johnston.

*The Need for Trained Psychiatrist in the State Hospital*, Dr. W. W. Young, Massillon. Discussion opened by Dr. B. A. Williams and Dr. Osborne.

*The Laboratory Problem*, Dr. George Walter, Cleveland. Discussion opened by Dr. R. E. Bushong.

*Katatonía and Infection*, Dr. Isabelle A. Bradley, Columbus.

*How Shall We Regard Focal Infection as an Etiological Factor in the Production of Mental Diseases?* Dr. R. E. Bushong, Toledo.

*Medical and Surgical Treatment in State Hospitals*, Dr. Fred L. Rhodes, Massillon.

Joint discussion of above three papers by Drs. L. W. Yule, Filley and Vorbau.

## Many Phases of Anesthesia Service Discussed at Joint Meeting of Special Societies

Teaching of anesthesia and the development of hospital anesthetic service were discussed at the Congress of Anesthetists, held in Columbus during the last two days of October and the first of November under the auspices of the National Anesthesia Research Society, the Interstate Association of Anesthetists and the New York Society of Anesthetists.

Aside from the scientific discussions upon research work completed during the past year, the following points were emphasized by speakers:

1. Medical school curriculums should be arranged so as to include a more thorough training in anesthetics.
2. Anesthetists should be thoroughly skilled in internal medicine.
3. Hospital staffs should contemplate a chief anesthetist, who would be responsible for the preparation "before, duration and after operations."
4. Laboratory tests should be made of each container of anesthetics to be used so that the hazard of impurities might be eliminated.

The Congress was divided into several sessions, including: teaching anesthesia, anesthesia and hospital service, anesthesia for oral surgery and dentistry, anesthesia clinics at the Protestant, McKinley and Children's hospitals, anesthesia in relation to cardiology, pressure and rebreathing in anesthesia, and general.

About two hundred attended the various sessions and visited the well arranged exhibit of anesthesia apparatus. Ohioans taking part in the sessions were:

"Teaching the Pharmacology-Physio-Pathology of Anesthesia", by D. E. Jackson, M.D., University of Cincinnati Medical School.

"The Teaching of Anesthesia to Dental Students at Ohio State University Dental Department", by W. E. Martindale, D.D.S.

"Anesthesia Service at the Jewish Hospital,

Cincinnati—A Part Time Specialty", by Moses Salzer, M.D.

"Anesthesia Problem of the Large Municipal Hospital", by James Hartman, D.D.S., Cincinnati

"The Reaction of Certain Cardiac Conditions to Anesthesia and Surgery"—President's Address, by E. I. McKesson, M.D., Toledo.

"The Disabled Heart and General Anesthesia", by N. Worth Brown, M.D., F. A. C. S., Toledo.

"The Relation of the Autonomic Nervous System to Surgical Shock", by H. D. McIntyre, M.D., Marion.

"The Value of Pressure and Controlled Rebreathing in Ether Anesthesia", by J. J. Vega, M.D., National Military Home, Dayton.

"The Advantages of the Sitting Posture and Nitrous Oxid-Oxygen Anesthesia in Brain Surgery", by H. H. Heath, M.D., Toledo.

"Misconceptions of Nitrous Oxid-Oxygen Anesthesia", by A. E. Peebles, D.D.S., Wilmington.

"Somnoform Anesthesia", by Don A. Crawford, D.D.S., Cleveland.

"Anesthesia in the Aged", by W. I. Jones, D.D.S., Columbus.

"Address of Welcome", by G. P. Lawrence, M.D., representing the Columbus Academy of Medicine.

Whether full-time anesthetists could be supported in various sized communities was the source of considerable comment, with proponents and opponents. Proponents asserted that the administration of anesthetics would always be a profession in itself and that those specializing in it could retain a distinct identity in the community.

F. H. McMechan, M.D., was reelected secretary of the National Anesthesia Research Society and the Interstate Association of Anesthetics and is editor of the new publication "Current Researches in Anesthesia and Analgesia", which is an extension of the former bulletin.

# LOESER'S INTRAVENOUS SOLUTIONS



## Developed on a Foundation of Scientific Research and Modern Laboratory Products

First:—Remedies of established therapeutic value.

Second:—Animal tests for adaptability.

Third:—Clinical tests for practical demonstration.

Fourth:—Scrupulous laboratory routines and exacting chemical, physical and biologic tests for accurate control.

Result—HIGHEST STANDARD.

Clinical Reports, Reprints, Price List  
and

"The Journal of Intravenous Therapy"  
will be sent to any physician on request.

**New York Intravenous Laboratory**  
100 West 21st Street  
New York, N. Y.

*Producing Ethical Intravenous Solutions  
for the Medical Profession Exclusively.*



### Anti-Tuberculosis Xmas Seals

Three weeks yet remain before Christmas Day when the annual Christmas Seal Sale will be concluded. During this campaign Ohioans are asked to purchase 30,000,000 of these "health harbingers."

"Until we learn something new and entirely unexpected about tuberculosis," Dr. C. D. Selby, Toledo, president of the Ohio Public Health Association says, "there is not much fault to be found with our present methods of combating the disease."

"In ten years time," he continues, "we have reduced the death rate from tuberculosis from 150 per 100,000 to 89 per 100,000 population. The little Christmas seal has had a large part in this accomplishment. It has inspired communities and reached individuals with the message that the disease is preventable and curable."

"Voluntary organization brought together through the Christmas seal campaigns of the past have employed nurses and built sanatoriums, hospitals and fresh air camps for the care and treatment of the sick."

"Underneath the entire program of tuberculosis is the matter of education. We are beginning now to emphasize the positive side of health, to teach prevention as well as to fight disease. What is now most urgently needed is money to teach everyone from the lowest walk in life to the scientist and the Christmas seal sale offers the way. Every person who buys seals is made to think of tuberculosis and the effort to eliminate it as a cause of death."

"In view of what has been accomplished," concludes Dr. Selby, "in the past ten years, we are certainly justified in carrying on and appealing for public support through the Christmas Seal sale."

### The 1923 Prohibition Permits

Physicians who are desirous of prescribing or using intoxicating liquors in their practice and who have failed to make application for their 1923 permit upon Form 1404, will save considerable delay and inconvenience, by making application to the Columbus office of the Federal Prohibition Director at once.

Director Russell states that it requires from four to six weeks to secure a license to prescribe or use intoxicating liquors and urges all physicians expecting to secure these licenses to make application before the end of the year, so that the new permits may be mailed out before January 1st.

It will be unlawful to prescribe or use liquors in professional practice without the 1923 permit after December 31st, he says. All violations, he warns, will be prosecuted.

Application blanks for renewal of licenses were mailed to all physicians holding 1922 licenses sometime ago. If these were not received copies may be obtained from the Columbus office.

# Cincinnati Radium Laboratory

22 West Seventh Street

Needle, Tube and Plaque  
Applicators



CHARLES GOOSMANN, M. D.

X-Ray Treatment When Indicated.

**D**o you believe that the fitting of trusses is a part of the Practice of Medicine? If so, send your patients needing trusses to

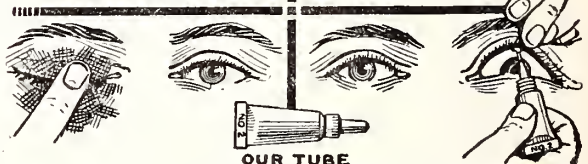
## The Columbus Truss & Optical Co.

PARKER W. PHENEGER, M. D., Mgr.

We Specialize in  
Elastic Stockings Made to Measure

Office and Fitting Rooms  
suite 303-309 Rowlands Bldg., Broad and Third Sts.  
COLUMBUS, OHIO

THE OLD WAY     THE NEW WAY



### Better Ocular Therapeutics

Can be obtained by the use of "M-E-S-Co" brand of Ophthalmic Ointments. Reasons: Selected Chemicals, Thorough Trituration, Perfect Incorporation, Sterilized Tubes, Boiled and Strained Petroleum, Excellent Service, No Waste, No Dirty Salve Jar, Right Prices. Write for complete information  
**MANHATTAN EYE SALVE CO., Inc.**  
Louisville, Ky.





## Diphtheria Antitoxin *and* Diphtheria Toxin-Antitoxin

PHYSICIANS have been specifying Parke-Davis Antitoxin for twenty-five years because it is dependable. In a disease in which life or death hinges on prompt and adequate immunization nothing must be left to chance. The patient has a right to every possibility of recovery; anything short of this would be false to the ideals of medical practice and subversive of the rights of humanity.

Medical men prefer Parke-Davis Antitoxin because it is pure, free from contamination, and certain of action. The potency and purity of the product are assured by every means known to biological science.

Toxin-Antitoxin, P. D. & Co., is rapidly winning similar recognition.

Active immunization is the end sought, and safety and efficiency of the product are predicated on proper mixing of the toxin and antitoxin. An improper mixture would result either in failure to protect, or in a dangerous reaction. Our Toxin-Antitoxin is so balanced as to insure the maximum immunizing effect consistent with safety.

"DIPHTHERIA IMMUNIZATION," a reprint, sent on request. Write nearest branch: Detroit, New York, Chicago, Kansas City, Baltimore, New Orleans, St. Louis, Minneapolis, or Seattle.

**Parke, Davis & Co.**

## *A Small Thing to Buy If You Never Need It*

"Gentlemen:

Just arrived home and hasten to enclose check for renewal. Would not be without such protection. Eternal vigilance against a suit affords a happy frame of mind that more than makes up for the cost.

Yours truly,"

"Gentlemen:

Enclosed find check; cannot afford to be without such contract, although I have practiced 25 years and never had a suit, yet the satisfaction of security is worth many times the amount asked.

Sincerely,"

"Dear Sirs:

I have carried a policy in your Company for many years without needing it but I am mighty glad to have it.

Very truly yours,"

"Gentlemen:

Enclosed find check. As yet we have never had a threat of law-suit but certainly feel the sense of security your policy affords us. The moral effect can be appreciated by anyone.

Respectfully,"

"Gentlemen:

Enclosed find check for current year's protection. I believe this is my 20th year. During these years, only once have I had a scare. I wouldn't live without your contract.

Yours truly,"

## *A Big Thing to Have By, if You Ever Need It*

"The Medical Protective Company  
Fort Wayne, Indiana

Gentlemen: I wanted to write to you the minute the foreman announced the verdict of the jury, "Not Guilty."

I have no words to express my appreciation of the way in which my case was handled from beginning to end. I am thoroughly pleased in every respect, and you can count on me to belong to your company as long as I practice.

The plaintiffs had an ex-judge for their attorney, and he certainly made a fight to win, but the ability of your attorneys certainly won the jury to our side.

Let me congratulate and thank you for the high class, capable handling of our case.

If there is a Doctor who is doubtful about getting your insurance, refer him to me, and I will assure you that you will have another patron.

I thank you again for all the courtesies and kindnesses extended.

Very sincerely yours,"

*For Medical Protective Service  
Have a Medical Protective Contract*

**The Medical Protective Co.**  
of  
Fort Wayne, Indiana

## Public Health Service In Rural Health Work

"Public health is purchasable," so it is said. It took the glorious work of the late Surgeon General Gorgas, of the United States army, in the Canal Zone to sharply focus public opinion upon this fact. Since then, the work in this field of disease prevention has increased enormously with astonishing results.

"Public Health" is defined by Dr. C. E. A. Winslow, of Yale university, as the "science and art of preventing disease, prolonging life and promoting health and efficiency through organized community efforts for sanitation, the control of infection, the education of the individual in the principles of personal hygiene, the organization of the medical and nursing service for the early diagnosis and preventive treatment of disease and the development of social machinery which will insure a standard of living adequate for the maintenance of health."

Funds used in "organized community efforts for sanitation, the control of infection, the education of the individual in the principles of personal hygiene," and frequent consultations with the family physician for the early diagnosis and preventive treatment of diseases will produce amazing returns in the way of reduced mortality rates, decreased prevalence of communicable diseases, eliminating the hazards of epidemics, and increasing health standards, it is declared.

For the fiscal year closing June 30, 1922, the United States Public Health Service spent nearly four hundred thousand dollars for cooperative rural health work. Of this amount, \$285,000 came from the state, municipal and county governments, \$76,000 from private agencies and \$44,000 from the Public Health Service.

What this four hundred thousand dollars was used for is summarized in the report as follows:

1. Public lectures presenting the principles and details of sanitation to over 277,000 persons.
2. Over 104,000 sanitary inspections of premises, with explanation of findings to occupants and owners.
3. Physical inspection of over 142,000 school children of whom over 91,000 were found to have incapacitating physical defects, with notification of parents or guardians, of defects found.
4. A record of 16,645 treatments made to remedy physical defects found among school children following notification of parents and guardians by public health officials.
5. Public health nurses made 7,882 visits to homes where there were cases of communicable diseases to advise and demonstrate how to prevent the spread of infection.
6. Public health nurses made 3,094 visits to prenatal cases to advise and assist expectant mothers in carrying out hygienic and physiological measures.
7. Public health nurses made 9,629 home visits to demonstrate hygienic measures.
8. There were 25,540 persons inoculated for protection against typhoid fever.
9. There were 38,241 persons vaccinated against smallpox.
10. There were 3,887 children inoculated with

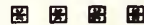


## The Holzer Hospital Gallipolis, Ohio

*Radium for all  
therapeutic  
uses*

## Radium Laboratory

350 East State St., Cor. Grant Ave.  
Columbus, Ohio



Edward Reinert, Ph. G., M. D.  
R. R. Kahle, Ph. B., M. D.

Citz. 9215

Bell, M. 7417

*X-Ray,  
Radium,  
Removal of  
Foreign Bodies*

CHAS. F. BOWEN, M. D.  
344 East State Street  
Columbus, Ohio

## Radium Rental Service

Radium loaned to physicians at moderate rental fees, or patients may be referred to us for treatment if preferred.

Careful consideration will be given inquiries concerning cases in which the use of Radium is indicated.

### BOARD OF DIRECTORS

William L. Baum, M. D.      Wm. L. Brown, M. D.      Frederick Menge, M. D.  
Louis E. Schmidt, M. D.      Thomas J. Watkins, M. D.

## The Physicians Radium Association

1110 Tower Building, 6 N. Michigan Ave.  
CHICAGO, ILL.

Telephones: Randolph 6897-6898

William L. Brown, M. D., Managing Director

toxin-antitoxin mixture for immunization against diphtheria.

11. There were 2,241 persons effectively treated for hookworm disease and for prevention of the spread of infection.

12. A marked reduction of the spread of malaria in hundreds of communities, with an aggregate population of several hundred thousand.

13. There were 23,985 treatments given to rid persons of venereal disease infection and prevent its spread.

14. There were 5,896 cases of communicable diseases quarantined.

15. There were 13,552 sanitary privies and 412 septic tanks installed in homes theretofore without these sanitary appliances.

16. There were 8,420 privies repaired.

17. There were 2,301 homes connected with sanitary sewers for the first time.

18. There were 2,950 homes provided with clean water supplies.

19. Radical improvement of 539 public milk depots.

20. There were 2,299 persons over 40 years of age examined and advised about measures to conserve their health.

It will be seen from this record that hundreds of thousands of people should have become acquainted with the need of frequent consultation with the family physician; impressed with the importance of proper sanitation and the prevention of the spread of infection in communities.

### Small Advertisements

*For Sale*—Doctor's practice and property in Ohio. Situated in a pretty city of 6,000 on two main line railroads, with the surrounding towns connected by interurban lines. Schools graded A-1 and educational advantages superior to those usually found in this size city. All fraternal organizations represented. Five large manufacturing plants. Roads good with excellent driving the whole year. Main roads either macadam or brick. Four modern hospitals within a radius of 10 miles, including laboratory and radium facilities. Modern home with hardwood floors, steam heat and garage on paved residential street. Office adjoins residence. Reception room with seating capacity of thirty. Consulting room can be used for all minor surgery. Practice for both practical and surgery. Ability to do major work will greatly increase income. The practice is clean and among the best people. Will sell complete equipment except automobile. Reason for leaving, going to large city to specialize. Would remain with purchaser to establish him. Terms will be arranged for responsible person. W. S. J., care *The Ohio State Medical Journal*.

*Wanted*—Medical book salesmen. Unusual opportunity for a few good live salesmen. We have important large new books now ready. Get in touch at once with publishers. P. Blakiston's Son & Co., 1012 Walnut Street, Philadelphia.

*For Sale*—Combined house and office with established practice at the price of the residence. Situated on corner in large growing business center in city of Dayton. For full details write, Doctor, Cor. 4th & Broadway Sts., Dayton, Ohio.

URINE	BASAL METABOLISM
BLOOD	AUTOGENOUS
SPUTUM	VACCINES
EFFUSIONS	FAECES
STOMACH	GENITO-URINARY
CONTENTS	SURGICAL and
WASSERMANN &	GYNECOLOGICAL
NOGUCHI	PATHOLOGY
REACTIONS	DARK FIELD
GONORRHEAL	ILLUMINATING
COMPLEMENT	FOR
FIXATION TEST	SPIROCHETA
BLOOD CHEMISTRY	PALLIDA
PROTEIN	MEDICO-LEGAL
SENSITIZATION	POST MORTEM
TESTS	X-RAY

# LABORATORY

## Clinical and Pathological

COLUMBUS, OHIO 370 East Town Street

J. J. Coons, B. S., M. D., D. Sc.

H. M. Brundage, M. D.

Dorris Coss, B. S., M. S.

Ruth Miller, B. S.

### PROMPT SERVICE

Immediate Report on Frozen Sections of all Tumors.

WASSERMANN (daily)	URINE
GONOCOCCUS	BLOOD
FIXATION	SPUTUM
AUTOGENOUS	STOMACH EXAM'S.
VACCINES	FAECES
TISSUES	BACTERIOLOGY
SPINAL FLUID	EXUDATES
DARK FIELD FOR	MILK
SPIROCHETES	WATER
BASAL METABOLISM	SEEDS
BLOOD CHEMISTRY	FEEDS
PROTEIN SENSITIZATION	FERTILIZERS
BLOOD TYPING FOR	IRON
TRANSFUSION	STEEL
MEDICO-LEGAL	COAL

## Ft. Wayne Medical Laboratory

### Radium, X-Ray, Pathology, Serology and Chemistry

Ft. Wayne, Indiana, 327 W. Berry St.  
(One block south of Interurban station)

Pathology and Serology by Dr. B. W. Rhamy  
Radium and X-Ray by  
Dr. E. M. Van Buskirk  
Medical and Industrial Chemistry by  
P. H. Adams, B. S., Ch. E.

*Special Delivery Postage insures prompt delivery*

# Artificial Pneumothorax

in  
Pulmonary Tuberculosis



**LOUIS MARK, M. D.**

327 East State Street  
Columbus, Ohio

## ACIDOSIS

readily estimated by determining the carbon dioxide tension of the alveolar air with our

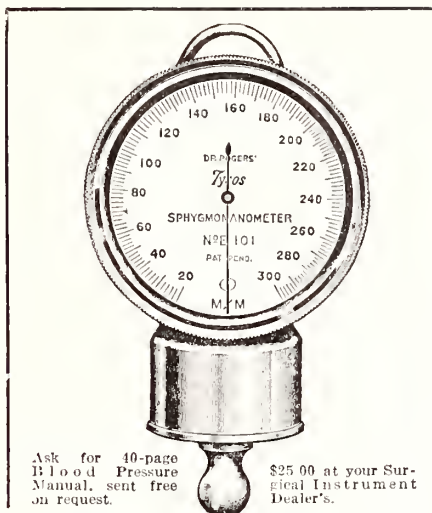
### Alveolar Air Outfit

(Price, \$8.50)

This apparatus was devised by Dr. W. McKim Marriott and described by him in "The Journal" A. M. A., May 20, 1916.

Literature on Request

**Hynson, Westcott & Dunning**  
BALTIMORE



Ask for 10-page  
Blood Pressure  
Manual, sent free  
on request.

\$25.00 at your Surgical Instrument Dealer's.

#### Tyco's SPHYGMOMANOMETERS

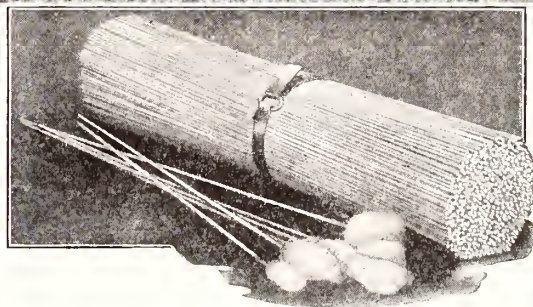
Tyco's dominates in blood pressure work. Accurate, durable, portable. Lends itself readily to every demand of medical practice—gives excellent, dependable service under severest conditions.

*Taylor Instrument Companies*

ROCHESTER, N. Y.

Office Type Sphygmomanometers, Fever Thermometers, Urinary Glassware S 75

## BETZCO SELECTED HARDWOOD APPLICATORS *Offer Safety and Convenience*



Smoothex hardwood applicators are made from specially seasoned wood, strong and tough, but flexible. They are supplied in two standard lengths, 6 and 12 inches. You will find them of uniformly good quality and handily packed for instant use. 3CJ5 Hardwood Applicators, 12 inch, per bundle of 1,000, 85c; 3CJ6 Hardwood Applicators, 6 inches long, per bundle, 1,000, 65c.

**Fill out and mail the Coupon**

**Frank S. Betz Co.**  
**Hammond, Ind.**

Enclosed is \$1.50 for which send me 1 bundle each size of 3CJ5 and 3CJ6 applicators.

Name .....  
Address .....  
City ..... State .....

## Compulsory Vaccination Upheld by U. S. Supreme Court

If the campaign of misrepresentation which has been bitterly waged by the anti-vaccinationists throughout the country during the past six months was designed to influence public opinion in the pending litigation against vaccination as a disease preventive then it has received a decisive defeat.

The United States Supreme court on November 13th handed down a decision in which the validity of legislation and city ordinances which compel the vaccination of children against disease as a school entrance requirement, was sustained. Not only was the validity of such legislation and ordinances sustained, but the court denied damages sought against health officials enforcing the provisions of these enactments.

In one case, which attracted nation-wide attention, Rosalyn Zucht, a high school girl of San Antonio, Texas, sued the health authorities of that city for damages because they barred her from school following her refusal to submit to vaccination. Not satisfied with the rulings of the lower courts, the girl carried her case to the U. S. Supreme court, where she again lost.

The Kentucky Court of Appeals in October upheld previous decisions of the Circuit court, which had refused to enjoin the health officials from barring an eight-year old girl from school

because she had refused to conform to the school entrance requirements.

"The fact that smallpox does not exist", the Kentucky decision says, "at the present time in Campbell county or territory adjacent thereto is immaterial, since the existence of a reasonable apprehension of a smallpox epidemic is sufficiently shown to warrant the enforcement of Rule 76 of the Kentucky Board of Health, requiring teachers and pupils of public schools to be vaccinated."

The decision has a direct bearing on the fight waged in Dayton, Kentucky, against vaccination by a branch of a society whose headquarters are in Chicago. The society is said to have placarded the city with posters denouncing the vaccination laws, and as a result of the agitation, nearly three hundred pupils were barred from the schools by the school superintendent upon order of the health officer.

This is one direct incident of the propaganda that has been directed against the vaccination laws. It may be a coincident, however such is a remote possibility, but during the period that the Texas case was being fought through the various courts, bitter assaults were made in all parts of the country upon vaccination as a disease preventive.

(Continued on page 876)

## Let's Get Together Rx Work Is the Basis of Your Success. It Is Equal- ly the Basis of Our Success

We are mutually interested in the best—at as low a price as possible. Your patient cannot tell what he is getting from inspection. But he judges you by the results,—or vision, he gets.

You are his dependance. Upon your careful guarding of his interest depends not only his most precious possession—sight—but your professional standing and business success.

Upon our careful Rx work you both depend. It is a matter of principle with us to meet your requirements with scientific accuracy.

How well we have done this is a matter of record with hundreds of dealers. White-Haines quality and prices are not founded on the use of second quality lenses or material. You can depend on us to continue supplying the same grade and quality in the future as in the past, thereby safeguarding your interest in price as well as quality.

### THE WHITE-HAINES OPTICAL CO.

*Nine Complete Manufacturing Plants in which spectacles are correctly made*

COLUMBUS, OHIO

Indianapolis, Ind.  
Springfield, Ill.  
Huntington, W. Va.

Roanoke, Va.  
Lima, Ohio.

Pittsburgh, Pa.  
Wheeling, W. Va.  
Cumberland, Md.



## Why every physician should know S.M.A.

**S**INCE S. M. A. requires only the addition of boiled water, whether for the month-old baby or the baby a year old, it assures the physician that his instructions for feeding will be carried out to the letter, and that no element in the baby's diet will be omitted.

Through S. M. A., baby feeding has been reduced to the simplest terms. But S. M. A. is of chief value to the physician not because of simplicity in itself, but because simplicity in this case means safety.

That this principle is sound is attested by the accumulated mass of successful experience in the use of S. M. A. in the hands of physicians during the past seven years.—The Laboratory Products Company, 1110 Swetland Bldg., Cleveland, Ohio.

Formula by permission of  
The Babies' Dispensary and Hospital of Cleveland

*Your druggist can supply you with S. M. A.*

**A FOOD TO KEEP BABIES  
AND YOUNG CHILDREN WELL**  
*Adapted to Mother's Milk*

So bitter were the denouncements made, and so flagrantly inaccurate were the facts stated that the Boston Evening Transcript editorially challenged the "statements made by the anti-vaccinationists that vaccination had proved a failure in the Philippines as a means of preventing disease. Details of this editorial were published on page 659 of the October *Journal*.

The decision of the United States Supreme court is of the utmost importance to the thousands of communities that rely upon compulsory vaccination as a means of preventing smallpox epidemics. And at the same time, it will undoubtedly be a deterrent to the anti-vaccinationists in future campaigns of misrepresentation.

### Interesting Ideas Propounded on Child Hygiene

Measures to protect the health of the child of pre-school age as a means of improving general health conditions, was the main topic of discussion at the annual meeting of the American Child Hygiene Association, held at Washington, D. C., in October.

Following the discussions, steps were taken to consolidate the Child Hygiene Association with the National Child Health Organization, in order to coordinate the work of the two organizations and reduce the administrative expenses.

"What Should be Done for the Pre-School Child" was discussed by Dr. R. M. Smith, Boston, Mass. He emphasized seven points which were:

1. Nutrition as the basis for the child's normal development.
2. Posture because abnormalities become evident during the pre-school age.
3. Teeth as it is not only necessary to keep them clean, but it has become recognized that proper foods may prevent decay by developing structurally sound teeth.
4. Obstructed nasal breathing prevented by proper care of adenoids and infected tonsils. He warned, however, against wholesale removal of tonsils.
5. Infectuous diseases.
6. Personal Hygiene emphasizing the need of proper clothing, fresh air, sunshine, exercise and sleep.
7. Habits for mental development.

The establishment of clinics for well children was advocated by Dr. Smith. He also urged that it was necessary to correlate the activities of all organizations and encourage and assist public officials.

Periodic re-examinations and classification of all children according to the social needs was advocated by Dr. Albert G. Schlink, medical officer for the Cleveland Day Nurseries. He reviewed the work of the Day Nurseries which is

## Every Physician

Is Interested In

## Physician's Supplies

In dispensing, he requires a great variety in his office—in prescribing he uses the **PRESCRIPTION DEPARTMENT** that is **UP-TO-DATE**.

If you are unacquainted with our plan of handling the physician's requirements, you may profit by giving us an opportunity to show you what we can do.

## The Wendt Bristol Co.

47 South High St., Columbus, Ohio

**FINE PHARMACEUTICAL SPECIALTIES**

## Our Business

is confined exclusively to the manufacture of Strictly High Grade Medicines and Pharmaceuticals for Physicians, Dispensing and Prescribing.



Our Offices and Laboratories are now located in our New Building, 330-336 Oak Street, one square north of Grant Hospital.

NO GOODS SOLD AT RETAIL

## The COLUMBUS PHARMACAL Co.

COLUMBUS, OHIO



THE OHIO MEDICAL PRODUCTS COMPANY MAINTAINS ORIGINAL IDEALS IN ITS RELATIONS WITH THE MEDICAL PROFESSION.

THE OHIO MEDICAL PRODUCTS COMPANY MAKES USE OF ACCREDITED PRINCIPLES IN MANUFACTURING REFINED PHARMACEUTICALS.

SEND US YOUR SPECIFICATIONS FOR SPECIAL FORMULA AND BULK QUOTATIONS.

APPRECIATING EVERY EVIDENCE OF CONFIDENCE AND APPROVAL OF OUR POLICY, DURING 1922, WE WISH ALL A MERRY CHRISTMAS AND HAPPY NEW YEAR.



Columbus,

Ohio

---

*Manufacturers of Refined Pharmaceuticals.*

mostly of a supervisory character rather than care and treatment.

Advancement made by America in improving the general health standards of children would not only be watched with interest by European nations but would be placed in use, Sir Auckland Geddes, K. C. B., Ambassador Extraordinary to America from England, told the members of the convention. This interest, he said, was taken because the child of America today may be the citizen of Europe tomorrow, or the child of Europe of today may be an American when an adult.

A special session was devoted to the study of the infant mortality rates during the first month of life. It was pointed out that there had been no perceptible improvement in the past decade. Dr. Levy, New Jersey, declared that the midwife is not always at fault for the high mortality rates during the first month of life and urged that in any study made consideration be given to the nativity of the mother and the number of prior deliveries.

Dr. R. G. Leland, chief of the Bureau of Hygiene, State Department of Health, attended the convention as a representative of Ohio.

### Narcotic Addiction in Ohio

The number of drug addicts in Ohio is increasing, but the supply of narcotics is obtained chiefly through illegal channels, R. M. Black, chief of the division of dairy and foods, has announced.

For the twelve-month period, ending in June, 1922, there were 83 persons fined from \$25 to \$1,000 upon conviction of illegal distribution of narcotics against 61 for the previous year.

The largest proportion of violations reported to the state are the result of "peddler activities." Contraband morphine, cocaine and raw opium have been confiscated from automobiles, steamboats, the mails, secret vaults in rooms, and even from the hems of garments.

There is no limit to the ingenuity of the "peddler", Mr. Black says. And his market is not confined to any particular class of people, except that most of the addicts are women.

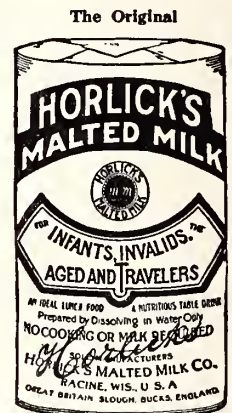
In the Division's effort to remove the source of supply, tips are mainly relied upon. An average of six telephone calls a day are received at the state offices. In every instance, an investigation is made.

"The excellent cooperation on the part of the professional medical and pharmaceutical men in the efforts to combat the distribution of dope among addicts" has aided the division materially.

On the other hand, it is pointed out, the peddler has become increasingly active and to his operations can be definitely traced most of the illegal supply.

## Very Useful in Digestive Disorders

A reliable food-drink that can be generally tolerated and assimilated sufficiently to maintain strength. Bland and non-irritating in disturbed conditions, ulcers, etc. Partially pre-digested. Easily adapted to individual needs.



Samples prepaid upon request.

### HORLICK'S

Racine, Wis.

Avoid Imitations

## Dares Haemoglobinometer

Candle lighted, or Electric lighted.  
We are accepting orders for prompt delivery.  
Write for booklet and prices.

## Tycos Office Sphygmomanometer

With 6 inch silvered dial.  
A distinct advance over the pocket type.  
Immediate delivery. Price \$37.50.

Surgical Instruments—Dressings,  
Pharmaceuticals, Biologicals

Your orders will receive prompt attention—  
"You will do better in Toledo."

### The Rupp and Bowman Co.

319 Superior St.

TOLEDO,

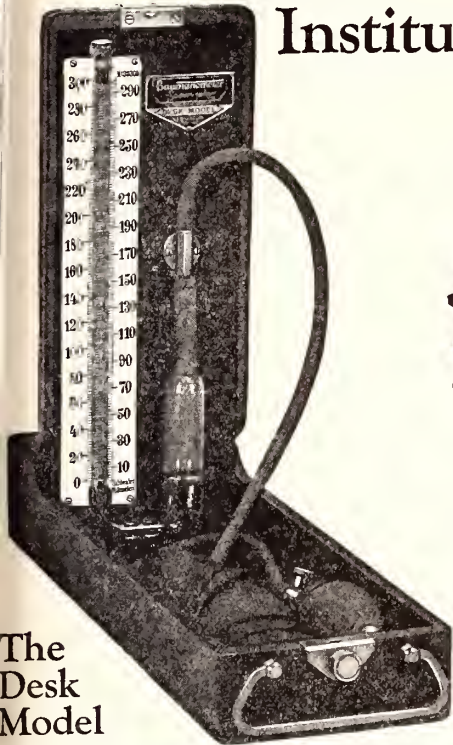
OHIO

Many Eminent Physicians and Leading Institutions use the Baumanometer

DO YOU?

# Baumanometer

“STANDARD FOR BLOODPRESSURE”



The Desk Model

A sphygmo-manometer of precise accuracy, whose utter simplicity and proven reliability has merited the high esteem in which it is held by thousands.

Four distinctive Models are supplied in cases of solid American Walnut, richly finished and mounted with polished nickel fittings of exclusive design.

YOUR DEALER HAS THEM IN STOCK

W. A. BAUM COMPANY, Inc. NEW YORK

## SAVE MONEY ON YOUR X-RAY SUPPLIES

Get Our Price List and Discounts on Quantities Before You Purchase

HUNDREDS OF DOCTORS FIND WE SAVE THEM FROM 10% TO 25% ON X-RAY LABORATORY COSTS

Among the Many Articles Sold Are

- X-RAY PLATES.** These brands in stock for quick shipment. PARAGON Brand, for finest work; UNIVERSAL Brand, where price is important.
- X-RAY FILMS.** Duplitzed or Dental—all standard sizes. Eastman, Ilford or X-ograph metal backed. Fast or slow emulsion.
- BARIUM SULPHATE.** For stomach work. Finest grade. Low price.
- COOLIDGE X-RAY TUBES.** 5 Styles. 10 or 30 millamp.—Radiator (small bulb), or broad, medium or fine focus, large bulb. Lead Glass Shields for Radiator type.
- DEVELOPING TANKS.** 4 or 6 compartment stone, will end your dark room troubles. 5 sizes of Enameled Steel Tanks.
- DENTAL FILM MOUNTS.** Black or gray cardboard with celluloid window or all celluloid type, one to eleven film openings. Special list and samples on request. Price includes your name and address.
- DEVELOPER CHEMICALS.** Metol, Hydroquinone, Hypt, etc.
- INTENSIFYING SCREENS.** Patterson TE, or celluloid-backed screens. Reduce exposure to one-fourth or less. Double screens for film. All-metal Cassettes.
- LEADED GLOVES AND APRONS.** (New type glove, lower priced).
- FILING ENVELOPES** with printed X-Ray form. (For used plates). Order direct or through your dealer.

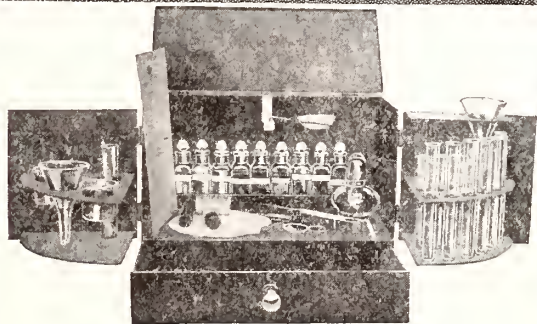
If You Have a Machine Get Your Name on Our Mailing List



**GEO. W. BRADY & CO**

771 So. Western Ave., Chicago

## Urinary Test Outfit With Steel Cabinet



The new steel case is finished in smooth, olive-green enamel. Equipment includes nine reagents in glass-stoppered bottles, alcohol lamp, porcelain evaporating dish, two funnels, two beakers, assorted test tubes, urinometer, urinometer jar, wood test tube holder, watch glasses, glass stirring rod, litmus paper and graduated pipette. All equipment fits into the cabinet and drawer compactly.

Frank S. Betz Co. Enclosed is \$10.50 for which you may send me your 2CJ219 steel urinary test cabinet.  
Hammond, Indiana.

Name .....  
Address .....  
City..... State.....

## American Public Health Association and Allied Bodies Considered Varied But Pertinent Subjects

Ohio was well represented at the fifty-first annual meeting of the American Public Health Association held in Cleveland. Public health officials of this state, in view of the fact that the system of health organization followed in Ohio is recognized as one of the most progressive in the nation, played an important part in the meeting.

The program started on the afternoon of October 16 and closed October 19. It was divided into eight sections—public health administration, health education and publicity, child hygiene, food and drugs, vital statistics, sanitary engineering, industrial hygiene, and public health nursing.

Attended by nearly 1,200 physicians and others interested in public health, the meeting was considered epochal in the struggle of science to prolong human life. Committee reports presented showed that ten years have been added to the life of the average individual through the practice of scientific medicine and public health measures, and that steady advance is being made toward the fifteen-year goal.

In general the sentiment of the convention indicated a reaction from some of the more radical tendencies resulting from the World War and inauguration of a long and concerted program

on some of the more difficult practical problems of health.

\* \* \*

The widespread use of moonshine and other illicit liquors is a menace to public health throughout the country, J. M. Doran, head of the industrial alcohol division, prohibition unit, of the internal revenue bureau, told the convention in a paper on "The Character of Moonshine Liquors" before the food and drug section of the association.

"The most casual survey must impress one with the vicious, if not the deadly, character of the illicit liquor now being dealt in and consumed for beverage purposes," he said. "Its effects are noticeable in all sections, and while drinking of illicit liquor may be more prevalent in metropolitan centers than in rural communities, it nevertheless is sufficiently widespread to become a matter that vitally concerns public health.

"Alcoholism is less prevalent since prohibition went into effect, but its attendant and after effects are more serious.

"A large element of the present drinking public is alarmed by the deaths from wood alcohol," he added, "and is disposed to resort to liquor of seemingly known and recent origin under the

### The Management of an Infant's Diet

*Mellin's Food contains 58.88 per cent of Maltose*  
*Mellin's Food contains 20.69 per cent of Dextrins*

a proportion of

# Maltose and Dextrins

best suited to the carbohydrate needs of the average baby.

Mellin's Food contains 10.35 per cent of Cereal Protein.

Mellin's Food contains 4.30 per cent of Salts which consist mainly of Potassium Salts, Phosphatic Salts, and a small amount of Iron.

These facts should be considered in selecting a modifier of milk for infant feeding and these facts point out some of the reasons for the success of Mellin's Food which probably is unparalleled in any decade since the beginning of the study of scientific infant feeding.

Mellin's Food Company, Boston, Mass.



**Rheumatism**  
**Gout**  
**Neuralgia**  
**Neuritis**  
**Sciatica**  
**Lumbago**  
**Migraine**

The best of patients may become the worst of impatiens

if kept suffering while a "painful" search is made for the "why's and wherefore's."

First relieve promptly and safely with ATOPHAN, then make it part of whatever is your favorite scheme of treatment.

Genuine ATOPHAN is manufactured at our Bloomfield, N. J. plant by a special process, precluding the possibility of even traces of irritating empyreumatic admixtures.

*Complimentary Trial Package and Information from*

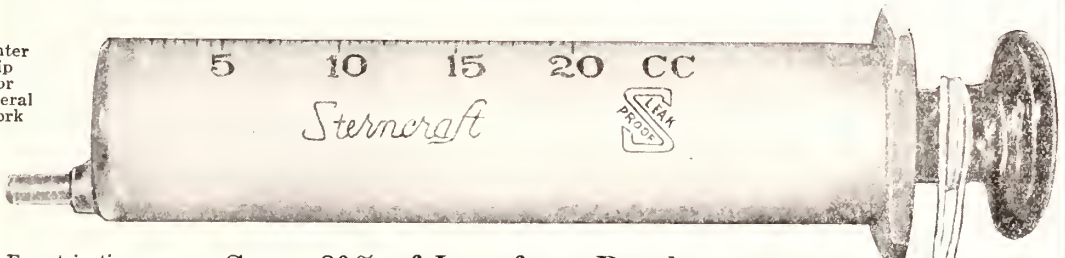
**SCHERING & GLATZ, Inc.**

150 Maiden Lane

**NEW YORK**

**STERNCRAFT SYRINGE Guaranteed Not to Crystalize in Sterilization**

Center tip for General Work



Eccentric tip for Intravenous		<b>Saves 80% of Loss from Breakage</b>			
2 cc.....	\$ .75	5 cc.....	\$1.75	30 cc.....	\$4.00
3 cc.....	1.25	10 cc.....	2.50	50 cc.....	5.50
1 cc.....	1.75	20 cc.....	3.00	100 cc.....	7.50

**STERNCRAFT THERMOMETER**

The STERNCRAFT Clinical Thermometer guaranteed accurate and to pass the test of any National, State, or Municipal Board.

*Personal guarantee of perfection. They must meet with your approval. All made in our own factory.*



**Sterncraft**

**STERN INSTRUMENT CORPORATION**

Pierce Avenue Long Island City, New York

THIS  
LEAK PROOF  
*Sterncraft*  
Syringes  
**GUARANTEED**  
Not to LEAK, BIND or  
CRYSTALLIZE IN  
STERILIZATION  
Stern Instrument  
Corporation

impression that, being locally or home made, it is at least safe and pure. This is far from the truth.

"Unless these home distilled liquors are treated scientifically or kept at least four years in wood barrels a high percentage of acetaldehyde accumulates. The ranker the liquor the higher the aldehyde content. It is this poison, and not fusel oil or the higher alcoholic content, in new whisky that produces the harmful effects.

"How the acetaldehyde literally pickles the internal organs of the user can readily be seen from the fact that meat can be preserved for months in a small aldehyde solution. It is a rapid intoxicant, like raw spirits, eats out the membranes of the internal organs and has a bad effect on the respiratory system."

\* \* \*

Speaking before the industrial hygiene section, Dr. Sidney M. McCurdy, medical director for the Youngstown Sheet and Tube Company, declared that the industrial physician is a community health officer and has the same responsibility in the large industrial plants that a public health officer has in a municipality.

"The test of medical efficiency," Dr. McCurdy continued, "must be recognized in terms of days lost from work, incapacity following sickness, as well as morbidity statistics. Sanitarians, public health officials, industrial physicians and private physicians must cooperate to conserve humanity.

"The industrial physician through physical examination of employes is trying to prevent the spread of infectious and contagious diseases. He is preventing physically damaged workers from doing work harmful to themselves, increasing efficiency by placing handicapped employes at work suitable to their powers and furthering health education by lectures, bulletin articles and personal talks.

"The public health official needs the industrial specialist to supplement his work and the industrial physician needs the public health official. Both must have the assistance of practicing physicians and surgeons if they are to keep the wheels of industry running."

\* \* \*

Robbing Peter to "pep up" Paul by gland operations was condemned as "monkey business" by Dr. Louis Klein, of Detroit, in an illustrated lecture on "The Present Status of Glandular Therapy". Gland operations are no fountain of eternal youth, elixir of life, or magic touchstone by which all ills can be cured, the delegates agreed.

"The upright physician does not believe in aiding one patient by sacrificing the health of another," Dr. Klein said. He added, however, that certain gland operations, such as the removal of a goiter, were valuable to the patient

Trademark  
Registered

# STORM

Trademark  
Registered

## Binder and Abdominal Supporter

(Patented)



Trade  
Mark  
Reg.

Trade  
Mark  
Reg.

### For Men, Women and Children

For Ptosis, Hernia, Pregnancy, Obesity,  
Relaxed Sacro-Iliac Articulations, Float-  
ing Kidney, High and Low Operations, etc.

Ask for 36-page Illustrated Folder.  
Mail orders filled at Philadelphia only—  
within 24 hours.

## Katherine L. Storm, M. D.

Originator, Patentee, Owner and Maker

1701 DIAMOND ST.

PHILADELPHIA

## Stamp Out Tuberculosis



## Buy Christmas Seals

## BULLETIN No. 2

*To the Medical Profession:*

The theory as to the medical value of a chemically pure and mineral free water in its natural state has proved of interest to the medical profession; and for some of the reasons which follow:

The almost total absence of mineral content renders such a water highly solvent. Its affinity for calcareous substances is obvious. It cleanses the kidneys by elimination, soothes irritation, and tends to purify the blood stream. It is excellent as a diuretic.

It is therefore suggested that its continuous and exclusive use tends to purify and gradually change the body fluids, thus maintaining and revitalizing the whole cellular structure.

Undoubtedly the drinking of water in quantity is of value in certain disorders. Is it not true that the purer the water (i. e. low mineral content) the greater the benefit? Much depends upon the kind of water taken. We have been told by physicians that when they prescribe a certain quantity of water per day and mention no particular kind, the patient left to his own choice, frequently fails to follow directions. When, however, a certain kind of water is prescribed, there is a psychological reaction in the patient who feels there is some special merit in the water indicated and then follows instructions religiously and in much the same way that he takes prescribed medication.

Paradise Water is not offered as a medicine "per se" but as an aid to medical treatment.

## ANALYSIS OF PARADISE WATER

The U. S. gallon of 231 cubic inches, holding 58,372 grains of water, contains:

		Grains
SiO <sub>2</sub> ,	Silica .....	0.379
Fe <sub>2</sub> O <sub>3</sub> ,	Oxide of Iron .....	0.005
CaSO <sub>4</sub> ,	Sulphate of Lime .....	0.060
CaCO <sub>3</sub> ,	Carbonate of Lime .....	0.074
MgCO <sub>3</sub> ,	Carbonate of Magnesia .....	0.060
NaCl,	Chloride of Sodium .....	0.022
Na <sub>2</sub> CO <sub>3</sub> ,	Carbonate of Sodium .....	0.360
KCl,	Chloride of Potassium .....	0.036

Total Solids by calculation.....0.996

Total Solids by weight, at 230 Fahr.....0.980

Note the remarkable freedom from mineral content.

## PARADISE SPRING COMPANY

Brunswick, Maine

---

# PARADISE WATER

and also to a second person who might benefit by the gland excess removed.

"I am suspicious of the doctor who calls himself a 'glandular therapist,'" Dr. Klein said. "Only a few of the human glands which play an important part in the health of the body are susceptible to medical treatment, but excellent results can be obtained by proper treatment of those few.

"Treatment of glands calls for careful diagnosis and the practitioner who attempts to give a patient glandular extracts or tries to operate or transfer glands had best make sure of his ground before starting in."

\* \* \*

The administration of the Sheppard-Towner act, taking politics out of public health, the relation of the private physician to public health, health education of the public, current knowledge of vitamins and proteins, sanitation of the food and milk supply, the relation of infant nutrition to infant mortality, the effect of transportation difficulties on the food supply and public health were among the other subjects discussed.

The National Council of Health, the American Social Hygiene Association, the American Medical Editors' Association and the Ohio Association of Industrial Physicians met in connection with the Public Health Association.

Speaking before the Medical Editors' Association, Dr. Charles J. Whalen, Chicago, condemned the Harrison narcotic act, the Volstead law, state health insurance, the Sheppard-Towner maternity act and anti-vivisection law as red tape, imposed by a lay bureaucracy upon the scientific physician.

"Under state medicine and compulsory health insurance not one single discovery of merit has come out of Germany in over twenty years," Dr. Whalen asserted. "Yet before, Germany was at the pinnacle of her medical success; just as now she is at the depths of medical decline, working as her doctors do, under a penal fee."

Dr. Whalen maintained paternalistic laws sapped the originality of physicians without doing any real good because the code of the profession was higher than that imposed by law. He held physicians should have discretion to prescribe drugs and alcohol without being "hamstrung by laws written by laymen."

The editors maintained they were not opposed to the purposes of the Sheppard-Towner act, but that it had been so framed that it might result in "wasteful extravagance by providing soft jobs for political appointees."

Among the officers chosen by the American Public Health Association for the ensuing year, was Dr. H. L. Rockwood, Cleveland health director, who was elected third vice-president.

# To Prevent Hydrophobia

Use

## Pasteur Treatment

With a

**Potent Product and Prompt Service**

**PRICE \$25.00**

Order from

**James McIlvaine Phillips, M. D.**

2057 N. High St.

Columbus,

Ohio

Acute Respiratory Diseases offer an excellent opportunity to demonstrate the value of Therapeutic Immunization with Bacterial Vaccines

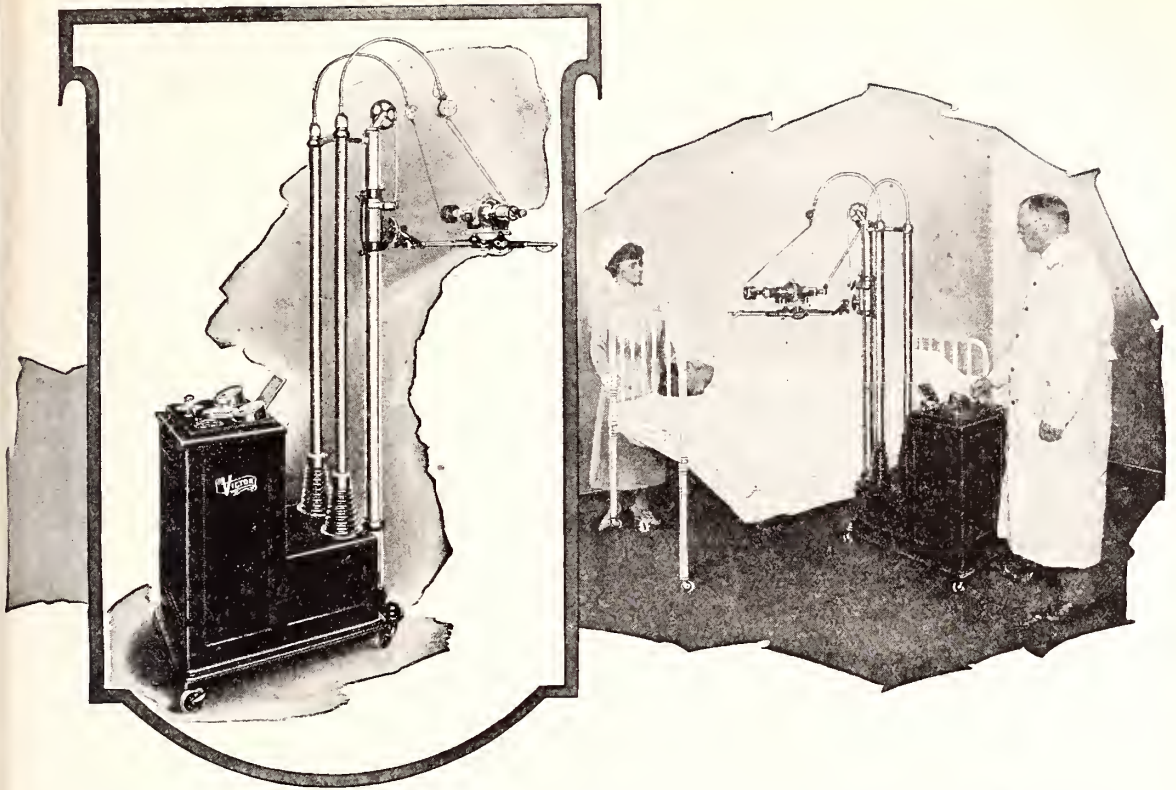
DATA FURNISHED ON REQUEST

Bacteriological Laboratories of

**G. H. SHERMAN, M. D.**

DETROIT, MICH.





## What This Simplified X-Ray Apparatus Means

### A Good Diagnostic Radiograph for Every Exposure

This is now possible to the user of the Victor Stabilized Mobile X-Ray Unit—no longer need he await years of experience to arrive at this point of efficiency.

### Guesswork Practically Eliminated

The "hit and miss" method of taking radiographs must now give way to this improved apparatus which enables the operator to duplicate his best results, from day to day and month to month, simply because the machine will deliver repeatedly the exact current desired for a given technique, regardless of voltage fluctuations occurring on the supply line from which the machine is energized.

*The Victor-Kearsley Stabilizer is one of the most important X-Ray developments since the advent of the Coolidge Tube itself. It should not be confused with other devices which tend to stabilize only the current to the filament of the tube. The important advantages of this unit are fully explained in a special bulletin, which we will gladly send you on request.*

VICTOR X-RAY CORPORATION, Jackson Blvd. at Robey St., Chicago

*Territorial Sales and Service Stations:*

COLUMBUS: 207 EAST STATE STREET

### Tube Current Is Stabilized

When the voltage of the line supply current fluctuates (this condition prevails on practically every line), the Victor-Kearsley Stabilizer, incorporated in this unit, acts automatically to hold constant the exact milliamperage desired for the radiograph. 100% radiographic results are therefore insured—no "retakes" necessary because of the fluctuating line supply.

### Circuit Breaker Safety Device

In case of "overload" beyond the capacity of the tube (30 Ma. at 5" back-up spark), a circuit breaker *automatically* shuts off the current supply, preventing damage to tube and apparatus. Consider also the importance of this from the standpoint of protection to both operator and patient, in case of accidental contact with the high tension system.





## NEWS NOTES of OHIO

*Shawnee*—Dr. J. S. Rambo has removed from this city to Richwood, Union County, where he has purchased the practice of Dr. J. O. Stout.

*Akron*—Dr. W. A. Hoyt addressed the Health Preservation Division of the College Club, November 14, at the Children's Hospital on "What the Community is Doing for Crippled Children".

*Oberlin*—Dr. W. A. McIntosh, Lorain County district health officer, and Miss Austa McKitrick, were married, October 3, at the home of the bride's parents, Dr. and Mrs. A. S. McKitrick, Kenton.

*McConnelsville*—Dr. James F. Leeper, who has been seriously ill with gall stones, recently underwent an operation and is reported improving.

*Findlay*—Dr. William J. Fishell has returned from a six months' visit at the Vienna clinics.

*Mt. Vernon*—Dr. Jay D. Thomas, former member of the staff of the Ohio State Sanatorium, has located in Cincinnati.

*Salem*—Dr. R. M. Schwartz, who recently returned from New Mexico, where he was health commissioner of Santa Fe County, told of his ex-

periences there at a meeting of physicians of the city hospital staff, October 16.

*Norwood*—Dr. George E. Orebaugh and Miss Hazel Sigler, both of this village, were married, October 19.

*Cleveland*—Dr. Clara A. Nutting of the Kate Ford Whitman Hospital for Women at Fenchow, Shansi province, China, one of the few women physicians engaged in foreign mission work, was a speaker at the 54th annual meeting of the Congregational Woman's Board of Missions of the Interior, in this city, November 2.

*Cincinnati*—Dr. William Jordan Taylor is convalescent after undergoing an operation for removal of a tumor. He has been ill for several months.

*Eaton*—The Union District Medical Association, composed of physicians of seven Indiana and four Ohio counties, met in this city, October 26, for its 110th semi-annual convention.

*Sandusky*—Dr. J. B. Ocheltree has moved to this city from Pasadena, California.

*Findlay*—Dr. J. P. Baker recently enjoyed a fortnight's vacation at Platte Lake, Michigan.

*Fostoria*—The marriage of Dr. John H. Norris and Mrs. Hazel Morris, both of this city, has been announced.

*Columbus*—Dr. James M. Dunham has gone to Auburndale, Florida, to spend the winter.

## MEAD'S

### INFANT DIET MATERIALS

Like many good things there is no mystery about Mead's Ethical Policy—but there is MUCH OF GOOD SENSE

*Mead's Slogan—"Consult the Doctor First."*

MEAD'S DEXTRI-MALTOSE is an ethical infant diet material offered to physicians who wish to modify cow's milk for the individual requirements of babies.

MEAD'S "D-M" is not advertised in women's magazines, newspapers, or any lay publications.

MEAD does not print feeding directions on the "D-M" package.

Satisfactory results—because the doctor's creative talent has full scope and he is not hindered by "outside interference."

A quality product marketed in this ethical manner must necessarily give results in most cases since it is offered only for the consideration and approval of physicians.

*The Doctor's Confidence Is Not Misplaced*

#### THE MEAD JOHNSON POLICY

Mead's Infant Diet Materials are advertised only to physicians. No feeding directions accompany trade packages. Information in regard to feeding supplied to the mother by written instructions from her doctor, who changes the feedings from time to time to meet the nutritional requirements of the growing infant. Literature furnished only to physicians.

28,000 doctors asked us for literature this year.

Will you please write for some too?

MEAD JOHNSON & COMPANY,

Evansville, Indiana

# The OHIO STATE MEDICAL JOURNAL

OWNED AND PUBLISHED MONTHLY BY  
THE OHIO STATE MEDICAL ASSOCIATION  
AS A MEDIUM OF SERVICE TO ITS MEMBERS

JANUARY 1, 1922

Volume XVIII  
Number : 1

Among the Authors in This Issue :

Herrick  
Duffee  
Skeen

Bowen  
Dunn  
Page

Goodyear  
Garrett  
Dunbar

Marthens  
McIntyre  
North

(SUMMARY OF CONTENTS, PAGE II.)

## CALCREOSE

### (Calcium Creosotate)



IN inflammations of the respiratory apparatus, especially in *bronchitis*, *Calcreose* has won a place in the therapeutic armamentarium of the physician. It is of value in the treatment of bronchitis associated with *pulmonary tuberculosis*, because it has creosote effect without upward action on the stomach, such as nausea, disagreeable eructations and distress.

CALCREOSE can be given in comparatively large doses for long periods of time without any objection on the part of the patient. The indications for CALCREOSE are the same as those of creosote.

Write for literature and samples.

THE MALTBIE CHEMICAL COMPANY  
NEWARK, NEW JERSEY

# Summary of Contents

## ORIGINAL ARTICLES

The Care of Patients after Abdominal Operations, A. Henry Dunn, M.D., Chillicothe.. 5  
 Factors influencing mortality and morbidity. Necessity of surgical experience and judgment in after-care. The newer concepts of post-operative care. Posture. Bowels. Diet. Alkalinization. Post-operative complications. Respiratory difficulties, nausea and vomiting, thirst, pain and restlessness. Suppurating wounds. Acute dilation of the stomach. Hiccough. Peritonitis. Sub-diaphragmatic abscess. Post-operative ileus. Pneumonia, phlebitis and parotitis.

The Management of the Third Stage of Labor, Walter E. Duffee, M.D., Columbus..... 12  
 General considerations. Routine management of the third stage of labor. Analysis of results.

Intra-Spinal Treatment of Neuro-Syphilitic Patients, Grant Marthens, M.D., Dayton.. 13  
 Routine methods of treatment. Rectal use of arsphenamine. Duration of treatment. Intra-spinal treatment. Statistical data. Results. Conclusions.

Comparative Values of Complement Fixation Methods in Syphilis, Howard D. McIntyre, M.D., Emerson A. North, M.D., and Aurelia P. McIntyre, A.B., Cincinnati.. 17  
 Historical evolution. Method of investigation. Results. Summary.

The Relation of Abdominal to Urological Surgery, Frederick C. Herrick, M.D., Cleveland ..... 26  
 The necessity of the surgeon being able to diagnose kidney diseases. Pyelitis and appendicitis. Colitis and pyelitis. Difficulty in diagnosing obstructive pyelitis. Kidney hyperesthesia and appendicitis. Renal ptosis. Pyelography and the diagnosis of abdominal tumors. Low renal output. Conclusions.

The Rural Health Commissioner and His Problems, C. H. Skeen, M.D., Napoleon.... 30  
 City vs. rural health. Deficient funds for health work. Lack of health work co-operation in the schools. Communicable diseases in school children. Typhoid fever a rural disease. Problems of isolation and quarantine. Enlarging scope of the health commissioner's work.

Rural Public Health Nursing, Celinda Dunbar, R. N., Chillicothe..... 33  
 Milestones in public health. Problems in public health. Ophthalmia neonatorum. The influenza epidemic. Cooperation of physicians. A trachoma survey. Teaching public health. The conversion of "Doc" McGee.

Infection of the Lateral Sinus, E. W. Garrett, M. D., Cleveland ..... 37  
 Symptoms of lateral sinus infection. Diagnostic aids. Ruling out other infections. Illustrative case report. Prognosis. Advantages of early operation. Ligating the jugular vein. Summary.

Report of a Case of Extensive Lateral Sinus Thrombosis: With Reference to Low Resection, Henry M. Goodyear, M.D., Cincinnati ..... 40  
 Abstract of clinical record. Notes following operation. Laboratory findings. Interesting findings at autopsy. Comment.

The Medical College and the Medical Profession, H. Page, M.D., Cincinnati..... 54  
 Making selfishness a pardonable virtue. Creating power out of force. The College the heart of medicine. Ideals of the College. Plans for extending service.

Superficial Malignancies, C. F. Bowen, M.D., Columbus ..... 60  
 The cancer problem. Superficial malignancies. Causes of failure. Selective therapy.

## EDITORIAL COMMENT

1922 Greetings ..... 1  
 Medical Promotional System..... 1  
 Enforcement vs. Legislation..... 2  
 Fighting Medicine's Cause..... 2  
 Chiropractic "Crust" ..... 2  
 Self-Diagnosis and Specialization..... 3  
 Minor Ailments and Physical Education..... 4  
 "The Doctor" ..... 4  
 Permits to Prescribe Intoxicants..... 4

## STATE NEWS

News Notes of Ohio..... 44  
 Sheppard-Towner Maternity Bill and the Willis-Campbell Anti-Beer Bill Emerge from Mass of Federal Legislation..... 45  
 Industrial Physicians Have Interesting Meeting at Cleveland..... 46  
 Deaths in Ohio..... 47  
 Special Course for Health Commissioners Proposed by State Department of Health.... 48  
 Small Advertisements ..... 49  
 News of the Academies and County Societies Gorgas Memorial Institute of Tropical and Preventive Medicine ..... 53  
 Ohio Hospital Notes..... 57  
 Medical Attention and Hospitalization on Large Scale Planned under Reorganized Veterans' Bureau ..... 58  
 Occupational Disease Forms Ready..... 59  
 The Cancer Campaign..... 60  
 Health Exposition and Institute in Louisville Cincinnati Ophthalmological Club..... 68  
 Ohio Health Code, Placed on Trial in Cuyahoga County, Upheld by Supreme Court.... 70  
 State Medical Board Activities..... 72  
 Proportion of Physical Defects Among College Students Presents Interesting Data for Consideration ..... 78  
 Effort to Revive Old Age Pension Proposal Expected ..... 82  
 Public Health Notes..... 84  
 Outbreak of Diarrhea and Enteritis at Delaware ..... 86

## ADDRESSES OF STATE AND FEDERAL OFFICES

### Columbus

Collector of Internal Revenue—W. H. Miller, Postoffice Building, Third and State Sts.  
 Columbus District (Ohio 11th) comprises the counties of Adams, Athens, Coshocton, Delaware, Fairfield, Franklin, Gallia, Guernsey, Hocking, Jackson, Knox, Lawrence, Licking, Madison, Marion, Meigs, Morgan, Morrow, Muskingum, Noble, Perry, Pickaway, Pike, Ross, Scioto, Union, Vinton and Washington.

Federal Prohibition Director—J. E. Russell, Gule Bldg., 4th and Long Sts.

State Prohibition Commissioner—Don Parker, State House.

State Department of Health—Director, Dr. H. H. Snively, 4th and Main Sts.

State Industrial Commission—Chief Medical Examiner, Dr. T. R. Fletcher, 4th and Main Sts.

State Department of Welfare—Director, Dr. H. S. MacAyeal, 9th and Oak Sts.

State Medical Board—Secretary, Dr. H. M. Platter, 4th & Main Sts.

### Cleveland

Collector of Internal Revenue—Harry H. Weiss, 262 Federal Bldg.  
 Cleveland District (Ohio 18th) comprises the counties of Ashland, Ashtabula, Belmont, Carroll, Columbiana, Cuyahoga, Geauga, Harrison, Holmes, Jefferson, Lake, Lorain, Mahoning, Medina, Monroe, Portage, Richland, Stark, Summit, Trumbull, Tuscarawas and Wayne.

### Cincinnati

Collector of Internal Revenue—Chas. M. Dean, Custom Bldg.  
 Cincinnati District (Ohio 1st) comprises the counties of Brown, Butler, Clarke, Clermont, Clinton, Fayette, Greene, Hamilton, Highland, Miami, Montgomery, Preble and Warren.

### Toledo

Collector of Internal Revenue—Frank B. Miles.  
 Toledo District (Ohio 10th) comprises the counties of Allen, Auglaize, Champaign, Crawford, Darke, Defiance, Erie, Fulton, Hancock, Hardin, Henry, Huron, Logan, Lucas, Mercer, Ottawa, Paulding, Putnam, Sandusky, Seneca, Shelby, Van Wert, Williams, Wood and Wyandot.



# The OHIO STATE MEDICAL JOURNAL

OWNED AND PUBLISHED MONTHLY BY  
THE OHIO STATE MEDICAL ASSOCIATION  
AS A MEDIUM OF SERVICE TO ITS MEMBERS

FEBRUARY 1, 1922

Volume XVIII  
Number : 2

Among the Authors in This Issue:

Pirrung  
Fullerton  
Schwartz

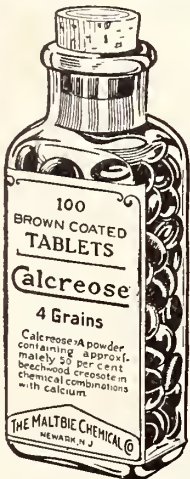
Gardiner  
Caldwell  
Koenig

Bunts  
Brockway  
Leonard

Southwick  
Friedlander  
Brown

(SUMMARY OF CONTENTS, PAGE II.)

## CALCREOSE



### (Calcium Creosotate)

IN inflammations of the respiratory apparatus, especially in *bronchitis*, *Calcreose* has won a place in the therapeutic armamentarium of the physician. It is of value in the treatment of bronchitis associated with *pulmonary tuberculosis*, because it has creosote effect without upward action on the stomach, such as nausea, disagreeable eructations and distress.

CALCREOSE can be given in comparatively large doses for long periods of time without any objection on the part of the patient. The indications for CALCREOSE are the same as those of creosote.

Write for literature and samples.

THE MALTBIÉ CHEMICAL COMPANY  
NEWARK, NEW JERSEY

# Summary of Contents

ORIGINAL ARTICLES

Wounds and Injuries of the Scalp: Their Complications and Treatment, J. Edward Pirrung, M.D., Cincinnati..... 93  
 Anatomical considerations. Types of scalp wounds. Essentials of treatment. Avoiding complications.

Contrecoup Damage to the Brain in Head Injuries, John A. Caldwell, M.D., Cincinnati ..... 96  
 Contrecoup experiments of Tillman. Contrecoup damage as shown by autopsy. Illustrative case reports. Summary.

Gastro-Intestinal Diagnosis: The Advantage of Present Day Methods as Seen by the Surgeon, Francis G. Leonard, M.D., Cleveland ..... 99  
 Historical review and development of newer methods. The methods in use and their relative value. Examination. Application of present day methods in diagnosing prevalent lesions. Peptic ulcer. Gastric malignancy. Tuberculosis of the intestines. Conclusions.

Heart Size in Relation to Thorax Size, Alfred Friedlander, M.D., and Samuel Brown, M.D., Cincinnati ..... 103  
 Ortho-diagrams and tele-roentgenograms. Clinical value of heart silhouettes. Technical precautions. Authors' observations and methods. Results of studies. Summary.

The School Child—The Future Citizen, P. B. Brockway, M.D., Toledo ..... 106  
 General considerations. Prevention and correction. Teaching health. Social hygiene.

Working of the Hughes-Griswold Health Law in Lucas County, Charles Koenig, M.D., Toledo ..... 108  
 The Hughes-Griswold health law. What was to be done. What has been done. Selling public health. Exhibit of public health work at the county fair. Securing the cooperation of the teachers and doctors. School examinations. Controlling epidemics. Cooperation with the profession. Social service.

The Requisites of Modern Obstetrics and the Professional, Social and Moral Obligations of the Present Day Obstetricians, Wm. D. Fullerton, M.D., Cleveland ..... 117  
 The problem of reproduction. Eugenics. Obstetrical obligations. Better babies. Improved teaching of obstetrics and gynecology. The obstetrician as an operator. The care of women in industry. Prophylaxis. Avoiding heart, lung and kidney and other complications. Pre-delivery examination. Problems of the puerperium.

Medical and Public Health Phases of the Salem Typhoid Fever Epidemic, R. M. Schwartz, M.D., Salem..... 122  
 Medical measures taken. Heroic work of doctors and nurses. Scope and utility of transfusion. Symptomatic treatment and dietetic regime. Public health phases of the epidemic. Source of contamination. Conclusions.

The Diagnosis of Twin Pregnancy by Means of a New Stethoscope, John Patterson Gardiner, M.D., Toledo..... 125  
 Description and Illustration. Other Uses.

Simplified Infant Feeding by the Caloric Modification of Cow's Milk, P. F. Southwick, M.D., Sandusky..... 126  
 Main points in prescribing infant foods. Caloric values in infant feeding. Food dilution for proteid digestion. Typical feeding formulas. Pointers in caloric feeding. The question of sugar and boiled milk.

Cancer of the Stomach, F. E. Bunts, M.D., Cleveland ..... 140  
 The necessity of dealing with precancerous conditions. Prevalence and mortality of cancer of the stomach. Etiology. Symptomatology. Treatment.

EDITORIAL COMMENT

State Medicine in Ohio..... 89  
 Policy Problems ..... 90  
 Medical Service in State Institutions..... 90  
 Income Tax Returns ..... 91  
 Workmen's Compensation—Occupational Diseases..... 91  
 Prohibition Prescription Sentiment..... 92  
 Unwholesome City ..... 130

STATE NEWS

New Notes of Ohio..... 128  
 Steps Taken for Placing in Operation in Ohio the Provisions of the Sheppard-Towner Maternity Legislation..... 129  
 Policies, Annual Meeting Plans and Committee Work  
 Crowd First Councilor Meeting of the Year ..... 131  
 Public Health Notes ..... 135  
 Suggestions for the Operation of a Doctors' Exchange in Communities of Thirty Thousand or Over..... 136  
 Deaths in Ohio ..... 138  
 Physicians May Take Into Account Various Exemptions in Submitting Income Tax Returns..... 139  
 The Cancer Campaign ..... 140  
 Activities of the State Medical Board ..... 142  
 News of the Academies and County Societies..... 144  
 Many Seek Admittance to Correspondence-Study Course Given by State Health Department for Commissioners..... 150  
 Encouraging Returns from Tuberculosis Seal Sale..... 156  
 Ohio-Michigan Fellows A. C. S. to Hold Joint Meetings..... 158  
 Small Advertisements ..... 156  
 Pioneer Health Commissioner Resigns; Other Changes in Personnel of Health Departments..... 160  
 Roster of County Society Officers..... 164-165  
 Hospital Notes ..... 166

## ADDRESSES OF STATE AND FEDERAL OFFICES

Columbus

Collector of Internal Revenue—W. H. Miller, Postoffice Building, Third and State Sts.  
 Columbus District (Ohio 11th) comprises the counties of Adams, Athens, Coshocton, Delaware, Fairfield, Franklin, Gallia, Guernsey, Hocking, Jackson, Knox, Lawrence, Licking, Madison, Marion, Meigs, Morgan, Morrow, Muskingum, Noble, Perry, Pickaway, Pike, Ross, Scioto, Union, Vinton and Washington.

Federal Prohibition Director—J. E. Russell, Gugle Bldg., 4th and Long Sts.

State Prohibition Commissioner—Don Parker, State House.

State Department of Health—Director, Dr. H. H. Snively, 4th and Main Sts.

State Industrial Commission—Chief Medical Examiner, Dr. T. R. Fletcher, 4th and Main Sts.

State Department of Welfare—Director, Dr. H. S. MacAyeal, 9th and Oak Sts.

State Medical Board—Secretary, Dr. H. M. Platter, 4th & Main Sts.

Cleveland

Collector of Internal Revenue—Harry H. Weiss, 262 Federal Bldg.  
 Cleveland District (Ohio 15th) comprises the counties of Ashland, Ashtabula, Belmont, Carroll, Columbiana, Cuyahoga, Geauga, Harrison, Holmes, Jefferson, Lake, Lorain, Mahoning, Medina, Monroe, Portage, Richland, Stark, Summit, Trumbull, Tuscarawas and Wayne.

Cincinnati

Collector of Internal Revenue—Chas. M. Dean, Custom Bldg.  
 Cincinnati District (Ohio 1st) comprises the counties of Brown, Butler, Clarke, Clermont, Clinton, Fayette, Greene, Hamilton, Highland, Miami, Montgomery, Preble and Warren.

Toledo

Collector of Internal Revenue—Frank B. Miles.  
 Toledo District (Ohio 10th) comprises the counties of Allen, Auglaize, Champaign, Crawford, Darke, Defiance, Erie, Fulton, Hancock, Hardin, Henry, Huron, Logan, Lucas, Mercer, Ottawa, Paulding, Putnam, Sandusky, Seneca, Shelby, Van Wert, Williams, Wood and Wyandot.



# The OHIO STATE MEDICAL JOURNAL

OWNED AND PUBLISHED MONTHLY BY  
THE OHIO STATE MEDICAL ASSOCIATION  
AS A MEDIUM OF SERVICE TO ITS MEMBERS

MARCH 1, 1922

Volume XVIII  
Number : 3

Among the Authors in This Issue:

Hoy

Spurney

Reynolds

Kennedy

Nyquist

Goddard

Bill

Ailes

Harpster

Micklethwaite

(SUMMARY OF CONTENTS, PAGE II.)

## CALCREOSE



### (Calcium Creosotate)

IN inflammations of the respiratory apparatus, especially in *bronchitis*, *Calcreose* has won a place in the therapeutic armamentarium of the physician. It is of value in the treatment of bronchitis associated with *pulmonary tuberculosis*, because it has creosote effect without upward action on the stomach, such as nausea, disagreeable eructations and distress.

CALCREOSE can be given in comparatively large doses for long periods of time without any objection on the part of the patient. The indications for CALCREOSE are the same as those of creosote.

Write for literature and samples.

THE MALTBIE CHEMICAL COMPANY  
NEWARK, NEW JERSEY

# Summary of Contents

Acute Appendicitis, Carl DaCosta Hoy, M. D., Columbus ..... 173  
 History. Pathological divisions. Postoperative conditions. Conditions at operation. Acute appendicitis in pregnancy. Perforation and fecal fistula. Symptomatology and clinical course. Pain. Temperature. Leukocytosis. Pulse. Tumor. Clinical course. Time for operative intervention.

Intussusception of the Appendix: With a Report of a Case, Paul M. Spurney, M. D., and David M. Nyquist, M. D., Cleveland.... 181  
 General considerations. Cause. Clinical picture. Mechanism. Pathology. Treatment. Illustrative case report. Operation. Bibliography.

Cardiac Arrhythmia, J. J. Reynolds, M. D., Defiance ..... 186  
 The cardiac cycle. Premature contractions. Rapid heart action. Paroxysmal tachycardia. Heart block. Pulse alternans.

Immunity with Reference to Tuberculosis, C. C. Kennedy, M. D., Bethel..... 189  
 General considerations. Infantile primary infections. Lack of racial immunity. Sensitization. Establishing immunity. Universality of tubercular infection. Adolescent tuberculosis. Latency of tuberculosis. Localization of tuberculosis. Conclusions.

Some Suggestions On the Relation of Congenital Syphilis to Juvenile Delinquency, H. H. Goddard, Ph. D., Columbus..... 193  
 Method of investigation. Behavior as an indication of congenital syphilis. Illustrative cases. Discussion.

The Use of Forceps in Obstetrics, A. H. Bill, M. D., Cleveland..... 195  
 Forceps contra-indicated in the first stage of labor. Cases handled. Selection of forceps cases. Rules for routine forceps deliveries. Prophylactic forceps.

The Newer Methods in the Treatment of Burns: With Report of Cases, Gilbert R. Micklethwaite, M. D., Portsmouth..... 198  
 General considerations. Cleansing the burn. Controlling granulation and protecting burns. Stimulating growth of skin. Skin grafting. Illustrative case reports. Summary.

Original Investigation and Comparative Value of Indigo Carmine as a Functional Kidney Test, C. M. Harpster, M. D., Toledo..... 200  
 Questions in kidney disease and surgery. The best single test for kidney function. Method of procedure. Misuse of the method. Use in physical examination. Colorimetric readings. Urea and creatinin output.

Selling Public Health in a General Health District, Arlington Ailes, M. D., Sidney..... 206  
 Factors influencing the sale of public health. The board of health and the health budget. Control of communicable diseases. Relations with county societies. Co-operation of public school teachers. The problem of defects. Method of examining school children. Community talks. Follow-up work.

Epidemic Hiccough and Encephalitis (Abstract)..... 211

EDITORIAL COMMENT

A First Call—A Last Tip..... 169  
 Public Vagaries..... 169  
 Medical Economics..... 170  
 Ohio—Medical Center..... 170  
 Encouraging Court Action..... 170  
 Medical Education, Hospitals and Health..... 171  
 Narcotic Regulation and Enforcement..... 171  
 Court Decides Hospital Liability..... 172  
 Medical Schools and Medical Practice..... 172  
 Anti-Cult Literature..... 217  
 U. S. Public Health Service..... 217  
 Chiropractic Incompetence..... 218  
 Income Tax Reports..... 218  
 Old Age Pensions..... 218

STATE NEWS

Public Health Notes..... 212  
 Medical Economics—A Frank Study of the Financial and Business Aspects of the Practice of Medicine, by C. D. Selby, M. D., Toledo..... 213  
 Cincinnati Hotels and Rates Listed for Convenience of Members in Making State Meeting Reservations..... 219  
 Proposed Amendments to the By-Laws of the State Association..... 220  
 Wertheim Moving Picture Clinic in Wapakoneta March 16..... 220  
 Hotel Reservations and Railroad Rates for A. M. A. Meeting..... 221  
 Christian Science Conviction..... 221  
 Small Advertisements..... 221  
 Hospital Notes..... 222  
 Data on State Hospital Population Shown by Comprehensive Charts..... 222  
 Pseudo Physician Arrested and Banished..... 223  
 The Present Situation with Regard to Narcotic Addiction in the United States..... 224  
 News of the Academies and County Societies..... 223  
 Dr. Baehr Appointed to New Medical Post..... 232  
 School Health Crusade Forms Bases of Hygiene Course Adopted by Department of Education..... 234  
 Deaths in Ohio..... 238  
 Changes in Health Plan Suggested..... 244  
 News Notes of Ohio..... 246

## ADDRESSES OF STATE AND FEDERAL OFFICES

Columbus

Collector of Internal Revenue—W. H. Miller, Postoffice Building, Third and State Sts.  
 Columbus District (Ohio 11th) comprises the counties of Adams, Athens, Coshocton, Delaware, Fairfield, Franklin, Gallia, Guernsey, Hocking, Jackson, Knox, Lawrence, Licking, Madison, Marion, Meigs, Morgan, Morrow, Muskingum, Noble, Perry, Pickaway, Pike, Ross, Scioto, Union, Vinton and Washington.

Federal Prohibition Director—J. E. Russell, Gugle Bldg., 4th and Long Sts.

State Prohibition Commissioner—Don Parker, State House.

State Department of Health—Director, Dr. H. H. Snively, 4th and Main Sts.

State Industrial Commission—Chief Medical Examiner, Dr. T. R. Fletcher, 4th and Main Sts.

State Department of Welfare—Director, Dr. H. S. MacAyeal, 9th and Oak Sts.

State Medical Board—Secretary, Dr. H. M. Platter, 4th & Main Sts.

Cleveland

Collector of Internal Revenue—Harry H. Weiss, 262 Federal Bldg.  
 Cleveland District (Ohio 18th) comprises the counties of Ashland, Ashtabula, Belmont, Carroll, Columbiana, Cuyahoga, Geauga, Harrison, Holmes, Jefferson, Lake, Lorain, Mahoning, Medina, Monroe, Portage, Richland, Stark, Summit, Trumbull, Tuscarawas and Wayne.

Cincinnati

Collector of Internal Revenue—Chas. M. Dean, Custom Bldg.  
 Cincinnati District (Ohio 1st) comprises the counties of Brown, Butler, Clarke, Clermont, Clinton, Fayette, Greene, Hamilton, Highland, Miami, Montgomery, Preble and Warren.

Toledo

Collector of Internal Revenue—Frank B. Miles.  
 Toledo District (Ohio 10th) comprises the counties of Allen, Augusburg, Champaign, Crawford, Darke, Defiance, Erie, Fulton, Hancock, Hardin, Henry, Huron, Logan, Lucas, Mercer, Ottawa, Paulding, Putnam, Sandusky, Seneca, Shelby, Van Wert, Williams, Wood and Wyandot.





# The OHIO STATE MEDICAL JOURNAL

OWNED AND PUBLISHED MONTHLY BY  
THE OHIO STATE MEDICAL ASSOCIATION  
AS A MEDIUM OF SERVICE TO ITS MEMBERS

APRIL 1, 1922

Volume XVIII  
Number : 4

In This Issue :

Detailed Program and Plans for the  
Annual Meeting of the State Association  
in Cincinnati, May 2, 3 and 4

(SUMMARY OF CONTENTS, PAGE II.)

# CALCREOSE

“CREOSOTE and \* \* \* \* are used internally as intestinal and urinary antiseptics, as stimulant expectorants and in the treatment of tuberculosis. Their local irritant actions often interfere with their internal administration.” (New and Nonofficial Remedies, 1921, p. 89.) CALCREOSE is a mixture containing in loose chemical combination approximately equal weights of creosote and lime (calcium creosotate.) CALCREOSE administered internally has the same actions and uses as creosote, but does not readily produce gastric distress, nausea and vomiting even when large quantities are taken for comparatively long periods of time.

CALCREOSE may be given in the form of solution or tablets.

*Write for Samples and Literature.*

**THE MALTBIE CHEMICAL CO., Newark, New Jersey**

See our Exhibit at Annual Meeting

# Summary of Contents

ORIGINAL ARTICLES

ANNUAL MEETING PROGRAM

Acute Appendicitis, Carl DaCosta Hoy, M. D., Columbus ..... 264

Final results. Hernia. Differential diagnosis. Complications and sequelae of appendicectomy. Influenzal appendicitis. End results of operation. Prognosis and results. Mortality. Statistical data.

Lethargic Encephalitis, F. C. Wagenhals, M. D., Columbus..... 272

Etiology. Symptoms. Course of the disease. Laboratory findings. Differential diagnosis. Prognosis. Treatment.

Bronchial Asthma: A Study of Forty Cases of Cutaneous Protein Tests. Associated Skin Conditions and Results of Treatment. George L. Lambright, M. D., Cleveland..... 275

General considerations. Patients studied. Associated disorders. Results or treatment. Conclusions.

Conservation of the Mother and Child, Blanche Hopkins, M. D., Columbus..... 278

Poverty as a factor. Infectious diseases. Value of the pre-natal clinic and nurse. What other countries do. What this country has done.

Constitutional Nervous Symptoms, John D. O'Brien, M. D., Canton..... 281

Meaning of the term. Symptoms and conditions. Neurasthenics.

The Relationship of the Health Department to the Medical Profession, D. D. Shira, M. D., Akron..... 283

Curative and preventive medicine. Keeping in with the profession. Service the health department owes the profession. The problem of clinics.

Actinotherapy in General Practice: Case Histories, F. J. Kern, M. D., Cleveland..... 286

General considerations. Sciatic neuritis. Puritis. Tonsillitis and mumps. Scabies. Epididymitis. Acute nephritis. Pulmonary tuberculosis. Rheumatism and complications. Other conditions. Conclusions.

New Tonsil Instrument and Method of Use, Thomas E. Walker, M. D., Cleveland..... 290

The new instrument. Method of using the instrument. Discussion. Advantages.

EDITORIAL COMMENT

Ohio's Policy..... 249  
 Nostrums—A Health Problem..... 250  
 Restrictions—Plus ..... 250  
 Ohio Workmen's Compensation..... 294  
 Medical Regulation Gone Mad..... 295  
 Infant Mortality..... 295

General Sessions..... 252  
 House of Delegates.....252-253  
 Surgical Section..... 253  
 Medical Section..... 254  
 Joint Medical and Surgical Sections..... 255  
 Section on Obstetrics and Pediatrics..... 255  
 Eye, Ear, Nose and Throat..... 256  
 Section on Dermatology, Proctology and Genito-Urinary Surgery..... 257  
 Section on Nervous and Mental Diseases..... 258  
 Section on Hygiene and Sanitary Science..... 259  
 Special Convention Features..... 260  
 Program of Group on Clinical and Laboratory Diagnosis ..... 261  
 Golf Tournament. The Epidemiology of Golf .....261-262  
 Hotel Reservations ..... 262  
 Special Railway Rates for Annual Meeting in Cincinnati ..... 263

STATE NEWS

Communcation from the Council to the House of Delegates of the Ohio State Medical Association ..... 251  
 Small Advertisements of Interest..... 292  
 Salvaging the Handicapped for Lives of Service—How You May Help Others to "the better 'Ole" ..... 293  
 Deaths in Ohio..... 296  
 Nostrums a Health Menace, to be Met by Uniform Laws and Closer Cooperation of Federal, State and Local Authorities..... 297  
 Occupational Diseases Reported under Workmen's Compensation..... 299  
 Organization Problems, Membership Policies, Annual Meeting Plans and New Proposals Feature March Session of Association Council ..... 300  
 News Notes of Ohio..... 303  
 File Copy of Your Liquor Permit..... 304  
 Activities Accomplishments and Proposals in the State Department of Health..... 304  
 Hospital Hotes ..... 306  
 Lowest Death Rate; Highest Birth Rate; More Fatal Diphtheria, Less Tuberculosis and Cancer ..... 308  
 Medical Comment, Abstract and Current Topics of Interest..... 310  
 News of the Academies and County Societies "Crippled Children Week" Planned for May; Forty Clinics Held in the State..... 322  
 Conservation of Vision..... 324  
 Public Health Notes..... 326



# The OHIO STATE MEDICAL JOURNAL

OWNED AND PUBLISHED MONTHLY BY  
THE OHIO STATE MEDICAL ASSOCIATION  
AS A MEDIUM OF SERVICE TO ITS MEMBERS

MAY 1, 1922

Volume XVIII  
Number : 5

In This Issue:

Annual Reports of Standing and Special  
Committees of the State Association

(SUMMARY OF CONTENTS, PAGE II.)

## CALCREOSE

“CREOSOTE and \* \* \* \* are used internally as intestinal and urinary antiseptics, as stimulant expectorants and in the treatment of tuberculosis. Their local irritant actions often interfere with their internal administration.” (New and Nonofficial Remedies, 1921, p. 89.) CALCREOSE is a mixture containing in loose chemical combination approximately equal weights of creosote and lime (calcium creosotate.) CALCREOSE administered internally has the same actions and uses as creosote, but does not readily produce gastric distress, nausea and vomiting even when large quantities are taken for comparatively long periods of time.

CALCREOSE may be given in the form of solution or tablets.

*Write for Samples and Literature.*

**THE MALTBIE CHEMICAL CO., Newark, New Jersey**

See our Exhibit at Annual Meeting

## Summary of Contents

ORIGINAL ARTICLES

The Prevention of Deformity. Clarence H. Hyman, M.D., Cleveland..... 333

Infantile paralysis. Rickets. Tuberculosis. Fractures. Infections. Trauma to the soft parts. Positions of election in deformities.

Argyria. O. P. Kimball, M.D., Cleveland.... 336

Fromann's classical report on a case of argyria. The Cleveland Clinic case. Histologic blood findings.

The Nursing Situation in Ohio. Clarence S. Ordway, M.D., and Charles Louy, M.D., Toledo ..... 338

The Value of Spinal Fluid Examination. Charles E. Kiely, M.D., Cincinnati..... 339

General considerations. Diagnostic value. Intracranial pressure. Method of taking pressure. Pressures in various conditions. Therapeutic value. Summary.

Solving Mal-Nutrition Among School Children. Elmer W. Schlemmer, M.D., Cincinnati ..... 342

Fundamental causes of mal-nutrition. Organizing mal-nutrition classes. Parental co-operation. Open air class rooms and routine. Supplementary feeding. Conclusions.

Personal Observations Regarding the Newer Roentgen Technique for the Treatment of Cancer. J. Henry Schroeder, M.D., Cincinnati ..... 345

Biological effects of radiation. Improved apparatus. The iontoquantimeter. Therapeutic application. Results. Personal experiences.

The Value of Tests for Renal Function in Clinical Medicine. Herman O. Mosenthal, M.D., New York City..... 348

Renal function and metabolism. Tests employed. Test day for renal function. Tables of results. Summary.

EDITORIAL COMMENT

Summons to Cincinnati..... 329  
 Chiropractic Situation—Court Decision..... 330  
 Enforce the Law..... 331  
 State Census for the Disabled, Week of May 8th ..... 331  
 "Premedicated" Alcohol ..... 332

Legal Opinion on Anesthesia Status..... 332  
 Advertising vs. Education..... 373  
 Reciprocal Duty ..... 375  
 Cured (?) Chiropractically..... 376

ANNUAL REPORTS

District Councilors of the State Association Present Interesting Membership Reports for 1921 and 1922..... 353

Committees—

Public Policy and Legislation..... 356  
 Crippled Children ..... 359  
 Medical Defense ..... 360  
 Auditing and Appropriations..... 362  
 Hospital Standardization ..... 364  
 Medical Education ..... 367  
 Publication ..... 368  
 Medical Economics ..... 369  
 Control of Cancer..... 371

STATE NEWS

Some More Golf Insanity..... 354  
 Ideal Facilities for A. M. A. Meeting..... 354  
 Views of Cincinnati, Host to Annual Meeting ..... 366  
 Public Health Notes..... 372  
 Small Advertisements ..... 372  
 Proceedings of the Academies and County Societies ..... 378  
 Resolutions Adopted ..... 380  
 Hospital Notes ..... 382  
 Terms Defined to Facilitate Work of Hospital Bureau ..... 384  
 Deaths in Ohio..... 386  
 Cincinnati Heard on Public Health..... 390  
 Extension Program for State Hospitals Mapped Out by Welfare Department..... 392  
 What is "Skin"?—Opinion by Attorney General ..... 394  
 Roster of County Society Officers..... 396  
 News Notes of Ohio..... 398  
 State Medical Board Notes ..... 398



# The OHIO STATE MEDICAL JOURNAL

OWNED AND PUBLISHED MONTHLY BY  
THE OHIO STATE MEDICAL ASSOCIATION  
AS A MEDIUM OF SERVICE TO ITS MEMBERS

JUNE 1, 1922

Volume XVIII  
Number : 6

In This Issue:

Proceedings of the House of Delegates  
of State Association and Other News  
of Seventy-sixth Annual Meeting.

(SUMMARY OF CONTENTS, PAGE II.)

## CALCREOSE

### Calcium in Intestinal Tuberculosis

"The administration of calcium chlorid in tuberculous diarrhea is, we believe, based on empiricism, but of its good effects there are at present many undeniable examples. . . . We have used calcium chlorid in no sense as a curative agent, but merely as a palliative in an attempt to control the distressing symptoms of pain and diarrhea."—P. H. Ringer and C. I. Minor, *Am. Rev. Tuberc.* 5:876 (Jan.) 1922.

CALCREOSE (calcium creosotate) is a mixture containing in loose chemical combination approximately equal parts of creosote and lime.

CALCREOSE has the same actions and uses as creosote but is free from its untoward effects on the stomach. Creosote is used as an intestinal antiseptic.

*Write for Samples and Literature*

**THE MALTBIE CHEMICAL COMPANY**  
NEWARK, NEW JERSEY



# Summary of Contents

ORIGINAL ARTICLES	STATE NEWS
Observations on Acute Mastoiditis. Samuel S. Quittner, M.D., Cleveland..... 405 When does a mastoid become of surgical significance? Illustrative hypothetical cases. General observations.	The Medical Profession, Its Objects, Opportunities and Obligations Discussed in Annual Address of the President, Dr. Wells Teachnor ..... 429
Cardiac Arrhythmias and their Clinical Recognition. Roger S. Morris, M.D., Cincinnati ..... 408 Sinus arrhythmias. Premature contractions. Auricular fibrillations. Auricular flutter. Pulsus alternans. Conclusions.	Public Health Notes..... 433
Medical Service in Industry. C. E. Ford, M.D., New York City..... 412 Compensation for industrial diseases. Fitting the employee to his work. Industrial medicine and surgery as a specialty. Community relations of the profession. Medical research in industry. Essential qualifications of the industrial physician and surgeon. The problem of health. Statistical data. Conclusion.	Election of Officers, Councilors and Committeemen, Action on Resolutions and Committee Reports Included in Official Sessions of House of Delegates..... 434
Hare-Lip and Cleft Palate. Charles M. Clark, M.D., Akron..... 417 The best time for operating. Technique of hare-lip operation. Cleft palate operation. After-care.	Roll Call of House of Delegates..... 441
The Stem Pessary. A. F. Spurney, M.D., and P. M. Spurney, M.D., Cleveland ..... 424 Scope and utility of the stem pessary. Illustrative case. Treatment. Selection of stem pessaries. Selection of cases. Operative technique. Results. Summary.	Council Meetings, May 1 and 3..... 441
Personal Experiences with Local Anesthesia Especially in Tonsillectomies. C. A. Campbell, M.D., Steubenville..... 426 Combatting shock. Selecting patients. Local anesthesia in children. Sedatives. Local anesthetics. Precautions. Summary.	Registration at Annual Meeting Representative of All Sections of the State Showed Splendid Interest of the Ohio Profession.. 443
	Echoes of the Convention..... 447
	Campaign of Diphtheria Prevention Begun with Demonstrations of Schick Test..... 449
	Hospital Notes ..... 450
	University Trustees Reaffirm Stand for Pay Ward ..... 450
	News of the Academies and County Societies 452
	New Books ..... 456
	Third Annual Clinic Held at Lima Hospital.. 458
	Diagnostic Clinic Held at Bellefontaine..... 458
	Small Advertisements ..... 469
	Deaths in Ohio..... 462
	Ohio's Death Rate in 1921 Lowest in Thirteen Years ..... 468
	News Notes of Ohio..... 466
	Nursing Bodies Convene in Dayton for Joint Program ..... 470

EDITORIAL COMMENT

The Annual Meeting in Retrospect..... 401
Genuine Keynote ..... 402
Socialized Health Activities..... 402
Narcotic Registration and Restriction..... 403
Organization Possibilities ..... 404
Flowers for the Living..... 404
Life Saving or Public Health?..... 404
The Physician as a Guide..... 448

## ADDRESSES OF STATE AND FEDERAL OFFICES

### Columbus

- Collector of Internal Revenue—W. H. Miller, Postoffice Building, Third and State Sts.  
Columbus District (Ohio 11th) comprises the counties of Adams, Athens, Coshocton, Delaware, Fairfield, Franklin, Gallia, Guernsey, Hocking, Jackson, Knox, Lawrence, Licking, Madison, Marion, Meigs, Morgan, Morrow, Muskingum, Noble, Perry, Pickaway, Pike, Ross, Scioto, Union, Vinton and Washington.
- Federal Prohibition Director—J. E. Russell, Gule Bldg., 4th and Long Sts.
- State Prohibition Commissioner—Don Parker, State House.
- State Department of Health—Director, Dr. H. H. Snively, 4th and Main Sts.
- State Industrial Commission—Chief Medical Examiner, Dr. T. R. Fletcher, 4th and Main Sts.
- State Department of Welfare—Director, Dr. H. S. MacAyeal, 9th and Oak Sts.
- State Medical Board—Secretary, Dr. H. M. Platter, 4th & Main Sts.

### Cleveland

- Collector of Internal Revenue—Harry H. Weiss, 262 Federal Bldg.  
Cleveland District (Ohio 18th) comprises the counties of Ashland, Ashtabula, Belmont, Carroll, Columbiana, Cuyahoga, Geauga, Harrison, Holmes, Jefferson, Lake, Lorain, Mahoning, Medina, Monroe, Portage, Richland, Stark, Summit, Trumbull, Tuscarawas and Wayne.

### Cincinnati

- Collector of Internal Revenue—Chas. M. Dean, Custom Bldg.  
Cincinnati District (Ohio 1st) comprises the counties of Brown, Butler, Clarke, Clermont, Clinton, Fayette, Greene, Hamilton, Highland, Miami, Montgomery, Preble and Warren.

### Toledo

- Collector of Internal Revenue—Frank B. Miles.  
Toledo District (Ohio 10th) comprises the counties of Allen, Auglaize, Champaign, Crawford, Darke, Defiance, Erie, Fulton, Hancock, Hardin, Henry, Huron, Logan, Lucas, Mercer, Ottawa, Paulding, Putnam, Sandusky, Seneca, Shelby, Van Wert, Williams, Wood and Wyandot.



# The OHIO STATE MEDICAL JOURNAL

OWNED AND PUBLISHED MONTHLY BY  
THE OHIO STATE MEDICAL ASSOCIATION  
AS A MEDIUM OF SERVICE TO ITS MEMBERS

JULY 1, 1922

Volume XVIII  
Number : 7

Among the Authors in This Issue:

Scott  
McGavran  
Fisher

Brigham  
Hay  
Dice

Gilliam  
Douglass  
Coate

(SUMMARY OF CONTENTS, PAGE II.)

## CALCREOSE

### Calcium in Intestinal Tuberculosis

"The administration of calcium chlorid in tuberculous diarrhea is, we believe, based on empiricism, but of its good effects there are at present many undeniable examples. . . . We have used calcium chlorid in no sense as a curative agent, but merely as a palliative in an attempt to control the distressing symptoms of pain and diarrhea."—P. H. Ringer and C. I. Minor, *Am. Rev. Tuberc.* 5:876 (Jan.) 1922.

CALCREOSE (calcium creosotate) is a mixture containing in loose chemical combination approximately equal parts of creosote and lime.

CALCREOSE has the same actions and uses as creosote but is free from its untoward effects on the stomach. Creosote is used as an intestinal antiseptic.

*Write for Samples and Literature*

**THE MALTBE CHEMICAL COMPANY**  
NEWARK, NEW JERSEY



# Summary of Contents

ORIGINAL ARTICLES

Syphilis of the Aorta. C. W. McGravan, M. D., and Ernest Scott, M. D., Columbus.. 477  
 Syphilis and vascular degeneration. Pathology. Symptoms. Points in examination. Illustrative case reports. Summary.

A Right Aortic Arch. Reed O. Brigham, M. D., Toledo..... 484  
 Evolution of aortic variations. The specimen observed. Other reported instances. Summary.

Megacolon. Wm. H. Fisher, M. D., Toledo.... 487  
 Illustrative case reports. General considerations. Etiology and treatment.

Heart Disease in Pregnancy. W. G. Dice, M. D., Toledo..... 491  
 Incidence of heart lesions in pregnancy. Murmurs and functional efficiency. Heart failure. Care and treatment. Conclusions.

Headaches. Charles H. Hay, M. D., Cleveland ..... 495  
 Analysing a pain. Hypertension headaches. Sinus headaches. Ocular headaches. Diagnosis. Treatment. Illustrative case reports.

The Rarity of Adult Contact Tuberculosis. Stephen A. Douglass, M. D., Dayton..... 501  
 General considerations. Influence of environment. Universality of tuberculous infection and rarity of tuberculosis. The question of adult contact infection. Remedial measures.

Ether In Tuberculosis. C. R. Coate, M. D., Pleasant Hill..... 503  
 Fundamental considerations. Illustrative case reports. Conclusions.

EDITORIAL COMMENT

Ohio's Part in the A. M. A..... 473  
 Administration of Workmen's Compensation...473  
 Chiropractic Chicanery .....474  
 Sheppard-Towner in Ohio .....474  
 Primary Legislative Candidates .....475  
 The Duty of Vacation .....475  
 Narcotic Registration .....475  
 Army Hospital at Camp Sherman .....476  
 1922 State Health Legislation .....476

STATE NEWS

News Notes of Ohio..... 505  
 Medical Lectures Feature Commencement Events ..... 505  
 Council of the State Association..... 506  
 Pronouncement of Policies and Establishment of New Organization Activities Feature Ohio's Participation in A. M. A. Meeting ..... 507  
 Deaths in Ohio..... 510  
 Dr. Goddard Resigns..... 510  
 The Pioneer Doctor of Ohio, by D. Todd Gilliam, M. D., Columbus..... 511  
 Public Health Notes..... 518  
 One Hundred and Sixty-five Applicants for Medical Licensure Appear Before Medical Board During June Examinations..... 520  
 Small Advertisements..... 524  
 News of the Academies and County Societies 526  
 State-Wide Program on Mental Hygiene Contemplated in Conjunction with Bureau of Juvenile Research..... 532

## SECTION OFFICERS 1922—1923

The following is a list of the officers elected by the scientific sections at the seventy-sixth annual meeting of the Ohio State Medical Association in Cincinnati. They will formulate the programs for their sections for the 1923 meeting, and inquiries concerning places on the program should be sent direct to them.

MEDICINE

Chairman.....Alfred Friedlander  
 4 W. Seventh St., Cincinnati  
 Secretary.....Marion A. Blankenhorn  
 Lakeside Hospital, Cleveland

SURGERY

Chairman.....L. G. Bowers  
 Fidelity-Medical Bldg., Cleveland  
 Secretary.....T. S. Jackson  
 465 Rose Bldg., Cleveland

OBSTETRICS AND PEDIATRICS

Chairman .....Wayne Brehm  
 677 N. High St., Columbus  
 Secretary.....Floyd Mowry  
 3757 Cedar Ave., Cleveland

EYE, EAR, NOSE AND THROAT

Chairman.....W. W. Alderdyce  
 513 Madison Ave., Toledo  
 Secretary.....F. W. Lamb  
 24 E. Eighth St., Cincinnati

HYGIENE AND SANITARY SCIENCE

Chairman.....A. O. Peters  
 Reibold Building, Dayton  
 Secretary.....H. H. Pansing  
 Reibold Bldg., Dayton

NERVOUS AND MENTAL DISEASES

Chairman.....E. M. Baehr  
 State Bur. Juvenile Research, Columbus  
 Secretary.....A. D. Finlayson  
 1836 Euclid Ave., Cleveland



1922  
LIBRARY



# The OHIO STATE MEDICAL JOURNAL

OWNED AND PUBLISHED MONTHLY BY  
THE OHIO STATE MEDICAL ASSOCIATION  
AS A MEDIUM OF SERVICE TO ITS MEMBERS

AUGUST 1, 1922

Volume XVIII  
Number : 8

*Latest Developments in Medical  
Education and Licensure*

(SUMMARY OF CONTENTS, PAGE II.)

# CALCREOSE

## Creosote Effect

free from the disagreeable effects on the stomach may be obtained by administering CALCREOSE (Calcium creosotate), a mixture containing in loose chemical combination approximately equal weights of creosote and lime.

Write for  
"The Calcreose Detail Man"  
Samples

The Maltbie Chemical Company  
Newark, New Jersey



# Summary of Contents

ORIGINAL ARTICLES

Spontaneous Evolution in Transverse Presentation. S. J. Goodman, M.D., Columbus ..... 541  
 Methods of transverse presentation delivery. Incidence of spontaneous evolution. Mechanism of spontaneous evolution. Personal experiences. Illustrative case report. Conclusion.

Chronic Infectious Arthritis (Still's Disease). S. D. Foster, M.D., Toledo ..... 543  
 Pathology and bacteriology. Deformities. Differential diagnosis. Treatment. Illustrative case report.

The Physician, the Health Official and Cooperation. M. F. Hussey, M.D., Sidney.... 545  
 Legendary ties. The basis of cooperation. The problem of immunology. Conclusions.

Dermatoses of Present Day Interest. James W. Miller, M.D., Cincinnati..... 547  
 Mycotic nature of skin eruptions. Clinical description. Illustrative case reports. Dermatitis exfoliativa. Illustrative case report. Clinical course.

Concerning Eye and Nasal Symptoms in Pituitary Disease; with Report of a Case of Acromegaly. Francis W. Alter, M.D., Toledo ..... 550  
 The anatomic basis of eye symptoms in acromegaly. The pathology of pituitary gland enlargement. Nasal and naso-pharyngeal symptoms. Illustrative case reports. Author's case report.

The Differential Diagnosis and Treatment of Some Pulmonary Diseases with Special Reference to Artificial Pneumothorax. Louis Mark, M.D., Columbus..... 554  
 Carcinoma of the lungs. Pulmonary abscess of the lungs. Pleural effusions. Artificial pneumothorax in progressive cases of pulmonary tuberculosis. Conclusions.

Phenol and Cresol Poisoning. Raphael Isaacs, M.D., Cincinnati..... 558  
 Phenol. Symptoms and course. The problem of proper treatment. Cresol. Symptoms and course. Treatment.

EDITORIAL COMMENT

Civic and Political Duty..... 537  
 "Your" Association ..... 538  
 Illinois Scandal in Licensure..... 538  
 Workmen's Compensation Developments..... 538  
 Ohio's Recommendations Effective..... 539  
 Health Code a Legislative Issue..... 540  
 "Maternity and Infancy"..... 540  
 Public Health and the Tariff..... 540

STATE NEWS

Public Health Notes..... 561  
 Typhoid Fever at East Liverpool and Xenia.. 562  
 Methods of Discipline at Boys' School under Probe ..... 562  
 Abolishment of Homeopathic College at State University Marks New Epoch in Medical Education in Ohio..... 563  
 State Medical Board Licenses New Medics and Limited Practitioners, Including One Chiro ..... 565  
 Deaths in Ohio..... 566  
 New Activities, Appointment of Splendid Committees and Policy Pronouncements Feature Busy Council Session..... 567  
 Hospital Notes ..... 570  
 Tuberculosis Conference Acts to Join Forces with State Hospital Association..... 571  
 Smallpox Film Available for Meetings..... 571  
 News of the Academies and County Societies ..... 572  
 Annual Conference of Health Commissioners with State Department in September..... 576  
 Plans of Correspondence-Study School for the Summer ..... 576  
 Aims of Mobile Psychiatric Clinic of Bureau of Juvenile Research Explained by Dr. Baehr ..... 578  
 Indigent Tuberculars Urged to Get Well at Home ..... 582  
 Experience of One Physician with Collecting Agency ..... 582  
 News Notes of Ohio ..... 584  
 Small Advertisements ..... 586  
 Roster of Academy County Society Officers.. 588  
 Value of Health Education of Public Demonstrated ..... 590

## ADDRESSES OF STATE AND FEDERAL OFFICES

Columbus

Collector of Internal Revenue—W. H. Miller, Postoffice Building, Third and State Sts.  
 Columbus District (Ohio 11th) comprises the counties of Adams, Athens, Coshocton, Delaware, Fairfield, Franklin, Gallia, Guernsey, Hocking, Jackson, Knox, Lawrence, Licking, Madison, Marion, Meigs, Morgan, Morrow, Muskingum, Noble, Perry, Pickaway, Pike, Ross, Scioto, Union, Vinton and Washington.

Federal Prohibition Director—J. E. Russell, Gule Bldg., 4th and Long Sts.

State Prohibition Commissioner—Don Parker, State House.

State Department of Health—Director, Dr. H. H. Snively, 4th and Main Sts.

State Industrial Commission—Chief Medical Examiner, Dr. T. R. Fletcher, 4th and Main Sts.

State Department of Welfare—Director, Dr. H. S. MacAyeal, 9th and Oak Sts.

State Medical Board—Secretary, Dr. H. M. Platter, 4th & Main Sts.

Cleveland

Collector of Internal Revenue—Harry H. Weiss, 262 Federal Bldg.  
 Cleveland District (Ohio 18th) comprises the counties of Ashland, Ashtabula, Belmont, Carroll, Columbiana, Cuyahoga, Geauga, Harrison, Holmes, Jefferson, Lake, Lorain, Mahoning, Medina, Monroe, Portage, Richland, Stark, Summit, Trumbull, Tuscarawas and Wayne.

Cincinnati

Collector of Internal Revenue—Chas. M. Dean, Custom Bldg.  
 Cincinnati District (Ohio 1st) comprises the counties of Brown, Butler, Clarke, Clermont, Clinton, Fayette, Greene, Hamilton, Highland, Miami, Montgomery, Preble and Warren.

Toledo

Collector of Internal Revenue—Frank B. Miles.  
 Toledo District (Ohio 10th) comprises the counties of Allen, Auglaize, Champaign, Crawford, Darke, Defiance, Erie, Fulton, Hancock, Hardin, Henry, Huron, Logan, Lucas, Mercer, Ottawa, Paulding, Putnam, Sandusky, Seneca, Shelby, Van Wert, Williams, Wood and Wyandot.



# The OHIO STATE MEDICAL JOURNAL

OWNED AND PUBLISHED MONTHLY BY  
THE OHIO STATE MEDICAL ASSOCIATION  
AS A MEDIUM OF SERVICE TO ITS MEMBERS

SEPTEMBER 1, 1922

Volume XVIII  
Number : 9

Among the Authors of Scientific Articles:

Fullerton  
Harpster

Berghausen  
Pirring

Jackson  
Ruedemann

Gaver  
Heslebower

Among the News Features:

Mansfield Child Health Demonstration  
Nurse Education Report by Rockefeller Foundation Committee  
Medical Defense, An Important Association Activity

(SUMMARY OF CONTENTS, PAGE II.)

## CALCREOSE

### In Pulmonary Tuberculosis

CREOSOTE EFFECT MAY BE OBTAINED  
WITHOUT UNTOWARD SYMPTOMS on  
the gastro-intestinal tract; no nausea, vomit-  
ing, gastric distress or irritability by using

CALCREOSE (Calcium creosotate), is a mixture con-  
taining in loose chemical combination, approximately  
equal weights of creosote and lime. Patients do not  
object to taking CALCREOSE, even in large doses for  
long periods of time.

*Write for "The Calcreose Detail Man"—He will tell  
you all about it.*

THE MALTBE CHEMICAL COMPANY  
NEWARK, NEW JERSEY



# Summary of Contents

ORIGINAL ARTICLES	EDITORIAL COMMENT
Premature Separation of the Normally Implanted Placenta. Wm. D. Fullerton, M. D., Cleveland..... 595 Frequency. Etiology. Pathology. Diagnosis. Treatment. Illustrative case report.	Anticipating Future Problems..... 593 When Education and Logic are Both Superfluous ..... 594 Health Service ..... 594 Winding Red Tape..... 595 More Teeth for Prohibition..... 595
A Case of Double Kidney and Double Ureter: With a Review of the Literature. C. M. Harpster, M.D., T. H. Brown, M.D. and H. A. Delcher, M.D., Toledo..... 602 Illustrative case report. Reports of this anomaly by others. Classification and incidence of various anomalies. Diagnosis. Pathology. Cause of double kidney. Conclusion.	Legality of Sheppard-Towner Act. "As Goes Maine, Etc."..... 595 Bills Paid in Corn and Beans..... 631
Significance of Meningeal Reactions. Oscar Berghausen, M.D., Cincinnati..... 606 Classifications. Serous meningitis, lymphatic, polynuclear types. Differential diagnosis. Illustrative case reports.	STATE NEWS
Diagnosis and Interpretation of Symptoms in Cerebral Injuries. J. Edward Pirrung, M.D., Cincinnati..... 611 General considerations. Noticeable symptoms. hemorrhage following head injuries. Direct method of diagnosis. Sinus syndrome. Team work.	Medical Defense, An Important Association Activity, Has Proved Its Value to the Membership ..... 627 Child Health Demonstration Conducted in Mansfield by National Child Health Council and Cooperating Agencies..... 629 Hospital Notes—(Developments Following Abolishment of Homeopathic College at O. S. U.)..... 632 Small Advertisements ..... 632 New Medical Group at Western Reserve University ..... 633
The Operability and Technique of Operation of Cerebral Traumatism. T. S. Jackson, M.D., Cleveland..... 614 Concussion. Simple fractures. Value of decompression. Compound fractures. Operative intervention. Precautions.	"Nurse Education" Report by Committee of Rockefeller Foundation Raises Interesting Questions in Connection with Problems in Ohio ..... 634 New Course for Nurses Planned..... 635 News of the Academies and County Societies ..... 636 Splendid Series of Lectures Arranged for Second District Meeting in September..... 638 Court Decision Regarding Personal Attendance on Patients by Practitioners under Harrison Anti-Narcotic Act..... 638
Some New Occupation Dermatoses. Rudolph Ruedemann, Jr., M.D., Cincinnati..... 618 Classification. Wood dermatitis. Aniline and benzol dermatoses. Ink poisoning. Conclusions.	Third Annual Conference of Health Commissioners with the State Department of Health ..... 640 Lost or Stolen Narcotic Forms..... 642 Public Health Notes..... 644 Deaths in Ohio..... 646 Legal Opinions of Interest..... 650 News Notes of Ohio..... 652 Valuable Data on Dispensary Service..... 653 Cincinnati University Honors Donors of Large Gifts to Medical Science..... 654
Practical Points in the Treatment of Drug Habits. E. E. Gaver, M.D., Columbus..... 620 Methods of treatment. Precautions. Preliminary treatment. Method of withdrawal. After treatment. Other treatments. Conclusions.	
Methods of Determining Astigmatism of the Crystalline Lens. R. C. Heflebower, M.D., Cincinnati..... 623 Keratometry. Phakometry. Lenticular astigmatism. Formulas. The Souter apparatus.	

## SECTION OFFICERS 1922—1923

The following is a list of the officers elected by the scientific sections at the seventy-sixth annual meeting of the Ohio State Medical Association in Cincinnati. They will formulate the programs for their sections for the 1923 meeting, and inquiries concerning places on the program should be sent direct to them.

**MEDICINE**

Chairman..... Alfred Friedlander  
4 W. Seventh St., Cincinnati  
Secretary..... Marion A. Blankenhorn  
Lakeside Hospital, Cleveland

**SURGERY**

Chairman..... L. G. Bowers  
Fidelity-Medical Bldg., Cleveland  
Secretary..... T. S. Jackson  
465 Rose Bldg., Cleveland

**OBSTETRICS AND PEDIATRICS**

Chairman..... Wayne Brehm  
677 N. High St., Columbus  
Secretary..... Floyd Mowry  
3757 Cedar Ave., Cleveland

**EYE, EAR, NOSE AND THROAT**

Chairman..... W. W. Alderdyce  
513 Madison Ave., Toledo  
Secretary..... F. W. Lamb  
24 E. Eighth St., Cincinnati

**HYGIENE AND SANITARY SCIENCE**

Chairman..... A. O. Peters  
Reibold Building, Dayton  
Secretary..... H. H. Pansing  
Reibold Bldg., Dayton

**NERVOUS AND MENTAL DISEASES**

Chairman..... E. M. Baehr  
State Bur. Juvenile Research, Columbus  
Secretary..... A. D. Finlayson  
1836 Euclid Ave., Cleveland



# The OHIO STATE MEDICAL JOURNAL

OWNED AND PUBLISHED MONTHLY BY  
THE OHIO STATE MEDICAL ASSOCIATION  
AS A MEDIUM OF SERVICE TO ITS MEMBERS

OCTOBER 1, 1922

Volume XVIII  
Number : 10

## PUBLIC HEALTH ISSUE

Review of Annual Conference of Ohio Health Commissioners. Lessons of the Past, by Dr. Frederick R. Green, Chicago. Program of Annual Meeting of American Public Health Association.

(SUMMARY OF CONTENTS, PAGE II.)

# CALCREOSE

## In Pulmonary Tuberculosis

CREOSOTE EFFECT MAY BE OBTAINED WITHOUT UNTOWARD SYMPTOMS on the gastro-intestinal tract; no nausea, vomiting, gastric distress or irritability by using

CALCREOSE (Calcium creosotate), is a mixture containing in loose chemical combination, approximately equal weights of creosote and lime. Patients do not object to taking CALCREOSE, even in large doses for long periods of time.

Write for "The Calcreose Detail Man"—He will tell you all about it.

THE MALTBEIE CHEMICAL COMPANY  
NEWARK, NEW JERSEY



# Summary of Contents

ORIGINAL ARTICLES

Infections of the Gall Bladder and Biliary Apparatus. Fred Fletcher, M.D., Columbus 661  
 Bacterial infections. Chronic cholecystitis. Differential diagnosis. Medical treatment. Functions of the gall bladder. Technique of cholecystectomy. Postoperative morbidity. Operation in the presence of jaundice. Mortality. Conclusion.

The Present Status of Gall Bladder and Pancreatic Disease as it Pertains to Etiology. Diagnosis and Treatment. Kelley Hale, M.D., Wilmington 665  
 Etiology. Diagnosis. Differential diagnosis. Treatment. Conclusion.

The Diagnosis and Treatment of Asthma and Hay Fever. Milton B. Cohen, M.D., Cleveland 669  
 General consideration. Asthma and anaphylaxis. Skin reactions. Classification of hay fever and asthma. Value of a complete history and physical examination. Treatment. Illustrative case reports.

Odors. John J. Sutter, M.D., Lima 672  
 Racial odors. Developing the sense of smell. Odors peculiar to diseases. Odors and the health commissioner.

The Autonomic Nervous System in Mental Depression. Howard D. McIntyre, M.D., Marion 675  
 The vegetative nervous system. Vagotonia and sympathicotonia sinus arrhythmias. Clinical researches. Illustrative case reports. Clinical impressions.

Blood Typing. H. R. Huston, M.D., Dayton 680  
 The serum factor in grouping. Preparation of serum. Grouping technique. Personal experiences. Conclusions.

Dacryocystitis. Etiology, Pathology, Treatment, Medical and Surgical. C. S. Means, M.D., Columbus 682  
 Anatomy and physiology of the lachrymal apparatus. Etiology. Pathology. Treatment. Operation of choice.

Granuloma Inguinale. H. L. Claassen, M.D., Cincinnati 685  
 General consideration. Synonyms and definition. History, location, age and race. Symptoms. Microscopic examination. Duration and differential diagnosis. Bacteriology. Treatment.

A Precocious Mother: Case Report. M. F. Hussey, M.D., Sidney 689

EDITORIAL COMMENT

Medical Profession and the Public..... 657

The Future vs. The Past..... 658

The Abrams Hypothesis..... 658

"Welcome" on the Mat for George..... 658

Prompt Prohibition Applications Urged..... 659

In the Wake of the Vaccinators..... 659

In Re Narcotic Situation..... 660

Quacks and Frauds..... 660

Wanna Play Golf?..... 660

STATE NEWS

Public Health Notes..... 690

Medical Leadership, Public Health Activities and Professional Relations Discussed at Annual Conference of Ohio Health Commissioners ..... 691

Group Meetings This Month on "Mental Hygiene" ..... 694

Lessons of the Past, by Frederick R. Green, M.D., Chicago ..... 695

Hospital Notes ..... 699

Pay Patients in State Hospitals—Correction 699

Constitutionality of Sheppard-Towner Act Attacked ..... 700

Deaths ..... 710

State Institutions Show Increased Populations ..... 702

Eyes of the Public Health World Focused on Cleveland This Month. Fifty-first Annual Meeting American Public Health Association ..... 704

Health Topics for Welfare Conference..... 706

News Notes of Ohio..... 706

News of County and District Societies..... 708

Counting the Cost of Public Health..... 714

Small Advertisements ..... 720

Cleveland Health Commissioner Writes Interestingly on Drug Problem..... 722

Post-Graduate Work in European Countries 726

## SECTION OFFICERS 1922—1923

The following is a list of the officers elected by the scientific sections at the seventy-sixth annual meeting of the Ohio State Medical Association in Cincinnati. They will formulate the programs for their sections for the 1923 meeting, and inquiries concerning places on the program should be sent direct to them.

MEDICINE

Chairman.....Alfred Friedlander  
 4 W. Seventh St., Cincinnati

Secretary.....Marion A. Blankenhorn  
 Lakeside Hospital, Cleveland

SURGERY

Chairman.....L. G. Bowers  
 Fidelity-Medical Bldg., Cleveland

Secretary.....T. S. Jackson  
 465 Rose Bldg., Cleveland

OBSTETRICS AND PEDIATRICS

Chairman .....Wayne Brehm  
 677 N. High St., Columbus

Secretary.....Floyd Mowry  
 3757 Cedar Ave., Cleveland

EYE, EAR, NOSE AND THROAT

Chairman.....W. W. Alderdyce  
 513 Madison Ave., Toledo

Secretary.....F. W. Lamb  
 Provident Bank Bldg., Cincinnati

HYGIENE AND SANITARY SCIENCE

Chairman.....A. O. Peters  
 Reibold Building, Dayton

Secretary.....H. H. Pansing  
 Reibold Bldg., Dayton

NERVOUS AND MENTAL DISEASES

Chairman.....E. M. Baehr  
 State Bur. Juvenile Research, Columbus

Secretary.....A. D. Finlayson  
 1836 Euclid Ave., Cleveland



# The OHIO STATE MEDICAL JOURNAL

OWNED AND PUBLISHED MONTHLY BY  
THE OHIO STATE MEDICAL ASSOCIATION  
AS A MEDIUM OF SERVICE TO ITS MEMBERS

NOVEMBER 1, 1922

Volume XVIII  
Number : 11

## Summary of Contents

Historical Review of Ano-Rectal Diseases: Limitations and Technique of Local Anesthesia in Recto-Colonic Operations Samuel G. Gant, M. D., New York City..... 733  
Historical review of ano-rectal diseases. Limitations and technique of local anesthesia in recto-colonic operations. Spinal, sacral, regional and local infiltration anesthesia. Ano-rectal diseases operable under local anesthesia. Inoperable diseases.

Equipment, agents and methods. Post-operative treatment.  
Pleuro-Bronchial and Pleuro-Cutaneous Fistula. J. A. Sherbondy, M.D., Youngstown ..... 739  
Etiological considerations. Diagnosis. Operative treatment. Carrell-Dakin treatment. Pre-operative treatment. Anesthesia. Summary.

(Continued on page II)

# CALCREOSE

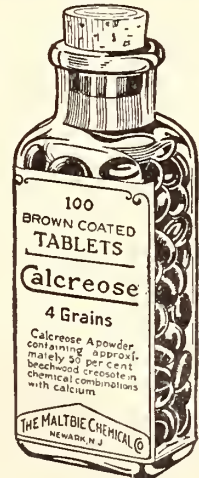
## In Pulmonary Tuberculosis

**C**REOSOTE EFFECT MAY BE OBTAINED WITHOUT UNTOWARD SYMPTOMS on the gastro-intestinal tract; no nausea, vomiting, gastric distress or irritability by using

CALCREOSE (Calcium creosotate), is a mixture containing in loose chemical combination, approximately equal weights of creosote and lime. Patients do not object to taking CALCREOSE, even in large doses for long periods of time.

Write for "The Calcreose Detail Man"—He will tell you all about it.

THE MALTBE CHEMICAL COMPANY  
NEWARK, NEW JERSEY



Observations on the Rational Use of Digitalis especially in Auricular Fibrillation. Richard Dexter, M.D., Cleveland..... 742  
 Action of digitalis on the heart. Indications for the use of digitalis. Dosage and methods of administration. Preparations of the drug. Illustrative case reports. Summary.

Problems of the Present Obstetrical Situation. W. W. Brand, M.D., Toledo..... 746  
 General considerations. Historical development of the midwife problem. Recent regulations. The Sheppard-Towner Maternity Act. Higher standards of obstetrical practice.

The Wassermann Reaction in Non-Syphilitic Patients: What it Conveys. C. J. Broeman, M.D., Cincinnati..... 748  
 Discrepancies in the Wassermann reaction. Statistical data. Discussion of results. Conclusions.

The Treatment of Chorea by Intravenous Injections of a Pure Protein. E. G. Horton, M.D., Columbus..... 751  
 Etiological considerations. Methods of treatment. Pure protein. Illustrative case reports. Conclusions.

The Influence of Hospital Standardization on Preventive Medicine. C. D. Selby, M.D., Toledo..... 754  
 Supervision of case records. Fewer exploratory operations. Encouragement of clinical research. Control of disease is prevention. Prevention is dependent on early diagnosis. Hospitals as schools of public instruction. Summary.

Tachycardias of Neurotic Origin. Charles E. Kiely, M.D., Cincinnati..... 759  
 Diagnostic classification. Studies in neuro-tachycardia. Sympatheticotonia and vagotonia. Endocrine relations. Psychotherapeutic handling of patients. Statistical data and case report. Conclusions.

The Early Diagnosis of Cancer of the Stomach. Jonathan Forman, M.D., Columbus..... 764  
 The problem of stomach cancer. Predisposing factors. Relation to gastric ulcer. The classic picture of gastric carcinoma. Early diagnosis. History. Physical findings. X-ray examination. Laboratory findings. Summary.

EDITORIAL COMMENT

"Now's the Time"..... 729  
 "Religious Healing"..... 729  
 Another Honor..... 730  
 Medicinal Chemicals and the New Tariff..... 730  
 Anti-vivisection Revival..... 731  
 What Is Chiropractic?..... 732  
 "Free Health" Buncombe..... 732  
 1923 Prohibition Permits Should Be Secured Now..... 777  
 Value of Medical Organization..... 777

STATE NEWS

Academy and County Society Reports..... 769  
 All Legal Technicalities Employed by Unlicensed Chiro Preparatory to Desparate Legislative Effort for Special Board..... 771  
 Public Health Notes..... 772  
 Proportionate Distribution of Physicians in Ohio by Population and Taxable Wealth, Rural and Urban. Result of Interesting Analysis..... 773  
 Anti-tuberculosis Christmas Seal Campaign Under Way. "Before You Invest—Investigate"..... 776  
 Activities of State Medical Board..... 778  
 Features of the Public Health Nursing Course at Ohio State University, with Emphasis on School Nursing Project..... 781  
 Typhoid Fever Epidemics at Canton and Troy..... 782  
 Industrial Commission to Adopt Occupational Disease Code..... 783  
 "Mental Hygiene" Lectures Before District and Group Meetings..... 783  
 Druggists on Treasury Department Alcoholic Decisions..... 783  
 Expert Testimony, Its Meaning and Purpose—Some Hints, Advice and Definitions by Well-known Attorney..... 784  
 Deaths in Ohio..... 785  
 "Mental Hygiene" Lecture Before District and Group Meetings..... 785  
 Interesting Conclusions Drawn from Admissions to Columbus State Hospital..... 786  
 Small Advertisements..... 787  
 Policies, Professional Relations, Hospital Problems, Plans and Prospects Considered by Council at October Meeting..... 788  
 Hospital Notes..... 792  
 "Proprietary Medicine and the Doctor"—and Bottle Maker..... 794  
 Second District Society Adds Laurels by Presenting Successful Fourth Annual Post-graduate Course..... 796  
 Comprehensive Ordinance Governing Examination of all Food Handlers May Be Effective in Columbus..... 800  
 Roster of County Society Officers..... 804  
 News Notes..... 806

STANDING COMMITTEES

(Elected)

PUBLIC POLICY AND LEGISLATION  
 J. H. J. Upham, Chairman.....Columbus  
 H. S. Davidson.....Akron  
 John B. Alcorn.....Columbus  
 Robert Carothers.....Cincinnati  
 J. S. Rardin.....Portsmouth  
 Don K. Martin.....Columbus

PUBLICATION

L. L. Bigelow, Chairman.....Columbus  
 D. V. Courtright.....Circleville  
 L. A. Levison.....Toledo

MEDICAL DEFENSE

J. E. Tuckerman, Chairman.....Cleveland  
 C. T. Souther.....Cincinnati  
 W. H. Snyder.....Toledo

MEDICAL ECONOMICS

H. L. Sanford, Chairman.....Cleveland  
 Webster Smith.....Dayton  
 J. S. Cherrington.....Logan

(Appointed by President)

AUDITING AND APPROPRIATIONS

S. J. Goodman, Chairman.....Columbus  
 R. R. Hendershott.....Tiffin  
 J. S. McClellan.....Bellaire

MEDICAL EDUCATION

R. H. Birge, Chairman.....Cleveland  
 E. F. McCampbell.....Columbus  
 A. H. Freiberg.....Cincinnati

GENERAL SECRETARIES

J. S. Rardin.....Portsmouth  
 Ex-officio, Chairman  
 H. C. Messenger.....Xenia  
 E. H. Porter.....Tiffin  
 O. T. Sproul.....West Union

SPECIAL COMMITTEES

(Appointed by President)

CRIPPLED CHILDREN

B. G. Chollett, Chairman.....Toledo  
 A. H. Freiberg.....Cincinnati  
 A. M. Steinfeld.....Columbus

HOSPITAL STANDARDIZATION

C. D. Selby, Chairman.....Toledo  
 S. S. Halderman.....Portsmouth  
 J. C. Tritch.....Findlay

NURSE EDUCATION

Charles S. Hamilton, Chairman.....Columbus  
 J. P. Baker.....Findlay  
 John Phillips.....Cleveland

MENTAL HYGIENE

T. A. Ratliff, Chairman.....Cincinnati  
 C. W. Stone.....Cleveland  
 E. A. Baber.....Dayton  
 J. H. J. Upham, ex-officio.....Columbus

PHYSICAL EDUCATION

P. B. Brockway, Chairman.....Toledo  
 W. H. Peters.....Cincinnati  
 Emilie Gorrell.....Columbus  
 J. H. J. Upham, ex-officio.....Columbus

ARRANGEMENTS 1923 ANNUAL MEETING

Otto P. Geier, Chairman.....Cincinnati  
 M. F. Hussey.....Sidney  
 R. K. Updegraff.....Cleveland

PROGRAM 1923 ANNUAL MEETING

S. J. Goodman, Chairman.....Columbus  
 R. R. Hendershott.....Tiffin  
 D. W. Stevenson.....Akron

Council has provided by resolution that Executive Secretary Don K. Martin shall serve as secretary of all standing and special committees. The executive headquarters of all committees shall be the Association offices in Columbus, 131 E. State Street.





# The OHIO STATE MEDICAL JOURNAL

OWNED AND PUBLISHED MONTHLY BY  
THE OHIO STATE MEDICAL ASSOCIATION  
AS A MEDIUM OF SERVICE TO ITS MEMBERS

DECEMBER 1, 1922

Volume XVIII  
Number : 12



## Christmas Greetings

(Summary of Contents, Page II)



# CALCREOSE

## In Pulmonary Tuberculosis

CREOSOTE EFFECT MAY BE OBTAINED WITHOUT UNTOWARD SYMPTOMS on the gastro-intestinal tract; no nausea, vomiting, gastric distress or irritability by using

CALCREOSE (Calcium creosotate), is a mixture containing in loose chemical combination, approximately equal weights of creosote and lime. Patients do not object to taking CALCREOSE, even in large doses for long periods of time.

Write for "The Calcreose Detail Man"—He will tell you all about it.

THE MALTBIE CHEMICAL COMPANY  
NEWARK, NEW JERSEY



# Summary of Contents

## ORIGINAL ARTICLES

Classification and Surgical Treatment of Chronic Diarrhea—Colitis. S. G. Gant, M. D., New York City..... 813  
 Operative treatment of ulcerative colitis. Appendicectomy. Irrigating solutions. Statistical data. Intestinal exclusion. Colostomy and colectomy.

A Short Consideration of Some Phases of Intestinal Obstruction. W. D. Haines, M. D., Cincinnati..... 819  
 Symptoms. Differential diagnosis. Cause and location of obstruction. The pathological syndrome. Treatment of acute ileus. Closing argument.

Typhoid Fever: Its Treatment and Mortality. Howard Jones, M. D., Circleville..... 822  
 General considerations. Drugless treatment of typhoid. Caloric diet and calomel. Charted results. Conclusion.

Pyelitis in the Puerperium. Andrews Rogers, M. D., Columbus..... 825  
 Etiology. Infection of the urinary tract above the point of compression. Illustrative case report. Pyelitis in the puerperium. Clinical course of the disease. Diagnosis, treatment and prognosis.

The Feeding of Infants Based on Recent Experiences. S. D. Giffen, M. D., Toledo.... 829  
 Breast feeding. Artificial feeding. Weaning. Varieties of foods and methods. Parenteral infections.

Treatment of Disease of the Accessory Nasal Sinuses. Harold I. Lillie, M. D., Rochester, Minn..... 834  
 Practical classification. Accessory sinuses in relation to focal infection. Surgical procedures in general. Post-operative course. Conclusions.

Some Physical Intra-Nasal Conditions Favoring Involvement of the Nasal Accessory Sinuses. Myron Metzbaum, M. D., Cleveland ..... 837  
 Physical factors. Treatment. Conclusions.

On the So-Called Angioneurotic Eruptions. A. Ravogli, M. D., Cincinnati..... 839  
 Urticaria. Pruritis. Perverted metabolism. Erythematata. Prognosis and treatment.

Parkinson's Disease as a Sequela to Lethargic Encephalitis. H. H. Drysdale, M. D., Cleveland ..... 842  
 Relation to influenza. Symptomatic and pathological findings. Parkinson's syndrome. Abstract of clinical notes. Conclusions.

## EDITORIAL COMMENT

A Call to Arms..... 809  
 Obligation Plus Opportunity..... 809  
 A View of Organization..... 810  
 Clinics, "Free" and "Pay"..... 810  
 Miracle or Fake?..... 811  
 Misleading Abrams Publicity..... 811  
 Legislative Personnel..... 812  
 "Whither Are We Drifting?"..... 812  
 Health Worker's Creed..... 860  
 Collecting Agencies..... 861  
 "Patent" Interests Busy Again..... 861  
 Full-time Teachers in Medical Schools..... 862

## STATE NEWS

Deaths in Ohio..... 849  
 Annual Inventory of Membership Strength Shows Hopeful Prospects for 1923 Through Concerted Team Work..... 851  
 Public Health Notes..... 852  
 Anti-vivisectionists Routed..... 852  
 Enormous Costs for "Welfare", Dangers of Socialization, Problems in Taxation, Public Health and Child Hygiene, are Illustrated at Welfare Conference..... 853  
 Term "Injury" in Ohio Workmen's Compensation Law Construed by Supreme Court..... 855  
 News of the Academies and County Societies..... 856  
 Sixth District Entertained at Massillon..... 858  
 The Pay Clinic—An Investigation and Recommendations on Policy by a Joint Committee..... 859  
 The U. S. Veterans' Bureau Offers Special Post-Graduate Courses in Neuro-Psychiatry and Tuberculosis..... 863  
 Hospital Notes..... 864  
 Many Phases of Anesthesia Service Discussed at Joint Meeting of Special Societies..... 866  
 Anti-tuberculosis Christmas Seals..... 868  
 The 1923 Prohibition Permits..... 868  
 Public Health Service in Rural Health..... 870  
 Small Advertisements..... 872  
 Compulsory Vaccination Upheld by U. S. Supreme Court..... 874  
 Interesting Ideas Propounded on Child Hygiene..... 876  
 Narcotic Addiction in Ohio..... 878  
 American Public Health Association and Allied Bodies Considered Varied but Pertinent Subjects..... 880  
 News Notes..... 886

## SECTION OFFICERS 1922—1923

The following is a list of the officers elected by the scientific sections at the seventy-sixth annual meeting of the Ohio State Medical Association in Cincinnati. They will formulate the programs for their sections for the 1923 meeting, and inquiries concerning places on the program should be sent direct to them.

### MEDICINE

Chairman.....Alfred Friedlander  
 4 W. Seventh St., Cincinnati  
 Secretary.....Marion A. Blankenhorn  
 Lakeside Hospital, Cleveland

### SURGERY

Chairman.....L. G. Bowers  
 Fidelity-Medical Bldg., Cleveland  
 Secretary.....T. S. Jackson  
 465 Rose Bldg., Cleveland

### OBSTETRICS AND PEDIATRICS

Chairman.....Wayne Brehm  
 677 N. High St., Columbus  
 Secretary.....Floyd Mowry  
 3757 Cedar Ave., Cleveland

### EYE, EAR, NOSE AND THROAT

Chairman.....W. W. Alderdyce  
 513 Madison Ave., Toledo  
 Secretary.....F. W. Lamb  
 Provident Bank Bldg., Cincinnati

### HYGIENE AND SANITARY SCIENCE

Chairman.....A. O. Peters  
 Reibold Building, Dayton  
 Secretary.....H. H. Pansing  
 Reibold Bldg., Dayton

### NERVOUS AND MENTAL DISEASES

Chairman.....E. M. Baehr  
 State Bur. Juvenile Research, Columbus  
 Secretary.....A. D. Finlayson  
 1836 Euclid Ave., Cleveland











