THE New York State Journal of Medicine.

Published Monthly by The New York State Medical Association.

VOL. I. NEW YORK, JANUARY, 1901. NO. 1.

CONTENTS.

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Next annual meeting at New York, October 21-24, 1901.

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President—Julius C. Bierwirth, Brooklyn.
Secretary—Nathan W. Green, New York.
Treasurer—E. H. Squibb, Brooklyn.

(Continued on page v.)

The New York State Journal of Medicine.

Published Monthly by The New York State Medical Association.

THE NEW YORK STATE JOURNAL OF MEDICINE is published on the first day of each month by The New York State Medical Association. It supersedes the annual volume of *Transactions* formerly issued by the Association. It aims to be a direct medium of communication between the members of the Association, and to widely disseminate Association news. Scientific Articles, Clinical Memoranda, and News Items of interest are solicited for publication. Communications should be typewritten. Reprints of Original Articles will be furnished at cost price, provided a request therefor accompanies the manuscript. Price-list on application. The Committee on Publication does not hold itself responsible for individual views of correspondents.

Every member of The New York State Medical Association in good standing receives the JOURNAL monthly and the Medical Directory of New York, New Jersey, and Connecticut, issued annually, free of expense other than the payment of the annual dues of the Association.

Subscription price to those not members of The New York State Medical Association, $3.00 per year. Single copies, 25 cents.

EDITORIAL OFFICE, 64 MADISON AVENUE, NEW YORK, N. Y.

VOL. I. JANUARY, 1901. NO. 1.

Association Notes.

WITH the present issue the New York State Medical Association begins the monthly publication of a journal which will take the place of its annual volume of *Transactions*. This undertaking marks a distinct era in the affairs of a State medical organization. That it will meet with immediate recognition there can be no doubt. The example should be followed by every State Medical Association in this country. Every member of a live organization, whether lay or medical, should be in close touch with the aims and purposes of that body. He should feel himself a vital part of it; should work for its interests; should raise his voice, when occasion demands, for all that is best and progressive. The members of the New York State Medical Association now have this opportunity placed before them.

The present journal does not enter the field to compete with the many excellent weekly and monthly medical publications now issued. It occupies a niche distinctly its own. From month to month will appear the scientific papers presented at the annual meetings of the Association with such others as may be considered advisable. County and District Branch Association proceedings will be reported in sufficient detail. The department of Association Notes will contain news items, letters of correspondence, notices of removals and of marriages and deaths, and an occasional short sermon, perhaps, on the needs of the Association or of the profession at large throughout the State. The journal will not lend itself to unnecessary controversy.

A journal conducted on these lines should be welcome to every member of the organization which it represents. The members of each County and District Branch Association will be in close touch with affiliated organizations—each will know what the others are doing to advance the common interests of the profession and the public. But it is difficult to successfully conduct a journal of this sort. No matter how willing those having it in charge may be to expend time and energy in developing its possibilities, they must have help. Each and every member of the Association should not only consider it his privilege but his *duty* to contribute to its columns; there should be not one but many regular correspondents in each county of the State.

* * *

ON the fourth day of February, 1884, one hundred members of the profession met in convention and organized the New York State Medical Association with the object of bringing the profession of the State of New York in affiliation with the American Medical Association. A plan of organization having been adopted and a committee on by-laws appointed, the organization was completed by the election of Dr. H. D. Didama as president; Drs. J. M. Crawe, T. B. Reynolds, B. L. Hovey, and N. C. Husted as vice-presidents; Dr. Caleb Green as recording secretary; Dr. E. D. Ferguson as corresponding secretary; and Dr. J. H. Hinton as treasurer.

The Association held its first annual meeting in New York City on November 18, 1884. The membership having already reached five hundred and fourteen, the meeting was very largely attended. Articles of incorporation had been secured on May 3, 1884. After adoption of a constitution and by-laws, the scientific session began, during which fifty-two papers were read and discussed. The Association then appointed delegates to the American Medical Association and has ever since maintained its affiliation with that body.

During the past sixteen years the Association has published an annual volume of *Transactions* of rare excellence. Looking backward the members of the Association can but review its work with pride and satisfaction, for it has fulfilled its mission of placing its members in harmonious relation with the great central National Association, of maintaining that exalted standard of professional conduct which has been the glory of medical men in all time, and of affording a medium of scientific and social communication among its members which has tended to cultivate the mind and strengthen the ties of brotherhood.

It can scarcely be regarded as invidious if we record the grateful appreciation by the members of the eminent services rendered in the foundation of the Association by Drs. E. M. Moore, Frederick Hyde, Austin Flint, Austin Flint, Jr., Caleb Green, H. D. Didama, E. D. Ferguson, and Thomas F. Rochester, nor shall the occasion pass without acknowledging the indebtedness of the members to Dr. E. D. Ferguson for his tireless labors as secretary.

The Association having passed adolescence, the time arrived for an equipment suitable to its growth, in other words, for its reorganization on a broader basis. This was effected at the seventeenth annual meeting in October, 1900, as attested by the charter and by-laws herein printed.

* * *

Dr. Leroy J. Brooks, for more than twenty-five years one of the leading physicians of Chenango County, died December 11, 1900, from Bright's disease. Dr. Brooks was a zealous worker in the interests of the State Medical Association and his loss will be keenly felt.

* * *

The Fourth District Branch Association held its Sixteenth Annual Meeting at Buffalo on May 8, 1900, the President, Dr. W. H. Thornton, of Buffalo, in the Chair. After an address of welcome by the President the following papers were read and discussed: "Report of Cases of Injuries to the Eyes," by Dr. A. A. Hubbell; "Goitre," by Dr. E. D. Meyer; "Intestinal Adhesions, with Report of Cases," by Dr. Charles E. Congdon; "Review of the Present Status of Jonnesco's Operation," by Dr. M. M. Hartwig; "Hepatic Sclerosis in Non-Alcoholics," by Dr. A. L. Benedict; "Dislocation of Tendons; Treatment," by Dr. William M. Bemus; "Report of Three Cases of Ectopic Pregnancy with Sub-Peritoneal Rupture," by Dr. C. C. Frederick.

During the afternoon session Dr. E. D. Ferguson, of Troy, and Dr. F. H. Wiggin, of New York, delivered short addresses on the needs of the Association and the advantages which would accrue from reorganization.

Dr. E. G. Starr then read a paper, entitled "Common but Generally Unrecognized Symptoms of Eye Strain." Dr. Allan A. Jones reported a case of "Perforating Gastric Ulcer." Dr. H. E. Hayd contributed a paper on "Hemorrhage after Confinement and Its Treatment." Dr. George A. Himmelsbach concluded the scientific session with a paper on "Rupture of the Symphysis Pubis during Parturition, with Report of a Case."

The following Executive Committee was elected for the ensuing year: H. A. Barney, of Allegheny County; J. H. Sackrider, of Cattaraugus County; T. D. Strong, of Chautauqua County; DeLancey Rochester, of Erie County; Frank L. Stone, of Genessee County; R. J. Menzie, of Livingston County; E. M. Moore, Jr., of Monroe County; W. Q. Huggins, of Niagara County; F. R. Bentley, of Ontario County; J. H. Taylor, of Orleans County; C. S. Parkhill, of Steuben County; Darwin Colvin, of Wayne County; A. G. Ellinwood, of Wyoming County.

Drs. DeLancey Rochester, A. A. Hubbell and Charles A. Wall were appointed a Committee on Arrangements.

* * *

The American Medical Association is the second largest body of medical men in the world, numbering about 10,000 and rapidly increasing. It was organized 53 years ago, when the population of the United States was less than 20,000,000 and when there were probably not more than 40 medical societies of all kinds in the country. The founders recognized the necessity of limiting the number of those who should manage its affairs, and therefore limited the number of those who should have a right to vote. Even at that time the probability was realized that the number might soon be too large to give each one a right to a voice in the management of the affairs of the Association, and so the delegate system was adopted. The plan upon which it was organized is the plan upon which the Association is working to-day, with a few minor modifications. It is a delegate body and all the business appertaining thereto is managed by delegates who are supposed to be elected by affiliated societies. These have a right to vote, and only these. The plan is an ideal one. It provides for a democratic form of representation looking to a limited number of representatives who shall act for the whole. It is the adoption of the general plan of the government of our country, by which delegates are elected to represent the many and to meet in congress to legislate for all. But every ten years a reapportionment is made by the Government for the purpose of equalizing representation without increasing the size of the working body—the House of Representatives. The American Medical Association, however, has made no reapportionment. The delegates are elected on the same basis now as in 1846; that is, one delegate for every ten members, every society being entitled to elect delegates in this proportion.

As above stated, in 1847 there were less than 40 medical societies in the country; to-day there are nearly 1,300. The number of delegates to the American Medical Association is not based on the number of members in that body, but on the num-

ber of members of the affiliated organization sending delegates. Thus one society may have 100 members, not ten of whom belong to the National body and yet it is entitled to send ten delegates. One person may belong to several societies and be counted several times. Again, one State, Illinois, according to the list of affiliated societies printed in the *Journal of the American Medical Association* last spring, has 96 affiliated county societies, and as one of these has nearly 1,000 members it may be presumed that the combined membership of these bodies in this one State, including the State Society, represent at least 4,000, entitling the State to send 400 delegates. It can readily be seen, therefore, that the number of delegates from the country at large necessarily makes a body too unwieldy for any deliberative legislative work. However, it is not necessary to present these figures in order to demonstrate that the number of delegates is too large, as this is quite evident at each annual meeting and is becoming more plain each year as the number in attendance increases. Under the present ratio of apportionment practicaly all who desire can receive a delegate certificate.

It seems strange that in all these years, with the rapid increase in the number of physicians and in the number of societies in the country, not to mention the increase in population and in territory, no change has been made in this apportionment. If important questions are to be acted on deliberatively the body which acts on them must not be an unwieldy mass but must be composed of a limited number, elected in such a way as to fairly represent the profession in all parts of the country. It would seem desirable for the American Medical Association to consider whether the time has not come for a radical change in the basis of representation to its working body. The change must be radical now, for the reason that it has been delayed so long. If a change had been made each ten years, as is done in Congress, it would not have been considered radical at any time. Now it must be, if the result is to be a deliberative body that can act in a deliberate manner on the vital questions that must come before the Association.

* * *

The Fifth District Branch Association held its Sixteenth Annual Meeting at Brooklyn on May 22, 1900. Dr. J. C. Bierwirth, the President, occupied the Chair. The Executive Committee reported that the permanent fund of the Branch Association amounts to fifteen hundred dollars. Seventy new Fellows were added to the list of membership during the preceding year. Five deaths occurred among the members during the same period.

The Secretary had been notified that sixteen delegates to this meeting had been appointed from the Kings County Medical Association.

Biographical sketches were read by the Secretary—of Dr. X. T. Bates, by Dr. E. H. Squibb, of Dr. J. F. Feely, by Dr. Adolph Wieber, of Dr. N. W. Leighton, by Dr. L. North, Jr., and of Dr. J. G. Wallack, by Dr. E. H. Squibb.

The following were chosen as the Nominating Committee: Drs. I. D. LeRoy, J. D. Sullivan, Ellery Denison, M. C. Connor, H. C. Johnston, W. B. Gibson, H. Van Hoevenberg and E. F. Brush. The Secretary then presented an outline of the work accomplished at the recently held Convention for the Revision of the U. S. Pharmacopœia.

At the afternoon session Dr. J. W. S. Gouley, of New York, was asked to take the Chair while the President read his address on "The Necessity and Benefits of More Completely Organizing the Medical Profession." The President then resumed the Chair and a discussion on "Diabetes Mellitus" was opened by the reading of a paper, entitled "The Identification of Dextrose in Human Urine," by Dr. Heinrich Stern. This was followed by a few remarks on "Diabetes Mellitus in Children," by Dr. Henry D. Chapin. The following papers were then read: "Diagnosis, Symptoms, Treatment and Prognosis of Diabetes Mellitus," by Dr. Egbert Le Fevre; "The Relations of Surgery to Diabetes Mellitus," by Dr. Charles P. Gildersleeve; "The Ocular Manifestations in Diabetes Mellitus," by Dr. L. A. W. Alleman; "Cutaneous Manifestations in Diabetes Mellitus," by Dr. Samuel Sherwell; "Manifestations of Diabetes Mellitus in the Upper Air Passages," by Dr. Jonathan Wright.

The following resolution was offered by Dr. Van Hoevenberg and was unanimously adopted: *Resolved*, That the Fifth District Branch Association requests the Council of the State Association to authorize the publication and free distribution of the President's address to the regular physicians of the State of New York; and *Resolved*, That the carrying out of this resolution be referred to a committee composed of Drs. F. H. Wiggin and E. H. Squibb.

The report of the Nominating Committee was then received and accepted. It recommended the appointment of the following Executive Committee for the ensuing year: I. D. Le Roy, of Dutchess County; L. Grant Baldwin, of Kings County; E. G. Rave, of Nassau County; Ellery Denison, of New York County; M. C. Connor, of Orange County; G. W. Murdock, of Putnam County; H. C. Johnston, of Richmond County; N. B. Bayley, of Rockland County; W. B. Gibson, of Suffolk County; I. L. C. Whitcomb, of Sullivan County; H. Van Hoevenberg, of Westchester County, and E. F. Brush, of Westchester County.

* * *

Cortland County organized a County Association last midsummer. The meetings are held in the evening at the offices of the members. One paper only is presented at each session, but each member is bound to speak to the subject. The officers for the first year are Dr. H. S. Braman, president; Dr. S. J. Sornberger, vice-president; Dr. Philip Neary, secretary; Dr. F. W. Higgins,

treasurer; Dr. F. D. Reese, member of the Executive Committee.

* * *

THE MEDICAL DIRECTORY of New York, New Jersey and Connecticut for 1901 is already in course of compilation. It will be issued early in September. As heretofore, the volume will be sent free of expense to every member of the Association. The immense amount of labor necessary in the preparation of this book can not well be appreciated except by those having it in hand. The last issue contained more than 22,000 classified names, to say nothing of important data concerning hospitals, medical societies, and the like.

Has it ever occurred to you that a large sum of money is required to produce a Directory of this kind, and that a portion of this expense is met by those who insert advertisements in the book? Of course they reap their reward but, on the principle that "one good turn deserves another," every one interested in the Directory should do what he can to make that reward as large as possible. The advertisements are selected with great care, and it is believed they are thoroughly reliable. If, then, you want instruments, office furniture, surgical dressings, the finest product of the pharmacy or of the dairy; if you desire to send a patient to some private hospital, sanitarium or health resort; if you have use for the services of skilful opticians; if your house needs renovating, decorating or to be fitted with sanitary plumbing or with better heaters, why not consult the advertisements in this Directory before looking elsewhere? You will find all these advertisements and a great many others equally useful to a physician. Give our advertisers at least a chance to show what they can do, and at the same time that you are giving them a trial say it is *because you saw their advertisement in the Directory* and are desirous of helping that enterprise at the same time that you are benefiting yourself and them.

The following changes should be made in the Medical Directory of 1900 in order to bring it to date:

Removals, New York City: Dr. Albert N. Scully, to 124 West 41st St. Dr. Thomas L. Bennett, to 17 West 90th St., Tel. 449 Riverside. Dr. Emil J. Sarlabous, to 127 West 22nd St., Tel. 3332-18th. Dr. Matthias Lanckton Foster, to 542 Fifth Ave. Dr. Donald M. Barstow, to 21 West 53rd St., Tel. 3905-38th. Dr. Henry C. Coe, to 8 West 76th St., Tel. 1567 Riverside. Dr. Walker Curry, to 23 East 61st St. Dr. John Alfred Bodine, to 128 East 34th St., Tel. 760 Madison. Dr. John T. Nagle, to 104 Third Ave. Dr. David Goldstein, to 41 East 63rd St. Dr. Henry H. Whitehouse, to 24 West 36th St., Tel. 1318-38th. Dr. S. Tynberg, to 1291 Madison Ave., Tel. 2027-79th. Dr. Austin Flint, Jr., to 34 East 54th St., Tel. 31-38th. Dr. E. L. H. McGinnis, to 202 West 86th St. Dr. W. J. Briskelmaier, to 25 West 36th St. Dr. Charles Warrenne Allen, to 30 East 33rd St. Dr. Allen Blair Bonar, to 146 West 94th St. Dr. William Post Herrick, to 23 West 54th St., Tel. 4036-38th. Dr. Henry Hall Forbes, to 96 Park Ave. Dr. Frank N. Irwin, to 10 West 39th St., Tel. 4206-38th. Dr. Andrew F. Currier, to 130 East 36th St. Dr. Victor Cox Pedersen, to 206 West 45th St. Dr. Mathilda K. Wallin, to 78 Park Ave., office, 542 Fifth Ave.

Corrected Addresses, New York City: Dr. William Armstrong, 515 Madison Ave. Dr. Pearce Bailey, 4 West 50th St. Dr. José F. de F. Fernandez, 139 East 28th St. Dr. Nelson Henry, 36 West 11th St. Dr. Edmund Y. Hill, 111 West 71st St. Dr. George Hooper Mallett, 72 West 68th St. Dr. Wolfred Nelson, Post Graduate Hospital, 303 East 20th St. Dr. A. D. Rockwell, 25 West 44th St., Res. 357 West 116th St.

Change of Office Hours, New York City: Dr. Howard Lilienthal, 679 Madison Ave., 10 to 12 A. M. except Sundays. Dr. Z. Swift Webb, 40 West 93rd St., 8 to 11 A. M., 5 to 7:30 P. M.

New Address: Dr. Walter W. Stebbins, Green Bay, Wisconsin (left Manhattan Hospital December, 1899).

Deaths, New York City: Dr. Christian P. Ahlstrom, Dr. Horace Tracy Hanks, Dr. William R. Larkin, Dr. Rufus P. Lincoln, Dr. Henry D. Noyes, Dr. Charles F. Overmiller, Dr. Samuel S. Purple, Dr. William H. Ross, Dr. Lewis A. Sayre, Dr. Frank W. Merriam, Dr. Franklin Smith, Dr. William H. Ross, Dr. John C. Acheson.

Corrected Addresses, Brooklyn: Dr. H. Arrowsmith, 180 Clinton St. Dr. Albert M. Judd, 188 Sixth Ave. Dr. William Maddren 1 Hanover Place. Dr. C. E. Olmsted, 401 Berry St. Dr. Warren S. Price, 163 Hancock St. Dr. Warren S. Shattuck, 147 Clinton St. Dr. F. L. Tucker, 464 Ninth St.

Removals, Brooklyn: Dr. J. J. Paulson, address unknown. Dr. P. A. Brennen, address unknown. Dr. F. F. Waldie, address unknown. Dr. Henry W. Burnett, address unknown. Dr. Reuben Jeffery, address unknown. Dr. William E. Spencer, address unknown. Dr. James F. McCaw, moved to Watertown, N. Y. Dr. Salvator Gomez, moved to Cuba. Dr. Vincent Gomez, moved to Cuba. Dr. Jerome B. Thomas, Philippine Islands, U. S. Government Service. Dr. A. F. Dunbar, moved to 159 Lexington Ave., New York City.

Deaths, Brooklyn: Dr. William B. Waterman, Dr. William W. Browning, Dr. Frank Stephen Milbury, Dr. Frederick DeMund, Dr. E. R. Squibb.

Corrections, New York State: Dr. Jane Lincoln Greeley, 328 East 4th St., Jamestown, N. Y. Dr. A. R. Judson, left Newton, N. Y., address unknown. Dr. Curtis R. Gray, left Borough of Queens, address unknown. Dr. I. B. Irwin, West Hebron, N. Y. Dr. B. Rush Holcomb, Whitehall, N. Y.

Deceased: Dr. Joseph L. Culter, Bolivia, Allegany County, N. Y.

Moved and left no Address: Dr. James McCallum, Dr. Edward J. Parish, Dr. Arthur Kahn, Dr. J. M. Rice, Dr. Eli G. Jones, Dr. J. B. Stein, Dr. T. O. Shepard, Dr. W. A. P. Andrews, Dr. R. E. Soule, Dr. G. L. Michon, Dr. L. C. Potter, Dr. Edward J. McCarthy, Dr. G. Thernberg, Dr. Amory Chapin, Dr. Frederick Griffith, Dr. A. Benzoni, Dr. V. F. Kouba, Dr. Wm. H. Munn, Dr. William G. Hoyt, Dr. T. M. Barnett, Dr. Francis M. Deems, Dr. Elias P. Hicks, Dr. John A. Hill, Dr. W. A. James, Dr. W. A. P. Andrews, Dr. J. W. Jewett, Dr. Barnim Scharlau.

You are earnestly requested to advise the editor of the Medical Directory, at 64 Madison Avenue, New York City, of necessary corrections or changes to be made in the forthcoming volume.

* * *

The New York County Medical Association, at a very largely attended meeting in November, adopted unanimously a carefully prepared set of by-laws conformable to the charter and by-laws of the State Association, and subject to the approval of the Council. By-law committees having been appointed by other County Associations, it is suggested that uniformity in arrangement and other requirements be observed, consistent with their needs.

* * *

The Treasurer of the State Association, during the past two months has sent out circular letters urging the members to look over their files of *Transactions* in order that the accumulated stock of back volumes may be made use of to supply deficiencies. The only cost to members in good standing on the Treasurer's books is that of expressage. An early correspondence with the Treasurer (P. O. Box 760, Brooklyn, N. Y.) will meet with prompt forwarding of such volumes as are required, up to the time that the limited supply of some numbers is exhausted.

* * *

The Kings County Medical Association held a regular monthly meeting on Tuesday evening, November 13, 1900, at which three new members were elected and two applications reported upon. About seventy-five members and guests were present. A temperate but animated and thorough discussion was held on the question of the proposed new charter and by-laws of the State Medical Association in so far as they immediately concerned the Kings County Association. The majority of members present, which included a very respectable proportion of the membership, decided to carry out fully the agreement made to closely associate with the State Medical Association and to make their by-laws conform.

The paper of the evening was entitled "Some Remarks on Infantile Diseases of the Skin," by Dr. Samuel Sherwell. The ground was so well covered and the points brought out were so eminently practical that little chance was left for discussion by the few members who took part in it. It was therefore confined almost entirely to the line of emphatically approving of the very practical suggestions made.

The regular December meeting was held on Tuesday evening, December 11, 1900, at which more than forty new members were elected, and a discussion of the new by-laws was taken up. A biographical sketch of the late Dr. Edward R. Squibb was read by Dr. J. D. Rushmore, and a few verbal remarks made by Drs. A. R. Paine, T. M. Lloyd and J. H. H. Burge. On motion, it was unanimously resolved to publish the sketch in the New York State Journal of Medicine and in the *Journal of the American Medical Association.*

The paper of the evening was on "Some Remarks on the Treatment of Acute Dysentery Based on Its Etiology and Pathology, with Special Reference to the Use of Sulphate of Magnesia," by Dr. W. J. Cruikshank. It was discussed by Dr. Ira Van Gieson, of Manhattan, and Drs. E. H. Bartley, Jacob Fuhs, and others, of Brooklyn.

* * *

The Fifth District Branch Association will hold a special meeting at Mott Memorial Hall, 64 Madison avenue, New York City, on Friday, anuary 4, 1901, at 8:30 P.M., to adopt by-laws to conform with the reorganization plan of the State Association, and to elect officers for the ensuing year. The president, Dr. J. C. Bierwirth, has appointed Dr. Nathan W. Green, 23 West Thirty-seventh street, New York, secretary, *pro tem.*

* * *

The Second District Branch of the New York State Medical Association held its Sixteenth Annual Meeting at Schenectady on the 28th day of June, 1900. Dr. E. D. Ferguson, of Troy, presided. An address of welcome was delivered by Dr. George E. McDonald, of Schenectady. The President's address, on "The History, Growth and Advantages of the New York State Medical Association," was of great interest. The following papers were read: "Some Remarks on the So-called Widal Reaction," by Dr. William Finder; "The Value of Blood Examinations in the Diagnosis of Trichinosis, with Report of a Case," and "Report of a Case of Depressed Fracture of Left Frontal Bone with Symptoms Showing Dissociation of Motor Speech from Writing Center," by Dr. H. C. Gordinier, of Troy; "The Radical Cure of Hydrocele," by Dr. C. E. Fritts, of Hudson. Dr. E. D. Ferguson made some interesting and instructing remarks on surgery of the ureters, and reported cases. A fine specimen of extra-uterine pregnancy, three months, was presented by Dr. George H. Comstock, of Saratoga.

The 17th annual meeting will be held at Saratoga on the last Thursday in May, 1901.

Erie County has organized a County Association and adopted by-laws in accord with those of the State Association. The meeting, which was largely attended, was held at the Buffalo Library Rooms, Buffalo, on the evening of December 20, 1900. Officers for the ensuing year were elected, as follows: Dr. DeLancey Rochester, president: Dr. Arthur G. Bennett, secretary; Dr. Charles A. Wall, treasurer. Executive Committee: Dr. J. Grosvenor, 3 years; Dr. Bernard Cohen, 2 years; Dr. A. A. Hubbell, 1 year.

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The New York County Medical Association held its first meeting of the fall season at the Academy of Medicine, New York City, on the evening of October 15, 1900. The attendance was very large, many members of the State Association from out of the city being present. Dr. E. D. Ferguson, of Troy, exhibited two new instruments, after which Dr. Frederick Holme Wiggin, the retiring president, and Dr. Parker Syms, the president-elect, delivered addresses.

At the November meeting, as elsewhere noted, new by-laws were adopted and the plan of reorganization completed in accordance with the new by-laws of the State Association. Two interesting papers were read and discussed, one entitled "General Septic Peritonitis," by Dr. Irving S. Haynes, the other "The Use of Hot-Water Vaginal Injections," by Dr. J. H. Burtenshaw.

At the meeting of December 17, Dr. Wm. A. Shufeldt presented two interesting specimens of retention cyst of the liver, and of a tube and ovary in an inguinal hernia. Dr. Wm. M. Leszynsky read a paper on "Coffee as a Beverage, and its Frequent Deleterious Effects upon the Nervous System. Acute and Chronic Coffee Poisoning." Dr. John G. Clark, Professor of Gynecology at the University of Pennsylvania, then delivered a most interesting lecture on "The Anatomical and Physiological Evolution of the Ovary from the Embryo to the Aged Woman," which was profusely illustrated by lantern slides.

Ninety-two new members have been admitted to the County Association during the past three months, and 19 additional names will be acted on at the January meeting. Two deaths have occurred: Dr. Wm. H. Ross, a graduate of Georgetown University, Class of 1869, died November 20, 1900; and Dr. John C. Acheson, College of Physicians and Surgeons, New York, 1859, died December 12, 1900.

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The past year has been an exceedingly eventful one for the State and County Medical Associations in fixing their legal status, both by recognition by the State Legislature, and by the decision in the case of the New York County Medical Association against the City of New York, which has just been handed down. This action was instituted in May last and tried before Mr. Justice McAdam, in June, at Part II., Trial Term of the Supreme Court. It resulted in a verdict for the plaintiff, and thus established the right of the State and County Associations to collect the fines imposed when convictions were secured on the complaint of these organizations. The case was at once appealed, and was argued before the Appellate Division on December 6, 1900, before Justices Van Brunt, Rumsey, Paterson, O'Brien and McLaughlin. James Taylor Lewis, Esq., attorney for the State Medical Association, appeared for the respondent, and Theodore Connoly, Esq., First Assistant to the Corporation Counsel, for the appellant. A decision was rendered on December 21, and was unanimously in favor of the County Association.

In brief, the statement of facts is as follows: On complaint of the County Medical Association one Thomas Tito was arrested on January 29, 1900, for illegally practising medicine in the County of New York, and by plaintiff's counsel was prosecuted and convicted on said charge. Said Tito was thereupon sentenced to pay a fine of $50 or serve an alternate term of imprisonment, which fine was paid and thereafter deposited in the New York City treasury. Payment of said fine to the plaintiff was refused, and to recover the same action was begun by the service of a summons and complaint on May 3, 1900.

The appellant's argument was based on a truly remarkable construction of the chapter of the Laws of 1875, under which the incorporation of the County Association was granted. It was claimed that judgment should be reversed, for the following reasons: (1) "Because the plaintiff is only a club or association formed under the Club Act, chapter 267 of the Laws of 1875." (2) "Because the plaintiff is not a county medical society." (3) "Because it is not represented in a State medical society." (4) "Because county and State medical societies are well recognized corporations created by special acts and carefully regulated by legislation." (5) "Because there are but three classes of county medical societies, namely, those represented respectively in the Medical Society of the State of New York, the Homeopathic Medical Society of the State of New York, and the Eclectic Medical Society of the State of New York."

A short quotation from the brief submitted by the Association's attorney is interesting: "The opposition to plaintiff's claim does not come from the City of New York, though the representative of the City appears. It is made solely by the County and State Medical Societies, which have up to the present time been the only societies prosecuting. The objection to the Comptroller turning over this fine came from the County Medical Society's attorney. This law was not enacted for any one corporation. Such a law would be manifestly unconstitutional. This law was passed to protect the public, especially the poor, from illegal practitioners of medicine; and it is submitted that the more vigorous the prosecution by regular, responsible medical societies, the better for the public and all reputable physicians."

Original Articles.

THE SUCCESSFUL TREATMENT OF ICHTHYOSIS HYSTRIX BY THE ELECTRIC ARC-LIGHT.

BY G. W. GOLER, M.D.
Rochester, N. Y.

WHILE experimenting with the electric arc-light as a therapeutic measure in tuberculosis and some other affections, a case of ichthyosis hystrix presented itself. The results obtained in the treatment of this case were so immediate that it appears to warrant a brief report.

Walter B., aged nine years, a robust, well-nourished boy of good family. At birth his skin was dry. When four years of age a roughness of the skin of the arms, legs and trunk was noticed; two years later a definite diagnosis of ichthyosis was made by Dr. Hingston of Montreal. As the boy grew older the disease became more marked. It is said to have been worse in the summer than in the winter, contrary to the general rule in such cases. When the patient was first seen in July, 1900, the affection was limited chiefly to the extremities. Beginning on the arms at the lower third and extending upward to just above the axilla, the skin was covered with dirty-brown scales, increasing in thickness on the anterior surface, and thickly beset with projecting protuberances one-eighth of an inch in height, which looked like cracked flat warts, except for their color, which was a dirty-brown, and to the touch like a horseradish grater. This degree of lesion merits the title of hystrix, though perhaps it is not more severe than what Kaposi calls *ichthyosis serpentina*.

On the lower extremities both anterior and posterior surfaces from the malleoli extending upward over the thigh on to the trunk half way to the crest of the ilium were involved. That part of the eruption on the anterior surfaces of the arms and on the buttocks was seamed. The skin of the trunk was rough and scaly. A portion of both cheeks and the auricles were covered by coarse, rough scales.

July 1st a portion of the arm of the patient was roughly circumscribed at a point showing the eruption in its worst character. A quantity of lanolin was well rubbed into the part, and the light from a twenty ampere lamp projected through two eight-inch plano-convex lenses mounted in pairs was allowed to fall on the arm for twenty minutes. The inunction of lanolin and exposure to light was repeated on the next day for the same period of time. On the third day the skin had lost its warty appearance, the dark-brown surfaces of the warts had disappeared, and in their places reddish, flattened, raised surfaces showed themselves, which gradually disappeared, leaving at the end of six or seven days a soft normal skin beneath. Similar treatment applied to the lower extremities, in which the arc-light was thrown on the parts from a nine-inch parabolic reflector, resulted in a rapid disappearance of the eruption, so that at the end of twenty days, and a total of eighteen exposures to light for thirty minutes each, the patient entirely recovered, save for a slight roughness of the skin sensible only to touch. There has been no return of the disease during three months, and I am informed that the patient now perspires on the areas formerly covered by the eruptions, which had never occurred before.

Ichthyosis hystrix is generally classed as a progressive and incurable affection of the skin. Its treatment may be summed up in the statement of Hyde, who says: "In no case can a favorable result be anticipated."

I present this brief report trusting that more extended observation may prove that we have in the treatment here outlined a means for the permanent relief of ichthyosis.

NOTE. Since this report two cases of simple ichthyosis have been entirely relieved by the arc-light. Four months later, notwithstanding frequent inunctions of lanolin, the disease is beginning to return in the first case.

THE RELATION OF MIGRAINE TO EPILEPSY.

BY ALVIN A. HUBBELL, M.D.,
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Buffalo, N. Y.

HEADACHES have been variously classified by different authors, and for many years migraine or megrim has been recognized as a distinct form. Liveing* was one of the first to give a systematic description of the disease; and he is still referred to as authoritative. Gowers defines migraine as "an affection characterized by paroxysmal nervous disturbance of which headache is the most common element. The pain is seldom absent and may exist alone, but it is commonly accompanied by nausea and vomiting, and is often preceded by some sensory disturbance, especially by some disorder of sight."† The symptoms often being one-sided, including especially the pain in the head, this disease has been called hemicrania, furnishing the French term migraine, and the English megrim. Charcot distinguished the disease as "ophthalmic" migraine, because of the initiatory disturbances of vision. Migraine is a common affection, and is known among the laity as "blind headache." Gowers asserts that it is often associated with high intellectual ability, and many distinguished scientific men have suffered from it and have furnished careful descriptions of the subjective symptoms.

The symptoms of migraine are so well known that I need not stop to detail them further. My purpose at this time is to discuss, rather, the suggestion put forth by Gowers a number of years ago, and since adopted and defended by numer-

* "Megrim, Sick Headache and Some Allied Disorders," London, 1873.
† "Diseases of the Nervous System," Amer. Ed., 1888, p. 1171.

ous other writers and teachers on nervous diseases, that this disease is related to epilepsy. Liveing, *loc. cit.*, had already advanced the theory that the affection is a neurosis in the course of which there occur periodical sensory discharges analogous to the motor discharges of epilepsy, but he did not seem to regard the two diseases as particularly related to each other.

In referring to the pathology of migraine, and especially to its relation to other diseases, Gowers says: " The most important and one of the most frequent of these associations is the relation of migraine to epilepsy. The connection of the diseases is of especial interest because the sensory disturbance of the two has so many common features."* He then refers to cases of epileptics in whom migraine was present in themselves or in their ancestors or descendants. He says he has met with a number of cases in which there was both epilepsy and migraine. In some, epilepsy developed after many years of migraine or seemed to grow out of it. In one, the migraine which had existed for years almost disappeared when the fits occurred, and *vice versa*. In some there were similar sensory symptoms preceding the epilepsy as in migraine.

Recently Dr. Spiller, of Philadelphia, has described in detail two cases in which he endeavors to support the same theory.† The first case was that of a man fifty-one years of age, who, since forty-four, had had attacks occurring twice a year at first but now quite frequently. During the first four years there was numbness of the tongue on the right side and inability to speak, the attacks lasting a minute or two. At forty-eight years of age he began to have similar attacks of numbness in his right upper limb and after a short time in his right lower limb. The paresthesia was always confined to the right side of the body and was associated with impaired function of speech and weakness of the hand. There was also a feeling of tension in the limbs at times, and the right eye would feel drawn upward, to the right, and backward when the numbness passed to the right side of the head. When seen in the attacks, however, the eyes were not drawn upward. In the lighter attacks, there was no loss of consciousness, but in the " major " attacks, of which he had six, there was loss of consciousness and he would fall. These attacks were preceded for twenty minutes by an unusually " well " feeling, followed by drowsiness, and as they came on he would utter a sound like " Uh-uh-uh." He sometimes remained unconscious in severe attacks for half to three-quarters of an hour. The attack was followed by bewilderment for a short time. There was a slight tremor of the hands but no jerkings or twitchings. He had not suffered from headache, was seldom dizzy and never had hemianopsia, scintillating scotoma, or other visual disturbances. This case Dr. Spiller considers as one of epilepsy in which the absence of convulsions is a noteworthy feature.

The second case was that of a well-developed woman twenty-one years of age. When four and a half years of age she fell and struck her head, leaving a red spot on the right side. She was at first confused and in a few minutes became unconscious. After a short time she began to scream and could not be quieted for several hours. For several days afterward her mind was exceedingly active. Some months after the fall she had an attack in which the right arm fell powerless to the side of the body and the whole right side seemed paretic for about half an hour, and she complained of headache. These attacks recurred for several years, sometimes being on the right side and sometimes on the left, but never on both sides. As she grew older, she explained that in the attacks there was numbness and paresis of the limbs, paraphasia, and intense headache on the side opposite to the affected limbs. The numbness began in the fingers and passed upward. She was unable to speak correctly when the numbness reached the tongue. The visual disturbances were doubtful. In one attack during the past year there was dimness of vision. No convulsions ever occurred. The headache, when frontal, was attended by a sense of sweet odor, when none existed. On October 4, 1899, she was suddenly attacked by severe headache, a few minutes after which she became quiet, and her father, a physician, thought she was unconscious. She soon began to complain of pain again, and a very small amount of chloroform was administered. After the attack was over she had a very imperfect recollection of what had happened. This was doubtfully interpreted as an epileptic seizure.

In these two cases Dr. Spiller seeks to establish a connecting link between epilepsy in the first and migraine in the second by means of the transitory paresis, paresthesia, and disturbance of speech found in both. But in neither case was epilepsy or migraine distinctive and typical. He then cites Féré, Charcot, Diller, Möbius. Gowers and others and refers to their experiences on similar lines, in corroboration of the theory that the two diseases are related to each other.

In all that Dr. Spiller or others have said, it has not been proved that these supposed connecting-link symptoms belong essentially to true epilepsy, or that they are necessarily forerunners or developmental symptoms of it. Undoubtedly, among those affected by transitory paresis and paresthesia there are hundreds who never have epilepsy to one who has. They are, however, common in those affected by migraine. Again, undoubtedly, there are thousands who are subject to migraine, even the typical " ophthalmic " form, who are not epileptic to one who is. Statistics are not at hand to prove this assertion, but general observation leads me to believe it to be true.

That " ophthalmic " migraine is not a precursor in any way to epilepsy, nor essentially kindred

* " Diseases of the Nervous System," Amer. Ed., 1888, p. 1182.

† Amer Jour. of the Medical Sciences, January, 1900.

to it, is evident to me from my own personal experience and from my observation of others. I am now past fifty years of age. On my mother's side I come from a more or less "neurotic" family. My mother was subject to "sick-headache" all her life, and so were her brothers and sisters. My only brother and sister suffer from periodical headaches. From my earliest recollection I have had frequent headaches, varying in frequency from once or twice a week to once or twice a month. For the most part these have come on gradually during the space of two or three hours. Occasionally, however, say once in two weeks to two months, a headache would be ushered in by visual scintillations and scotoma, characteristic of Charcot's "ophthalmic" migraine. I have never, in this connection, had paresthesia, motor, speech or sensory disturbances of any kind outside of those of vision. Twenty to thirty minutes after the onset of the visual disturbances, these would begin to subside and the headache, mostly frontal, commence. There is a sense of great soreness in the eyeballs, but otherwise the headaches are the same as those which develop slowly without the visual phenomena. They have always been rather severe, although seldom causing nausea or vomiting. My daughter, an only child now twenty-seven years old, is afflicted in precisely the same way as myself, the migraine coming on at times with and at other times without the scintillations and scotoma.

Of the twelve persons in my family thus suffering from migraine in the typical form, not one now has or ever has had epilepsy in any form, partial or complete, and several of them have lived long lives.

It has been my lot, furthermore, to see a very large number of migrainous people during the past fifteen years. In this age of "eye-strain," it has become quite the custom of the general practitioner to refer his cases of headache to the ophthalmologist, and in this way the latter has a great opportunity, far excelling even that of the neurologist, for studying this disease. I have no table of statistics, but from one to three cases of "ophthalmic" migraine present themselves to me every week, and since I first saw the announcement of the theory that this affliction is related to epilepsy, I have probably examined three or four hundred persons, at least, who had it. These I have questioned in regard to associated affections, and especially epilepsy, and in not one has the latter existed in any form, partial or complete, nor has it been found in the family antecedents or descendants. In the few epileptics whom I have examined in regard to the associated diseases there has been no true migraine; but my observations here have been too limited to be of any value. The fact, however, that out of the large number of cases of genuine migraine that I have studied the association of epilepsy has not been found in a single instance, goes far, in my opinion, to put in doubt a relationship between the two. If the one naturally attends or merges into the other, I ought to have found many examples of it instead of not one.

I have no doubt that a few epileptics may be migrainous and that occasionally out of so many who have migraine there may be now and then one who is also epileptic or who may develop epilepsy. But this does not prove a kinship. It might as well be assumed that there is a relationship between dyspepsia and epilepsy because certain epileptics have dyspepsia, or certain dyspeptics have epilepsy.

The argument that there is a similarity between migraine and epilepsy does not seem to me to be well sustained. A paroxysm of epilepsy is sudden in its onset, begins almost without warning, and at once reaches its climax. Its duration is short, and the patient soon becomes normal again. That of migraine begins with slight symtoms which gradually increase in severity and reach their climax after hours. Even the visual disturbances which sometimes usher in an attack, are at first slight and gradually become more pronounced for half or three-quarters of an hour, when they reach their height, and then slowly disappear in the course of ten or fifteen minutes. In epilepsy there are convulsions, in migraine there are none. In epilepsy there is unconsciousness, in migraine there is not. In epilepsy there are varied sensory and mental disturbances which do not belong to migraine, and *vice versa*. Epilepsy often leads to insanity; migraine does not. Epilepsy has the character at first of an "explosion," while migraine is at first more like an "inhibition." The sequence of an attack is different in both diseases.

I can understand how it is possible for the two diseases to exist in one person, and how the general nervous disturbance attending migraine may be a possible "nervous" factor in the development of epilepsy in one predisposed to it by heredity or otherwise. And I can also imagine that the same cell-disturbance of the cerebral apparatus of vision may also extend to, or take place in, the motor and speech centers of the cerebrum, whereby there is produced paresis, paresthesia, aphasia, etc., but I cannot see how this can be translated, directly, into an epileptic fit.

Being therefore unable to detect, clinically, any essential association of epilepsy with migraine, and being unable to trace any definite similarity between them, I am led to conclude that true epilepsy and true migraine are two distinct and separate pathological manifestations of the cerebral nervous system.

The Warren County Medical Association was organized December 19, 1900, with a membership of seventeen. The following officers were elected: President, G. R. Martine; vice-president, D. J. Fitzgerald; secretary and treasurer, F. C. Fielding, all of Glens Falls. The next meeting, at which the adoption of by-laws will be considered, will be held at Glens Falls on Wednesday, January 30, 1901.

TRICHINOSIS: REPORT OF TWO CASES.

BY H. C. GORDINIER, M.D.,
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ALTHOUGH trichinæ have often been observed since their recognition by Sir James Paget and Owen, in 1835, in the muscles, either in their encysted or larval state, they were considered as pathological curiosities to be found at the autopsy-table only. It remained for Professor Zenker, the eminent pathologist of Erlangen, then of Dresden, to associate for the first time the clinical symptoms of a grave and fatal case with the presence in the muscles and alimentary canal of numerous living trichinæ. His case in abstract was as follows:

A girl, aged twenty years, was admitted to the General Hospital of Dresden on January 12, 1860. She had been ill since Christmas and at the beginning of the new year had to go to bed. She complained of lassitude, insomnia, anorexia, constipation, thirst and fever. The fever at the onset was quite high and the abdomen considerably distended and tender. The spleen was not palpable and rose spots were absent. The diagnosis of typhoid fever, however, was made. Very soon there occurred much pain in the muscles, especially those of the extremities, which continued day and night. The arms and legs were flexed and could not be extended without the production of great pain. Edema of the legs was present. Shortly after the patient developed pneumonia of a typhoid type to which she succumbed on January 27th. The post-mortem being held the next day, Professor Zenker was greatly surprised to find in the first sections of muscles examined microscopically numerous non-encapsulated trichinæ in and between the muscle fibers. A more thorough search showed the muscles to be literally swarming with trichinæ. Peyer's patches were found normal. Zenker also found living adult trichinæ in the intestines and was able to find trichinæ in the flesh of the animal, some of which had been eaten by this unfortunate girl. As numerous individuals had partaken of this same carcass several cases of trichinosis were traced by him.

This important contribution to medicine of the discovery of a severe and fatal case of trichinosis was heralded throughout the world and soon much confirmatory evidence was forthcoming of its great value. Since then more than a hundred epidemics of trichinosis have been recorded in North Germany alone, with similar records from this and other countries. The fact that sporadic cases of trichinosis are commonly overlooked is well illustrated by the remarks of Professor Osler in his article on the clinical features of this disease, in which he states: "Until quite recently I have had no clinical experience with this disease, having seen to recognize but one case in Traube's Clinic in Berlin, in 1873. The probability is, of course, that in a hospital service of more than twenty years, I have frequently overlooked cases, just as might have been done in three or four of the cases here reported." These remarks of Professor Osler may, I believe, with propriety be applied to most of us. We doubtless have seen in times gone by cases of sporadic or family trichinosis which we have diagnosed and treated as cases of rheumatism, grippe or typhoid fever, trichinosis bearing more than a superficial resemblance to all these diseases.

Owing to the careful observations of Dr. Thomas R. Brown of John Hopkins Hospital, who declares that in trichinosis there is an enormous increase of eosinophiles in the blood, we now possess a very simple means of diagnosis which will enable us in most if not all instances to recognize this hitherto obscure disease. Dr. Brown's first contribution on this subject was published in the *Bulletin of the Johns Hopkins Hospital* for April, 1897, and was entitled "Studies in Trichinosis." He reports his observation of the condition of the blood in his first case of trichinosis, in which he found a gradual rise of the proportion of eosinophiles to sixty-eight and two-tenths per cent., thirty-five per cent. higher than any previous record, and from this point a gradual decline to sixteen and eight-tenths per cent. on the patient's discharge. A coincident depression of the polymorphonuclear neutrophiles occurred, reaching at one time six and six-tenths per cent., while for two weeks these forms showed an absolute decrease in the blood notwithstanding the marked leucocytosis, reaching on some occasions about 30,000 per cubic millimeter. Dr. Brown's second contribution on this subject, entitled, "Studies in Trichinosis," appeared in the *Journal for Experimental Medicine,* Vol. III., No. 3, 1898, and referred especially to the increase of eosinophiles in the blood and muscles, the origin of these cells, and their diagnostic importance. Here he reports in full his first case, together with two new ones, and from the study of the blood draws the following conclusions:

First, there is a marked increase in the percentage of eosinophile cells in the blood in trichinosis.

Second, this increase may be used as a diagnostic sign in this disease.

Third, this disease in its sporadic form is more common than has hitherto been supposed as shown by the discovery of the three cases above described within a comparatively short time at the Johns Hopkins Hospital.

Fourth, a systematic examination of the blood should be undertaken in cases in which there are indefinite intestinal, muscular or articular symptoms, in the hope that in some, at least, of the hitherto doubtful cases a diagnosis may be reached.

The discovery by Dr. Brown of the presence in trichinosis of an eosinophilia of a higher grade than in any other known condition is one of the most valuable contributions to medical science, being second only in importance to that of Zenker. These observations of Brown have recently been verified by Cabot, Gwyn, Atkinson, Stump,

Blumer and Neuman. In Cabot's case a differential count of the leucocytes showed 27 per cent. of eosinophiles; in the case of Gwyn the percentage of eosinophiles was between 33 and 66 per cent.; in Atkinson's case it reached 58 per cent., and in the case of Stump, 52 per cent. of eosinophiles were found. In each of the nine cases reported by Blumer and Neuman the highest average percentage of eosinophiles was respectively 40.6 per cent., 41.5 per cent., 36 per cent., 33 per cent., 46 per cent., 39.4 per cent., 50.4 per cent., and 20 per cent.

Case I. My first case presented the following history. Sidney V., aged thirteen years. Entered Samaritan Hospital November 8, 1899. His family and personal history is of no special interest in relation to his present condition, which began November 1, 1899, when he noticed that his face was swollen, that he was breathless on exertion; his feet felt heavy and swollen; he had severe pains in his eyeballs; he was feverish and chilly, and had lost all desire for food. Could elicit no history of gastro-intestinal disturbance. He stated that he had eaten during the past six months quantities of *blutwurst* and that his father and brother had also eaten of it and had suffered from pains and soreness of the muscles of the arms and legs. *Present condition*: Patient's height, five feet; weight 100 pounds; appears very anemic. The face, especially about the upper and lower eyelids and over the malar prominences, was distinctly swollen. Tongue heavily coated; mucous surfaces pale; no stiffness or tenderness of tongue; larynx not at all tender on manipulation. Slight tenderness of bodies of biceps and calf muscles; muscular movements were not attended by soreness; nerve trunks not tender; no tenderness of bones or joints; slight puffiness over tibiæ. Heart apex in normal position, sounds normal, no adventitious sounds; lungs negative; liver dulness normal; spleen not enlarged; abdomen not tympanitic or tender; no rose spots. On the part of the nervous system nothing abnormal was found save slight diminution of the patella tendon reflexes. Pulse regular, full, rate 110. Temperature 102° F. Urine (24 hour specimen): specific gravity, 1008; alkaline in reaction; 480 grains of urea per ounce. No albumin, sugar, casts, blood or pus; distinct diazo reaction.

Before entering the hospital he had been treated as an out-patient at another institution where the diagnosis of valvular disease with dropsy was made. My attention was directed to the patient through the courtesy of my colleague, Dr. James P. Marsh, in whose service he was and who had made no diagnosis but recognized the fact that he had never before seen a similar case. The peculiar location of the swelling about the face and especially the eyelids, the slight muscle tenderness, the entire absence of signs of disease in any of the organs, together with the history of having eaten during a long period of *blutwurst*, consisting as it does of coagulated blood with small chunks of pork, brought to mind at once the fact that we probably had to deal with a case of sporadic or family trichinosis, and I suggested an immediate microscopic examination of the blood, which was carried out by Dr. Becker, the house physician, who found an enormous increase of eosinophiles, these being easily recognized at a glance beneath the microscope in freshly drawn blood. A careful differential count was then made of 1000 leucocytes, after having been stained with Ehrlich's tri-acid mixture, with the following results: 773 eosinophiles, 124 small lymphocytes, 49 large lymphocytes and transitionals, 54 polymorphonuclear leucocytes, hemoglobin 65 per cent. Widal reaction absent. This was truly an enormous increase of the eosinophiles, there being 77 per cent., together with a remarkable decrease of the polymorphonuclear leucocytes. For the purpose of confirming the diagnosis Dr. Ferguson removed some muscular tissue from the biceps of the left arm and right gastrocnemius muscle. The tissue was examined in the fresh state after having been teased, without finding the trichinæ, though their workings were evident as several granular areas were seen together with longitudinal and transverse splitting of the muscle fibers. The remainder of the muscle tissue was sectioned after hardening in absolute alcohol and embedding in celloidin and was stained with hemotoxylin and eosin. In several sections non-encapsulated trichinæ were found lying coiled up in characteristic granular areas of myositis. Many muscular fibers were found split both transversely and longitudinally. The connective tissue between the primitive muscle bundles was slightly increased. All these changes were marked only in close proximity to the position of the areas of granular degeneration.

On November 28th a differential count of 500 leucocytes showed 37.6 per cent. polymorphonuclear; 7.7 per cent. small mononuclear; 1.9 per cent. large mononuclear; 52.6 per cent. eosinophiles.

Case II. W. W., aged 42 years. The father of the former patient came into the Samaritan Hospital November 14, 1899. He was a painter by occupation. Never had been ill since childhood, save eight years before, when he had an attack of painter's colic. Since early spring, in common with his son, he had been eating large quantities of *blutwurst*. Three months before was taken ill with chills, fever, cramps in stomach, severe headache and pains and aches all over the body. He consulted a physician, who told him he had malarial fever and treated him for several days. In a short time diarrhea supervened and has continued ever since. The pains and soreness in the muscles of the arms and legs have remained until the present time, although must less in intensity than at first. He complains of the muscles being tender, especially those of the arms and the hamstrings of the legs. These muscles frequently cramp after which the arms and legs feel numb.

The patient was a moderately well-nourished man, five feet six inches in height and weighed 150 pounds. He walked unassisted to the hospital. His face was slightly swollen about the malar eminences, but no edema existed about the eyes. His tongue was coated and his breath was very foul. He was pale but much less so than his son. There was no swelling of the legs. The biceps, hamstrings and calf muscles were quite tender, especially at the junction of the tendons with the bodies of the muscles. No nerve tenderness existed; no evidence of wrist drop; reflexes normal; movement of joints unattended by pain. When patient first became indisposed muscular movements created great pain. Examination of the thoracic and abdominal organs elicited nothing abnormal. Urinary examination negative; no diazo reaction; pulse 76, regular, full and strong; temperature 99.5° F.

Examination of freshly drawn blood showed a marked eosinophilia which evidently was not as great as in the first case. Differential count of 500 leucocytes gave the following result: Polymorphonuclear, 49 per cent.; small mononuclear, 10 per cent.; large mononuclear, 8 per cent.; eosinophiles, 31.9 per cent. Widal reaction absent. On November 22, 1899, Dr. Ferguson excised a small portion of the right biceps muscle, sections of which were examined in the usual manner, but without trichinæ being discovered, although a few granular areas of myositis were found.

Case I. is very interesting because of the entire absence of gastro-intestinal symptoms, such as vomiting, colic or diarrhea, and of general muscular pains. The only severe pains from which he suffered were provoked by movements of the eyeballs. But one characteristic objective symptom was present, namely, swelling of the face and eyes and the puffiness over the region of the tibiæ. The case certainly was atypical, and belonged to the type described by Rentz as insidious trichinosis, its true nature only being disclosed by a study of the blood, which showed an enormous eosinophilia, with a corresponding reduction of the polymorphonuclear neutrophiles and led to the excision of the muscles, with the result of finding numerous non-encapsulated trichinæ together with the pathological changes in the muscles excited by their presence.

The clinical history of Case II. was rather typical of a very mild type of trichinosis. The recurring chills, the fever, cramps in the stomach and diarrhea followed by severe headache and pains and aches all over the body, with soreness and tenderness of the muscles, all pointed to trichinosis. All of these symptoms could, however, have been easily counterfeited by those of grippe or by an erratic type of rheumatism, and this error could more easily have been committed owing to the general appearance of the patient and from the fact that he did not appear ill and was able to walk about the ward during his short stay in the hospital. But here again the blood examination cleared up all doubt by showing a decided increase of eosinophiles. Although we were unable to find the trichinæ in the muscles, a few sections showed the characteristic changes incident to their presence.

These two cases, then, illustrate very clearly the great assistance rendered by a careful examination of the blood in establishing the diagnosis of trichinosis and are entirely confirmatory of the results of Dr. Brown's painstaking study of the condition of the blood in the peripheral circulation in this disease.

Since the publication of Dr. Brown's original article on the value of eosinophilia in establishing the diagnosis of trichinosis fourteen additional cases have been recorded, making with the two herein reported, nineteen, in all of which number, owing to the discovery of a marked eosinophilia in the peripheral circulation a presumptive diagnosis of trichinosis was made to be in most instances confirmed by actually finding living trichinæ together with areas of myositis from the muscle tissue removed from the patient.

Although eosinophilia is common in a number of other affections, notably, asthma, leukemia, chronic eczema, pemphigus, psoriasis, sarcoma of bones, poliomyelitis, and in certain individuals infected by some forms of intestinal parasites, it is an interesting fact that the eosinophiles are not at all increased in any of the diseases likely to be confounded with trichinosis, such as typhoid fever, grippe, rheumatism or malarial fever. Hence the great value of the presence of a natural increase in number of eosinophiles in the blood, in aiding to establish the diagnosis of trichinosis.

In Memoriam.

EDWARD ROBINSON SQUIBB, M.D.*

BY JOHN D. RUSHMORE, M.D.
Brooklyn, N. Y.

Dr. Edward R. Squibb was born in Wilmington, Delaware, July 4, 1819. His medical education was received in Philadelphia at the Jefferson Medical College, and from this institution he was graduated in 1845. He began his medical career as a surgeon in the United States Navy, and those who knew him well can recall with pleasure the relation of his experiences on shipboard. To the end of his life he loved the sea, and no form of relaxation was enjoyed more or was more beneficial to him than an ocean voyage. In 1853 he was acting as surgeon in charge of the Naval Hospital in Brooklyn. He had at that time reached in line of promotion the position of Passed Assistant-Surgeon. About 1863 he resigned from the Navy, and failing to receive from the Government sufficient funds to carry on the investigations and work necessary for the manufacture of pharmaceutical preparations, of which the Government was in need, he established a private laboratory and, to quote from

*Read before the Kings County Medical Association, December 11, 1900.

the *Medical News,* "began what has been one of the most valuable life-works that this country has known in the history of medicine, for it was medicine itself of which he was master. A chemist and a physician he was, but with all the keen desire of the true scientist to discover remedies and of the doctor to apply them to human ills. 'Instead of practising at the bedside with the drugs the names of which he had learned in his medical books, he studied the drugs themselves chemically, physiologically, therapeutically, and sent them out to his brother practitioners in such form that the whole country, in fact, the profession of the round world accepted his dictum, and made his name the standard mark for purity and accuracy in pharmaceutical preparations."

It is fitting that the Kings County Medical Association should do all honor to his memory. He was one of its founders, and in the defense of the principles on which it is based he took a leading part nearly twenty years ago, when with many others he withdrew from the New York State Medical Society and subsequently formed the New York State Medical Association, of which this body is an integral part. He was a man of strong convictions; but no better evidence of his freedom from any strain of intolerance or prejudice can be furnished than his modest and temperate but firm defense of what at that time he thought was right; and his quiet accuracy of statement then, as always, was as far as possible from the blustering confidence that characterizes the support of a prejudice. The position which he took and maintained so sturdily alienated no man's affectionate regard for him, and some of those that differed from him then bore willing testimony to his worth by their presence at the funeral service which in its simplicity accorded wth his own wish. He was a member of the New York State Medical Association, Kings County Medical Association, Metropolitan Museum of Art, the Philosophical Society of Philadelphia, and many other societies of like character.

His death, the immediate cause of which was cardiac dyspnea, occurred on the evening of October 25, 1900, at his home. The following extract from an obituary notice published in the daily press is a touching and worthy tribute to his character:

"The death of this well-known maker of medicines is the removal of a sturdy character, a fine thinker, an eminent chemist and a strong, clear personality. Science, philanthropy, religion and citizenship have lost a bulwark and an ornament in him.

"He was a great power in Brooklyn—out of sight. He never advertised. He never made addresses. He wrote only within the lines, on the subjects and for the members of his own profession. He abhorred publicity or praise. Yet his influence on medicine, on medical thought, on medical practitioners and sympathetically on public health was not unlike that of the Gulf Stream on climate or of the Nile on soil. Men and women lived, labored, died and won renown here, who never knew of him. But those who knew Brooklyn to its elements, to its foundations, who knew medicine to its causes and beginnings, knew that this quiet, true, diligent man, this incarnated conscience and this great embodied capacity was veritably a genius, truly a world benefactor, one whom the giants and the literature of medicine around the earth held in almost worshipful veneration.

"He was a martyr as well as marvel of science. Over a generation ago his devotion to his calling subjected him to injuries from an explosion by which his life was long in danger, his sight long threatened and his visage permanently and sadly marred. The latter misfortune was the only one that did not pass away. He bore it with dignity, philosophy and fortitude. It increased his congenital aversion to public occasions, but it, by reflex action, sweetened to him the society of friends and the comforts of literature and thought. It in nothing affected him, except to confirm and augment his faith in the Divine Goodness, giving, as it did, to him, a cross to bear which he bore in the spirit and love of the Master. To those aware of the causes and of the ordeal, this affliction made his career replete with the power of pathos and eloquent with the pathos of power.

"Long ago a wave of adversity rolled over and prostrated this extraordinary man. His medical brethren quietly put him on his feet, with a love gift that enabled him to start the world again. His rehabilitation was essential to their sense of security in their own work. Their gift to him was a debt, they felt, not a gift and not a loan. Not so felt he. As soon as he could he returned it all with interest to the full. He would owe no man anything even by implication. His exquisite act of honor has been within the knowledge of the descendants of those to whom it was tendered, for over a generation. It is permitted to tell it now that he is dead. Said Gœthe: 'The Spirit in which we work is the chief matter.' The spirit in which E. R. Squibb worked was worthy of the best ideals of duty and of consecration to humanity."

THE SECRETARIES of County Associations are requested to immediately communicate the names of newly elected members and their addresses to the Secretary of the State Medical Association, Dr. F. H. Wiggin, 55 West 36th street, New York City, in order that they may be added to the mailing list of the JOURNAL.

* * *

A SILVER LOVING CUP of beautiful design was recently presented to Dr. Frederick Holme Wiggin by a number of members of the New York County Medical Association in token of their high appreciation of the valuable services he has rendered the Association as its presiding officer.

Transactions.

THE NEW YORK STATE MEDICAL ASSOCIATION

Seventeenth Annual Meeting, Held at New York, October 15-18, 1900.

The President, E. D. Ferguson, M.D., of Troy, in the Chair.

First Day, Monday, October 15th.

The Council met at 9:30 A. M. and transacted routine business, a report of which was afterward presented to the Council and Fellows. The Council was constituted as follows:

First or Northern District: Charles H. Glidden, M.D., Vice-President, Little Falls, Herkimer Co.; Douglas Ayres, M.D., (1900), Fort Plain, Montgomery Co.; Charles Munger, M.D., (1901), Knoxborough, Oneida Co. Counties: Franklin, Fulton, Hamilton, Herkimer, Jefferson, Lewis, Montgomery, Oneida, Oswego, St. Lawrence.

Second or Eastern District: E. D. Ferguson, M.D., President, Troy, Rennselaer Co.; Crawford C. Fritts, M.D., (1900), Hudson, Columbia Co.; E. M. Lyon, M.D., (1901), Plattsburg, Clinton Co. Counties: Albany, Clinton, Columbia, Essex, Greene, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington.

Third or Central District: John M. Farrington, M.D., Vice-President, Binghamton, Broome Co.; Leroy J. Brooks, M.D., (1900), Norwich, Chenango Co.; W. L. Ayer, M.D., (1901), Owego, Tioga Co. Counties: Broome, Cayuga, Chemung, Chenango, Cortland, Delaware, Madison, Onondago, Otsego, Schuyler, Seneca, Tioga, Tompkins.

Fourth or Western District: William H. Thornton, M.D., Vice-President, Buffalo, Erie Co.; DeLancey Rochester, M.D., (1900), Buffalo, Erie Co.; Morris W. Townsend, M.D., (1901), Bergen, Genesee Co. Counties: Alleghany, Cattaraugus, Chautauqua, Erie, Genesee, Livingston, Monroe, Niagara, Ontario, Orleans, Steuben, Wayne, Wyoming, Yates.

Fifth or Southern District: Julius C. Bierwirth, M.D., Vice-President, Brooklyn, Kings Co.; Charles E. Denison, M.D., (1900), New York, New York Co.; Frederick H. Wiggin, M.D., (1901), New York, New York Co.; M. C. O'Brien, M.D., Secretary, New York, New York Co.; Edward H. Squibb, M.D., Treasurer, Brooklyn, Kings Co.; John W. S. Gouley, M.D., New York, New York Co.; Joseph D. Bryant, M.D., New York, New York Co. Counties: Dutchess, Kings, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Sullivan, Ulster, Westchester.

The Council and Fellows met in Hosack Hall of the New York Academy of Medicine at 10:40 A. M. The following Fellows were present:

Drs. Joseph D. Bryant, Douglas Ayres, Charles Munger, Crawford C. Fritts, E. M. Lyon, Leroy J. Brooks, W. L. Ayer, DeLancey Rochester, Morris W. Townsend, Charles E. Denison, Frederick Holme Wiggin, Seymour S. Richards, William B. Reid, William B. Sabin, Thomas L. Wilson, M. B. Hutton, Lyman G. Barton, William Finder, Jr., Frank J. Sherman, William J. Hunt, George F. Comstock, Thomas E. Bullard, Douglas C. Moriarta, Theron A. Wales, H. D. Didama, Thomas D. Strong, Carlton C. Frederick, Alvin A. Hubbell, Bernard Cohen, C. A. Wall, William M. Bemus, Robert Menzie, Arthur G. Bennett, A. G. Ellenwood, J. H. Sackrider, Thomas J. Acker, Edward F. Brush, Norton J. Sands, Henry Van Hoevenberg, Frank Overton, Walter Lindsay, Norman B. Bayley, Milton C. Connor, William D. Granger, John A. Wyeth, Willy Meyer, John W. Wainwright, Hiram N. Vineberg, Alfred B. Tucker, Wisner R. Townsend, Parker Syms, Stephen Smith, J. W. Draper Maury, Henry M. Silver, John Shrady, John J. Morrissey, John T. Nagle, Francis J. Quinlan, James C. Mackenzie, John J. Quigley, Bennett S. Beach, H. Ernst Schmid, Samuel Alexander, Edwin Gaillard Mason, Robert Newman, Timothy N. Holden, H. Seymour Houghton, M. L. Maduro, Walter W. Palmer, James A. Meek, Charles E. Nammack, George W. Beers, Heinrich Stern, James Moran, George B. Hope, Monta W. Jamison, Albertus A. Moore, John C. Schminke, Ogden C. Ludlow, William M. Leszynsky, S. Adolph Knopf, Joseph E. Janvrin, Joseph E. Messenger, Neil J. Hepburn, Thomas F. Reilly, E. Eliot Harris, W. Travis Gibb, Frederick P. Hammond, Jean F. Chauveau, John E. Erdmann, A. Palmer Dudley, Ellery Denison, Eden V. Delphey, J. Riddle Goffe, Robert N. Disbrow, Frederick S. Cowles, Charles E. Quimby, S. Carrington Minor, Abram Brothers, Frederick A. Baldwin, David P. Austin, Robert Abrahams, E. Busby Allen, Hubert Arrowsmith, L. Grant Baldwin, William H. Biggam, Arthur C. Brush, Charles P. Gildersleeve, James C. Hancock, Joseph F. O'Connell, Edwin Reynolds, Frank C. Raynor, Herman C. Riggs, Henry M. Smith, Herman C. O. Steinke, George H. Treadwell, J. Scott Wood, Louis L. Seaman, and Robert C. Davis.

After calling of the roll of Fellows and Alternates the President delivered an address on "Needs of the Association." The Secretary announced that the Report of the Council had already been printed and circulated. The detailed report of the Treasurer was referred to a Committee on Audit. Dr. Wickes Washburn presented the Report of the Committee on Public Health, which was accepted. Dr. E. Eliot Harris presented the Report of the Committee on Legislation. Dr. Harris said that as Dr. Nelson H. Henry, Chairman of the Committee on Public Health in the Assembly, had rendered such valuable services to the Committee on Legislation of the State Association he moved that the Council

be authorized to suitably recognize Dr. Henry's services. Carried. Dr. J. W. S. Gouley presented an epitome of the Report of the Library Committee. Dr. S. A. Knopf presented the Report of the Committee on the Preparation of a Leaflet on Consumption. Dr. F. H. Wiggin presented the Report of the Committee on Reorganization, which was received. Dr. Rochester moved to take up the by-laws, article by article, and section by section, and discuss and vote upon them. Carried. After discussion it was moved that an adjournment be declared until 2 P. M. Carried.

The Council and Fellows reconvened at 2 P. M., Dr. Ferguson in the Chair. Dr. Rochester moved that the matter of the by-laws be referred to a committee consisting of the previous committee on by-laws and of five more, to be appointed by the Chair, to report back at 4 P. M. Seconded. Dr. A. A. Hubbell, of Buffalo, moved to amend by making the time 10 o'clock the following morning. Carried. The following additions to the original committee were then announced: Dr. S. French (1st District), Dr. D. Moriarta (2nd District), Dr. H. D. Didama (3rd District), Dr. DeLancey Rochester (4th District), Dr. Stephen Smith (5th District), Dr. E. D. Ferguson.

Second Day, Tuesday, October 16th.

The Association was called to order by the President at 10 A. M.

Dr. Rochester moved that the charter as provided by the Act of the State Legislature be accepted by the New York State Medical Association. Carried. A recess was then taken, subject to the call of the Chair. A meeting of the Council and Fellows was then called by the President. The proposed by-laws were discussed, section by section, and on motion of Dr. M. C. O'Brien were finaly adopted as a whole as amended (see page 18).

The Association reconvened at 11:45 A. M. Sir James Grant, of Canada, was presented to the members and was given a very cordial reception. The Report of the Committee on Arrangements was then received and accepted.

Dr. Rockwell, of New York, then read a paper on "The Analogy between the Nervous Conductibility and the Electric Conductibility and their Relations to Functional Neuroses." Dr. James J. Walsh, of New York, followed with a paper on "Heart Complications in Rheumatism."

Afternoon Session.

The session was called to order at 2 P. M. and was devoted to a Symposium on Obstetrics. The following papers were read:

"Treatment of the Patient During the Weeks Preceding the Expected Confinement," by Edward P. Davis, M.D., of Philadelphia.

"Management of Normal Labor, Including the Use of Forceps," by Austin Flint, Jr., M.D., of New York.

"After-Treatment of the Child in Normal Cases," by Bernard Cohen, M.D., of Buffalo.

"After-Treatment of the Mother in Normal Cases," by George W. Jarman, M.D., of New York.

"Ophthalmia Neonatorum; Its Pathology, Prophylaxis and Treatment," by John E. Weeks, M.D., of New York.

"The Major Obstetrical Operations from the Standpoint of a General Practitioner," by Edward Reynolds, M.D., of Boston.

"Puerperal Sepsis; Its Pathology and Treatment," by William R. Pryor, M.D., of New York.

Evening Session.

The meeting was called to order at 8:15 by the President and was devoted to a Symposium on the Blood. The following papers were read and discussed:

"Technique of Blood Examination," by Edward K. Dunham, M.D., of New York.

"Leucocytosis in Relation to Surgical Diagnosis," by Joseph C. Bloodgood, M.D., of Johns Hopkins' University, Baltimore.

"Pernicious Anemia," by Prof. Alfred Stengel, M.D., of the University of Pennsylvania, Philadelphia.

"Leukemia, by C. W. White, M.D., of Philadelphia.

"Parasites in the Blood," by Leon T. LeWald, M.D., of New York.

"The Value of Blood Examination in the Diagnosis of Trichinosis, with a Report of Two Cases," by H. C. Gordinier, M.D., of Troy.

Third Day, Wednesday, October 17th.

The meeting of the Council and Fellows was called to order at 9:45 A. M. The Committee on Nominations presented the following report: For president, Dr. John A. Wyeth, of New York County; for vice-president, Dr. A. A. Hubbell, of Erie County; for secretary, Dr. Frederick Holme Wiggin, of New York County; for treasurer, Dr. E. H. Squibb, of Kings County.

For district presidents, to act until their successors are chosen: First District, Dr. Charles B. Tefft, of Onondago County; Second District, Dr. John T. Wheeler, of Columbia County; Third District, Dr. Theron A. Wales, of Chemung County; Fourth District, Dr. W. H. Thornton, of Erie County; Fifth District, Dr. J. C. Bierwirth, of Kings County.

Standing Committees: On Arrangements, Dr. Irving S. Haynes, of New York, Chairman; on Legislation, Dr. E. Eliot Harris, of New York, Chairman; on Library, Dr. J. W. S. Gouley, of New York, Chairman; on Public Health and Medical Charities, Dr. Stephen Smith, of New York, Chairman; on Nominations, Dr. C. A. Wall, of Erie County, Chairman; on Publication, Dr. James Hawley Burtenshaw, of New York, Chairman.

On motion of Dr. Rochester this report was received and the Secretary was authorized to cast an affirmative ballot for the candidates named.

Dr. Wiggin moved that the Committee on Publication be instructed to continue another year in its present form the publication of the Medical Directory of New York, New Jersey and Connecticut, provided the Committee could be sure that it would not be held for damages at law. Carried.

Dr. C. A. Wall gave notice of the following proposed amendment to the by-laws, to be acted upon at the next annual meeting: "Article II. Section 10. The Council shall employ an attorney to represent the Association in all cases of suits for alleged malpractice or other matters affecting the professional status of its members and to prosecute alleged violators against the laws governing medical practice or health. In necessary cases the Council may assume all costs of legal services necessary for the conducting of such defence or prosecution."

The meeting of the Council and Fellows adjourned at 10:25 A. M. and the Association was called to order.

Dr. Chauncey P. Biggs, of Ithaca, read a paper on "An Epidemic of Diphtheria Traced to a Milk Supply."

The President interrupted the order of business at this point to introduce Dr. C. A. L. Reed, of Cincinnati, the President of the American Medical Association.

Following a short address by Dr. Reed, papers were read on the following subjects:

"Management of Diphtheria in Small Cities from a Bacteriological Standpoint," by Professor Veranus A. Moore, of Cornell University.

"The Tonsils as Portals of Infection," by Julius Ullman, M.D., of Buffalo.

"Report of Some Interesting Cases of Infectious Disease," by DeLancey Rochester, M.D., of Buffalo.

"Present Status of Jonnesco's Operation," by Marcel Hartwig, M.D., of Buffalo.

"Treatment of Pulmonary Tubercuolsis, with Special Reference to the Climate of Arizona," by Clarence G. Campbell, M.D., of New York.

The President of the Association then delivered the presidential address, which was entitled, "The Surgical Management of Umbilical Hernia with Large Rings."

The following delegates from other societies were then introduced: Dr. J. Solis-Cohen, Dr. W. H. Dudley and Dr. S. M. Green, of Pennsylvania; Dr. E. W. Silvers, of New Jersey; Dr. B. B. Foster and Dr. S. P. Warren, of Maine; and Dr. W. M. Curtiss, of Connecticut.

Afternoon Session.

The meeting was called to order at 2 P. M.

The following papers were read in a Symposium on Tuberculosis:

"Tuberculosis, Its General Etiology, General Pathology and Prophylaxis," by Prof. Victor C. Vaughan, of the University of Michigan.

"The Diagnosis and Treatment of Laryngeal Tuberculosis," by Jonathan Wright, M.D., of Brooklyn.

"Tuberculosis of the Eye; Its Differential Diagnosis, Pathology and Treatment," by Charles Stedman Bull, M.D., of New York.

"The Pathology, Diagnosis, Special Prophylaxis and Treatment of Tuberculosis of the Ear," by Seymour Oppenheimer, M.D., of New York.

"Acute Tuberculosis of the Mesentery Lymph Nodes," by Prof. Maurice H. Richardson, of Harvard University.

"The Surgical Treatment of Urinary and Uro-Genital Tuberculosis," by Samuel Alexander, M.D., of New York.

"The Pathology, Diagnosis, Special Prophylaxis and Treatment of Tuberculosis of the Bones and Joints," by E. H. Nichols, M.D., of Boston.

"Pathology, Diagnosis, Special Prophylaxis and Treatment of Tuberculosis of the Skin," by A. Fordyce, M.D., of New York.

"The Pathology, Diagnosis, Special Prophylaxis and Treatment of Tuberculosis of the Female Pelvic Organs," by Prof. John G. Clark, of the University of Pennsylvania.

Fourth Day, Thursday, October 18th.

The meeting was called to order at 10:25 A. M. The following papers were read:

"The Treatment of Ichthyosis Hystrix by Electric Light," by George W. Goler, M.D., of Rochester.

"The Differential Diagnosis in Ectopic Gestation, with Special Reference to Early Abortion," by Hiram N. Vineberg, M.D., of New York.

Afternoon Session.

A paper was read by Dr. John A. Wyeth, of New York, on "Amputation at the Hip Joint; A Report of 200 Cases in which the Author's Method of Hemostasis was Employed."

After a discussion of this paper, the President of the Association delivered his farewell address. The President-elect, Dr. John A. Wyeth, responded in a few well-chosen words. The following papers were then read:

"Report of Three Cases of Intestinal Obstruction Due to Meckel's Diverticula," by John F. Erdmann, M.D., of New York.

"Intraspinal Cocainization for the Production of Surgical Anesthesia," by S. Ormand Goldan, M.D., of New York.

"The Technique of Bloodless Work," by R. H. M. Dawbarn, M.D., of New York.

"Operative Treatment of Symblepharon by the Use of Thiersch Grafts," by Wilbur B. Marple, M.D., of New York.

The Seventeenth Annual Meeting of the Association was then declared adjourned.

CHARTER
OF
THE NEW YORK STATE MEDICAL ASSOCIATION.

(Granted April 14, 1900.)

AN ACT

to charter "The New York State Medical Association" for the purpose of the cultivation and advancement of the science of medicine, the promotion of public health, and the establishment of a death-benefit fund for the dependents of its members.

(Chapter 452 of the Laws of 1900.)

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Organization.

SECTION 1. There shall be established by the physicians and surgeons named in Section 6 of this Act an organization styled "The New York State Medical Association," in one corporate body, for the purpose of the cultivation and advancement of the science of medicine, the promotion of public health, the establishment of a death-benefit fund for the dependents of its members, the maintenance of the honor and character of the medical profession and the establishment and furtherance of cordial professional relations and fellowship between the medical profession of the State of New York and the medical profession of other States of the United States and of foreign countries, through the medical associations and societies of such States and countries.

Legal Rights.

SEC. 2. "The New York State Medical Association" may and shall have perpetual succession, shall be capable of suing and being sued, of pleading and being impleaded, answering and being answered unto, defending and being defended, in all courts and in all causes whatsoever, and shall and may have a common seal which may be altered or renewed at the pleasure of the said Association.

SEC. 3. "The New York State Medical Association" may purchase, receive, hold and convey personal or real property and receive bequests and devises of personal or real property by will for an amount not exceeding one hundred thousand dollars.

Death-Benefit Fund.

SEC. 4. "The New York State Medical Association," reconstituted by virtue of this Act, may, in its discretion, establish for its members a death-benefit fund, and may include in its by-laws an article governing the establishment and distribution of the said death-benefit fund, and may form district branches and subordinate county associations in the State of New York.

Governing Body.

SEC. 5. The superintendence and management of "The New York State Medical Association," reconstituted by virtue of this act, shall be vested in a body known and styled the Council and Fellows of "The New York State Medical Association," which body shall have power to make and prescribe by-laws that shall govern its officers, Council, Fellows and members; to establish the conditions of admission, dismission and expulsion of its members; to determine the amount of the annual dues and also to impose assessments from time to time on its members; to collect such dues and assessments by suit or otherwise; and to receive, hold, invest, or otherwise dispose of all moneys or other properties belonging to the said "The New York State Medical Association," and in general to make such by-laws, rules and regulations for the proper government of the Association and of its branches and subordinate county associations as are not repugnant to the laws of the United States or of the State of New York.

Charter Members.

SEC. 6. The charter members of "The New York State Medical Association," reconstituted by virtue of this Act, shall be the following-named physicians and surgeons residing in the State of New York: D. Ayres, J. C. Bierwirth, L. J. Brooks, J. D. Bryant, H. D. Didama, C. E. Denison, E. D. Ferguson, J. M. Farrington, C. E. Fritts, C. H. Glidden, G. W. Goler, J. W. S. Gouley, E. E. Harris, N. H. Henry, J. G. Hunt, F. W. Higgins, W. E. Johnson, E. M. Lyon, E. M. Moore, D. C. Moriarta, M. C. O'Brien, De Lancey Rochester, B. T. Smelzer, E. H. Squibb, W. H. Thornton, M. W. Townsend, T. A. Wales, F. H. Wiggin, and their associates, consisting of all members in good standing in "The New York State Medical Association" founded in eighteen hundred and eighty-four and reconstituted by virtue of this Act.

Primary Organization.

SEC. 7. The Council of "The New York State Medical Association" founded in eighteen hundred and eighty-four shall select the officers,

Council, Committees, and Fellows of "The New York State Medical Association," reconstituted by virtue of this Act, from its charter members, who shall serve until the close of the annual meeting to be held in the Borough of Manhattan, in the City of and County of New York, in the month of October, nineteen hundred. All subsequent annual meetings shall be held in the City of New York.

Qualifications of Members.

SEC. 8. No physician or surgeon shall be qualified as a member of "The New York State Medical Association" until he shall have signed its by-laws and paid his first annual dues.

Assessments and Dues.

SEC. 9. The several District Branch and subordinate County Associations shall pay to the Treasurer of "The New York State Medical Association" all such dues and assessments as from time to time shall be laid by the Council and Fellows of "The New York State Medical Association."

SEC. 10. This act shall take effect immediately.

BY-LAWS.

(Adopted October, 1900.)

ARTICLE I.

ORGANIZATION.

Composition.

SECTION 1. The New York State Medical Association shall be composed of resident, non-resident, corresponding, and honorary members.

Organization.

SEC. 2. The resident members shall constitute the active membership, and shall be organized into five (5) district branches and sixty-one (61) county associations.

Council.

SEC. 3. The Council shall consist of the officers of the Association.

Fellows.

SEC. 4. The Fellows shall be members specially chosen by the several county associations, to the number of one for every ten of their membership, to hold office for one year from the date of their election.

Officers.

SEC. 5. The officers shall be a President, a Vice-President, five (5) Vice-Presidents *ex-officiis,* a Secretary, a Treasurer and the Chairmen of the Standing Committees.

Committees.

SEC. 6. There shall be six (6) Standing Committees—namely, a Committee on Arrangements, a Committee on Legislation, a Committee on the Library, a Committee on Public Health and Medical Charities, a Committee on Nominations, and a Committee on Publication.

Term of Office.

SEC. 7. All officers, Fellows and members of Standing Committees shall hold office for one year from the date of their election or appointment or until their successors have qualified.

ARTICLE II.

DUTIES OF THE COUNCIL.

Executive Board.

SECTION 1. The Council shall be the Executive Board of The New York State Medical Association.

Meetings.

SEC. 2. The Council shall meet annually in the City of New York, on the third Monday in October, and immediately after the adjournment of each annual meeting of the Association, and at such other times and places as the President may direct; and the President shall call special meetings at the written request of five (5) members.

Quorum.

SEC. 3. Seven (7) members shall constitute a quorum.

Delegates.

SEC. 4. The Council shall appoint all Delegates to the societies of other States, and of foreign countries.

Attorney.

SEC. 5. It shall be the duty of the Council, when necessary, to employ an attorney or counsellor at law who shall appear in all legal matters for and on behalf of The New York State Medical Association.

Defense and Prosecution.

SEC. 6. Whenever it shall seem that it would probably be wise to institute associated defense in suits for malpractice, the Council and Fellows

shall formulate a plan therefor and submit it at an annual meeting of the Association, said plan, on adoption by the Association, to form and become a part of these by-laws; but notice of such plan must be given in the programme of the meeting at which it is to be considered. The Council shall have authority to take action in all matters in violation of the laws of medical practice and of public health, and may prosecute such alleged violators.

Board of Appeals.

SEC. 7. All appeals from decisions of District Branch Associations on questions of ethics and discipline shall be referred to and be adjudicated by the Council.

Death-Benefit Fund.

SEC. 8. It shall be the duty of the Council and Fellows to formulate a plan for a death-benefit fund when conditions seem favorable for action thereon and to submit the plan to an annual session of the Association.

Report.

SEC. 9. The Council, through its Secretary, shall present at the annual meeting of the Council and Fellows an annual report which shall include a statement of the investments, the condition of the funds of the Association, the disbursements for the current year and a record of all changes in membership.

ARTICLE III.

DUTIES OF THE COUNCIL AND FELLOWS.

Meetings.

SECTION 1. There shall be an annual meeting of the Council and Fellows in the City of New York, on the third Monday in October, following the meeting of the Council; and special meetings at such other times and places as may be determined by the Council and Fellows.

Quorum.

SEC. 2. Thirty-five (35) members shall constitute a quorum.

Rules of Procedure.

SEC. 3. All questions of order shall be determined in accordance with the rules of order and procedure laid down in Cushing's "Manual of Parliamentary Practices."

Order of Business.

SEC. 4. The order of business at the annual meeting of the Council and Fellows shall be as follows:

1. Calling the meeting to order.
2. Roll-call by the Secretary.
3. President's report on the needs of the Association.
4. Annual report of the Council.
5. Report of the Treasurer.
6. Reports of Standing Committees.
7. Reports of Special Committees.
8. Unfinished business.
9. New business.
10. Report of Nominating Committee.
11. Election of officers.
12. Reading of the minutes of the meeting and action thereon.

ARTICLE IV.

DUTIES OF OFFICERS.

President.

SECTION 1. The President shall preside at all meetings of the Council and of the Council and Fellows and of the Association. He shall appoint all committees or members of committees not otherwise provided for. At the annual meeting of the Council and Fellows he shall report the condition and needs of the Association, and shall deliver before the Association at its annual meeting an address upon some scientific subject at such time as may be determined by the Committee on Arrangements.

Vice-President.

SEC. 2. The Vice-President, at the request or in the absence of the President, shall temporarily perform the duties of President. In case of resignation, disability or death of the President, the Vice-President shall act as President until the next annual election of officers.

Vice-Presidents Ex-officiis.

SEC. 3. In the absence or disability of the Vice-President, the Vice-Presidents *ex-officiis* shall take office in the numerical order of their district branch associations.

Secretary.

SEC. 4. The Secretary shall make and preserve accurate minutes of the meetings of the Council and Fellows, and of the general and special meetings of the Association. He shall conduct the official correspondence of the Association, shall preserve all such correspondence, including copies of official letters written by him. The Secretary may nominate to the Council, for its action, an Assistant Secretary who shall be a stenographer and shall be under his direction and perform such secretarial and recording duties as

may be prescribed by the Secretary. The Council shall decide upon the compensation of the Assistant Secretary, who may be required to be present at meetings of the Council.

Treasurer.

SEC. 5. The Treasurer shall receive and disburse all funds of the Association under the direction of the Council and Fellows. He shall make an annual report to the Council and Fellows on the finances of the Association and on the names of delinquent members. He shall collect the dues of non-resident members.

Bond.

SEC. 6. The Treasurer shall be under bond to an amount fixed by the Council and Fellows.

ARTICLE V.

COMPOSITION AND DUTIES OF COMMITTEES.

Chairmen.

SECTION 1. The Chairmen of all Standing Committees shall be elective officers, and the other members, with the exception of the Committee on Nominations, shall be appointed by the Council.

SEC. 2. The Chairmen of Standing Committees shall make full reports at the annual meeting of the Council and Fellows of the work done by their respective committees during the year.

Meetings.

SEC. 3. Each committee shall hold at least one meeting annually, at which a majority of its members shall constitute a quorum, and shall make and preserve accurate minutes of all its proceedings.

Committee on Arrangements.

SEC. 4. The Committee on Arrangements shall consist of thirteen (13) members, including the Chairman and the President, Vice-President and Secretary, who shall be members *ex-officiis.*

SEC. 5. It shall be the duty of this committee to take entire charge of and to make all necessary arrangements for each annual meeting of the Association.

Committee on Legislation.

SEC. 6. The Committee on Legislation shall consist of five (5) members exclusive of the Chairman, one from each of the District Branches. It shall be the duty of this committee to inform itself of all proposed legislation in the Legislature of the State bearing on medical subjects, and to organize and carry into effect, subject to the approval of the Council, such plans intended to influence legislative enactment as it may deem for the best interests of the public.

Committee on the Library.

SEC. 7. The Committee on the Library shall consist of three (3) members including the Chairman, who shall be designated as the "Director of the Library." This committee shall have charge of the Library and of the contained property. The Chairman of this committee may appoint, as required, a Librarian, subject to the approval of the Council, at such salary as may be determined by the Council and Fellows.

Committee on Public Health and Medical Charities.

SEC. 8. The Committee on Public Health and Medical Charities shall consist of five (5) members exclusive of the Chairman, one from each District Branch. This committee shall be charged with the duty of investigating all matters relating to public health and of presenting to the Council and Fellows suggestions as to action to be taken by the Council in these matters.

Committee on Nominations.

SEC. 9. The Committee on Nominations shall consist of a Chairman and two (2) Fellows elected by each District Branch. It shall be the duty of this committee to present nominees for all elective offices at the annual meeting of the Council and Fellows until such offices shall be filled, and to present, as occasion requires, nominees for appointment by the President, to serve for the unexpired term for any office made vacant by resignation or death.

Committee on Publication.

SEC. 10. The Committee on Publication shall consist of a Chairman and four (4) members to be appointed by the Council. This committee shall have full charge of all publications of the Association, with power to determine what papers shall appear in the printed *Transactions* of the Association. No paper that has appeared in print or that has been read before any medical society previous to its presentation before the Association shall be published in the *Transactions.*

ARTICLE VI.

MEETINGS OF THE ASSOCIATION.

Annual.

SECTION 1. The Association shall hold an annual meeting in the City of New York, begin-

ning on the Tuesday following the third Monday of October, and special meetings at such times and places as may be determined by the Council and Fellows.

Special.

SEC. 2. Special meetings shall be called by the President on the written request of twenty-five (25) Fellows.

Order of Business.

SEC. 3. The order of business at the annual meeting of the Association shall be as follows:

1. Calling the Association to order.
2. Address of welcome by the Chairman of the Committee on Arrangements.
3. Special reports from the Council and Fellows.
4. Reports of Special Committees.
5. Special addresses.
6. President's address.
7. Reading and discussion of papers.
8. Installation of officers.
9. Adjournment.

ARTICLE VII.

DISTRICT BRANCHES.

SECTION 1. The sixty-one (61) counties of the State shall be grouped in five (5) districts, to be constituted and designated as follows:

Territorial Divisions.

The First or Northern District shall embrace the counties of Franklin, Fulton, Hamilton, Herkimer, Jefferson, Lewis, Montgomery, Oneida, Oswego and St. Lawrence.

The Second or Eastern District shall embrace the counties of Albany, Clinton, Columbia, Essex, Greene, Rensselaer, Saratoga, Schenectady, Schoharie, Warren and Washington.

The Third or Central District shall embrace the counties of Broome, Cayuga, Chemung, Chenango, Cortland, Delaware, Madison, Onondaga, Ostego, Schuyler, Seneca, Tioga and Tompkins.

The Fourth or Western District shall embrace the counties of Allegheny, Cattaraugus, Chautauqua, Erie, Genesee, Livingston, Monroe, Niagara, Ontario, Orleans, Steuben, Wayne, Wyoming and Yates.

The Fifth or Southern District shall embrace the counties of Dutchess, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Sullivan, Ulster and Westchester.

Organization.

SEC. 2. In each of these districts there shall be organized a District Branch Association of The New York State Medical Association, to be composed of the several County Associations and members residing in counties temporarily having no County Association.

Officers.

SEC. 3. The officers of each District Branch Association shall be a President, who shall be *ex-officio* a Vice-President of the State Association; a Vice-President, a Secretary and a Treasurer.

Committees.

SEC. 4. There shall be an Executive Committee in each District Branch Association composed of its officers and of the several Presidents of the component County Associations, and a Nominating Committee, composed of one member chosen from and by each of the component County Associations.

Duties of Officers.

President.

SEC. 5. The duties of the President and Vice-President shall be such as commonly pertain to those offices, and the President shall be required to make himself familiar with the character and quantity of work performed by the County Associations in his jurisdiction, and to report on their condition at the annual meeting of the District Branch Association.

Secretary.

SEC. 6. The Secretary shall perform the usual duties pertaining to that office and shall present an annual report of the proceedings of the District Branch Association to the Secretary of the State Association, and shall give therein the names of the Fellows and their Alternates and the members of the Nominating Committee of the State Association for his District Branch Association.

Treasurer.

SEC. 7. The Treasurer shall receive and disburse the funds of the Association (as hereinafter prescribed) under the laws regulating the distribution of fees and dues.

Duties of Committees.

SEC. 8. The Executive Committee shall be charged with the general mangement of the affairs of the District Branch Association, and shall hold at least one meeting annually, at which five (5) members shall constitute a quorum.

SEC. 9. The Nominating Committee shall present at the annual meeting a list of nominees for the several elective offices.

Annual Meeting.

SEC. 10. Each District Branch Association

shall hold an annual meeting during the month of May, June or July, at which shall be chosen by ballot two Fellows to serve as members of the Committee on Nominations of the State Association.

By-Laws.

SEC. 11. Each District Branch Association shall make its own by-laws in conformity with the charter and by-laws of The New York State Medical Association, and subject to the approval of the Council.

ARTICLE VIII.

COUNTY MEDICAL ASSOCIATIONS.

Charter Associations.

SECTION 1. All such County Medical Associations as shall have accepted the invitation of The New York State Medical Association to become its subordinates associations at the time these by-laws are ratified by the Council and Fellows of the State Association shall thereafter be the County Medical Associations contemplated in the charter for their respective counties.

Formation.

SEC. 2. When the members of any District Branch Association, residing in any county, are ten in number, they shall forthwith organize as the County Association of The New York State Medical Association for that county.

Officers.

SEC. 3. The officers of each County Association shall be a President, Vice-President, Secretary, and Treasurer, and any Association may have a Second Vice-President and a Corresponding Secretary.

Committees on Legislation, Public Health and Medical Charities.

SEC. 4. All Committees on Legislation or Public Health and Medical Charities of County Associations shall be associate committees of the corresponding committee of The New York State Medical Association.

Secretary.

SEC. 5. The Secretary of each County Association shall make an annual report to the Secretary of his District Branch Association, which shall contain the names of the Fellows and their Alternates and the member of the Nominating Committee of such Branch Association for his County Association.

Treasurer.

SEC. 6. The Treasurer shall receive and disburse the funds of the Association as hereinafter prescribed under the laws regulating the distribution of fees and dues.

Annual Meeting.

SEC. 7. Each County Association shall hold an annual meeting during the month of January, February, March or April, at which shall be chosen Fellows of the State Association to the number of one for every ten of the County Association membership, a corresponding number of Alternates, and one member of the Nominating Committee of the District Branch Association.

By-Laws.

SEC. 8. Each County Association shall make its own by-laws, which shall be in conformity with the charter and by-laws of The New York State Medical Association and subject to the approval of the Council.

ARTICLE IX.

MEMBERSHIP.

Eligibility.

SECTION 1. Physicians in good standing and resident in the State of New York shall be eligible for active resident membership in The New York State Medical Association. Physicians in good standing, resident in other States, shall be eligible for non-resident membership. Physicians of eminence residing in other States shall be eligible for corresponding membership, and in other countries, for honorary membership.

Application and Election.

SEC. 2. Application for resident active membership shall be made in prescribed form to the County Association in the county in which the applicant resides, or, when no such County Association exists, to the District Branch Association. The Council may elect members at the annual session when the application is approved by three (3) members of the Executive Committee of his District Branch Association, provided there is no County Association in the county in which the applicant resides.

Non-Resident, Corresponding, and Honorary Members.

SEC. 3. Upon nomination by two Fellows, non-resident members may be appointed by the Council after six months' notification. Corresponding and honorary members, not to exceed

two each during any one year, may be appointed by the Council at its annual meeting after nomination by three Fellows in writing at the preceding annual meeting.

Privileges of Members.

SEC. 4. Resident members shall have all the rights and privileges conferred by their respective County Associations and District Branch Associations. They shall be eligible to any office in the gift of the Association; shall be entitled to attend all meetings of the Council and Fellows, and shall receive all the protection, benefits and support conferred by the Association.

SEC. 5. Non-resident, honorary and corresponding members shall be privileged only to take part in the scientific meetings, programmes of which shall be sent to them, and they shall receive the *Transactions* of the Association.

Removal.

SEC. 6. When a member in good standing of a County Association removes to another county his name shall be transferred to the roll of members of the Association in the county of his new residence.

SEC. 7. When a member removes from the State of New York permanently he shall cease to be a member of The New York State Medical Association, and shall forfeit all right and title to any share in the privileges and property of the Association. If he shall send a written notice of his removal to the Secretary of his County Association (or District Branch Association) within thirty (30) days of such removal he may make application to the Council for non-resident membership.

Resignation of Members.

SEC. 8. When a member shall resign his membership he shall thereby forfeit all right and title to any share in the privileges and property of "The New York State Medical Association" or its subordinate divisions.

SEC. 9. No member shall be permitted to resign while owing dues or assessments or while he is under charges which may lead to his expulsion.

Expulsion of Members.

SEC. 10. When a member is expelled he shall thereby be deprived of all right and title to any share in the privileges and property of The New York State Medical Association.

Reinstatement of Members.

SEC. 11. When a former member applies for reinstatement he may be admitted to membership, provided that, if expelled for non-payment of dues, he makes good his indebtedness before he makes application for reinstatement.

ARTICLE X.

INITIATION FEES AND DUES.

Initiation Fees.

SECTION 1. On and after January 1, 1901, the initiation fee shall be five (5) dollars.

Dues.

SEC. 2. The annual dues of resident members of the State Association and of non-resident members shall be five (5) dollars. Corresponding and honorary members shall be exempt from the payment of initiation fees or dues.

Fines.

SEC. 3. All dues shall be payable on the first day of January of each year to the Treasurer of the County Association or of the District Branch when no County Association exists. If a member's dues remain unpaid three months he shall be fined one (1) dollar.

Collection of Dues.

SEC. 4. If, six months after the expiration of the time specified in Section 3, Article X., for the payment of dues, the dues, assessments and fines still remain unpaid without satisfactory excuse, the delinquent shall be dropped from the list of members of the State and subordinate Associations.

SEC. 5. On every bill for dues or assessments sent to members the Treasurer shall cause to be printed Sections 2, 3 and 4 of this Article.

Distribution of Dues.

SEC. 6. On or before the first day of October in each year the Treasurer of each County Association or District Branch Association shall pay to the Treasurer of the State Association the sum of five (5) dollars for each and every member who has paid his dues for that year, together with the fines and assessments due and paid.

ARTICLE XI.

ETHICS AND DISCIPLINE.

Ethics.

SECTION 1. The Code of Ethics of the American Medical Association shall be the Code of Ethics of The New York State Medical Association and of its subordinate divisions, and shall form an integral part of the by-laws.

Discipline.

SEC. 2. The adjudication of all questions of ethics and the administration of discipline shall be vested in the County Associations and Dis-

trict Branch Associations, but any member under sentence of expulsion for any cause other than non-payment of dues shall have the right to appeal to the Council.

ARTICLE XII.

DELEGATES.

Appointment.

SECTION 1. The Fellows and their Alternates shall be respectively the Delegates and Alternates of The New York State Medical Association to the American Medical Association, and credentials shall be furnished by the Secretary to said Delegates and their Alternates, signed by the President and Secretary of The New York State Medical Association. In case a Delegate and his Alternate cannot serve, the President of The New York State Medical Association may fill the vacancy thus created in the list of delegates to the American Medical Association.

Reception of Delegates.

SEC. 2. At any annual meeting of The New York State Medical Association, duly authenticated delegates from societies of other States or from foreign societies shall be received, and such delegates may be invited to read papers and participate in the scientific proceedings of such annual meeting.

Guests.

SEC. 3. Invited guests, members of the medical and other professions, may be accorded the same privileges as delegates from other States and foreign medical societies.

ARTICLE XIII.

SEALS.

State Medical Association.

SECTION 1. The Seal of The New York State Medical Association shall be of the same size and design as that of The New York State Medical Association founded in 1884, but the marginal inscription shall be, in the upper segment, The New York State Medical Association, and in the lower segment, 1884-1900.

District Branch Associations.

SEC. 2. The Seal of each District Branch Association shall be identical in size and design with the Seal of the State Association, but the marginal inscription shall be, in the upper segment, 1884—The N. Y. S. M. A.—1900, and, in the lower segment, the number of the District Branch Association.

County Associations.

SEC. 3. The Seal of all County Associations shall be identical in size and design with that of the State Association, but the marginal inscription shall be, in the upper segment, 1884—The N. Y. S. M. A.—1900, and, in the lower segment, the name of the county.

ARTICLE XIV.

TRANSFER OF PROPERTY.

Transfer of Property.

SECTION 1. At the expiration of his term of State Medical Association and of its District service, each and every officer of The New York Branch Associations and County Associations shall transfer to the new incumbent such of the Association's property as may be in his charge, and the new incumbent shall give him a receipt therefor in which the nature of the property shall be specified.

ARTICLE XV.

AMENDMENTS.

Amendments.

SECTION 1. Amendments to these by-laws may be made by a three-fourths affirmative vote of the Council and Fellows present and voting at any regular meeting; provided that notice of such amendments shall have been presented in writing at the previous annual meeting.

Suspension of By-Laws.

SEC. 2. Any article or any section of any article of these by-laws, except Section 1 of this Article, by unanimous vote, may be suspended at any session of any meeting of the Council and Fellows during such session only.

The New York State Journal of Medicine.

Published Monthly by The New York State Medical Association.

THE NEW YORK STATE JOURNAL OF MEDICINE is published on the first day of each month by The New York State Medical Association. It supersedes the annual volume of *Transactions* formerly issued by the Association. It aims to be a direct medium of communication between the members of the Association, and to widely disseminate Association news. Scientific Articles, Clinical Memoranda, and News Items of interest are solicited for publication. Communications should be typewritten. Reprints of Original Articles will be furnished at cost price, provided a request therefor accompanies the manuscript. Price-list on application. The Committee on Publication does not hold itself responsible for individual views of correspondents.

Every member of The New York State Medical Association in good standing receives the JOURNAL monthly and the Medical Directory of New York, New Jersey, and Connecticut, issued annually, free of expense other than the payment of the annual dues of the Association.

Subscription price to those not members of The New York State Medical Association, $3.00 per year. Single copies, 25 cents.

EDITORIAL OFFICE, 64 MADISON AVENUE, NEW YORK, N. Y.

VOL. I. FEBRUARY, 1901. NO. 2.

Association Notes.

JUDGMENT IN FAVOR OF THE NEW YORK STATE MEDICAL ASSOCIATION, WITH COSTS.—The decision rendered recently by the Appellate Division of the Supreme Court unanimously confirming the judgment of Mr. Justice McAdam, with costs, states that the New York State Medical Association is the legal representative of the American Medical Association in this State, and that the New York County Medical Association as an integral part of the New York State Medical Association has every right to secure the enforcement of the medical laws of the State, and as the legal representative of the medical profession of the State, is entitled to the fines collected as provided in the statutes. We hope this judgment of the Supreme Court, which has been confirmed on appeal, will forever stop the disgruntled few who are jealous of the wonderful growth of the New York State Medical Association from attacking its legal status. The decision firmly establishes the legal standing of all other County Associations represented in the State Association. The very liberal charter granted by the Legislature to the State Association reconstituted that body by uniting its membership with those of the County and District Branch Associations throughout the State.

The Committee on Charter believed the time was ripe to constitute a State Medical Association representing the individual member which would benefit him, and through him maintain the honor and character of the medical profession.

At the January meeting of the New York County Medical Association its executive committee was instructed to proceed with the immediate enforcement of the medical laws, including that concerning illegal practitioners, and the dispensary law. Members of the medical profession are requested to send complaints to the corresponding secretary of the New York County Association, Dr. J. W. D. Maury, 105 West 74th street, New York, which complaints will be considered by the Executive Committee.

The Executive Committee was also instructed to prepare a plan for a Medical Defense Union against alleged malpractice suits, the majority of which, the resolution stated, are brought for the purpose of blackmail.

* * *

ENFORCEMENT OF THE DISPENSARY LAW.—The following report of the Committee on Dispensaries of the State Board of Charities in relation to the enforcement of the rules and regulations in accordance with which dispensaries shall furnish medical or surgical relief, was made on January 24, 1901: Though the act requiring this Board to make rules governing the dispensaries of the State in dispensing medical and surgical relief was passed by the Legislature of 1899, it did not take effect until the first of October of that year. During the intervening period the Committee proceeded to prepare a form of license to be issued to the dispensaries and to formulate the required rules and regulations. The form of license adopted was that usually employed by other State authorities which grant licenses, and was, therefore, readily perfected. But in the preparation of the rules and regulations the Committee had a much more difficult task to perform. Many of the dispensaries, especially in the large cities, were old incorporations that had been in continuous operation for scores of years under rules and regulations of their own and which they regarded as especially adapted to their individual institutions. Some dispensaries had been established for specific

purposes other than that of giving medical relief, as were those connected with religious associations and medical schools and hospitals; these had rules quite different from the ordinary charity dispensaries. And there was finally a class of private dispensaries, conducted by individuals or associations, often in connection with drug stores, which had no specific rules governing their management.

Preliminary to the preparation of any rules, the Committee decided to give public hearings for the purpose of enabling all persons interested in the management of dispensaries an opportunity to discuss the questions which the Committee must consider in the performance of its duties. Much valuable information was thus obtained which was very helpful to the Committee. In formulating the rules adopted by the Board the Committee constantly had in view two principal objects, *viz.:* (1) to render them so stringent that they would effectually remedy the evils for which the law was enacted; and (2) to avoid as far as possible embarrassing the management of dispensaries by imposing unimportant details.

On the completion of the first draft of the rules the Committee again called public meetings to which the managers of dispensaries were especially invited. These rules were discussed in detail, and such modifications were made as seemed essential for their successful operation. The rules as thus prepared were submitted to the Board at a stated meeting, held at its office in the Capitol, Albany, on the 11th day of October, 1899, and after discussion were unanimously adopted. The code of rules and regulations thus adopted was at once sent to each of the dispensaries of the State with a report explanatory of the several provisions. During the succeeding year special inspections of the dispensaries were constantly made in order to secure their enforcement and to determine what further modifications, if any, might be necessary to make the rules entirely practicable. As a result of these inspections it was found that certain features of the rules were embarrassing to the management of dispensaries without accomplishing the results required. The Committee, therefore, called a meeting of the managers and requested a free expression of opinion as to the results of the practical application of the rules. Though some of the managers approved the rules as originally adopted, the larger number advised the changes which our inspections seemed to render necessary. These changes were accordingly made in committee and the rules thus modified were submitted to the Board at its stated meeting held on the 10th day of Ocober, 1900, and by it adopted. The rules and regulations as finally approved by the Board were immediately sent to each dispensary with directions to the officers and managers to substitute them for the former code and to rigidly enforce them.

The amended rules have now been in operation upward of three months. In order to learn how far they are being complied with, a special inspection has recently been made, the results of which are appended. The inspection was limited to the dispensaries of the Boroughs of Manhattan and the Bronx, which comprise, however, one-half of all of the dispensaries of the State. It appears from this inspection that in general the managers and officers are endeavoring to comply fully with the rules, and that the delinquencies are due rather to ignorance of the proper methods of complying than to indifference or antagonism to the rules. There are, however, a few instances where the managers and officers have entirely ignored the rules, though their attention has been repeatedly called to the obligations which the law imposes. In the opinion of the Committee the time has come when the Board should take such action to secure compliance with the rules on the part of all dispensaries as the law provides. During the first year the rules were regarded as tentative, and the only measures taken to secure compliance were frequent visitations of inspectors and such suggestions by them as each case seemed to require. After this trial of a year the rules were amended so that they were unanimously accepted by the managers of dispensaries at a meeting called for that purpose by the Committee. There is, therefore, now no longer any excuse for non-compliance with the rules on the part of any dispensary, and it seems to be clearly the duty of the Board to take the necessary steps for their enforcement.

* * *

The Rensselaer County Medical Association was formed January 10, 1901, with the following-named officers: President, Dr. C. S. Allen, Rensselaer; vice-president, Dr. M. B. Hutton, Valley Falls; secretary and treasurer, Dr. F. A. Smith, 3 Clinton Place, Troy. Fellows: Drs. William Finder, D. W. Houston, G. L. Meredith, H. C. Gordinier. Alternates: Drs. E. D. Ferguson, T. C. Church, J. T. Cahill, James P. Marsh.

* * *

The Rochester Pathological Society held a special meeting January 16, 1901, in the Chamber of Commerce, for the purpose of considering measures for preventing the extension of epidemic rabies in Rochester and vicinity. The physicians of Monroe County, the veterinarians, and the heads of the various city and county departments were asked to attend the meeting. Papers were read by Dr. M. P. Ravenel, Demonstrator of Bacteriology in the University of Pennsylvania; Dr. Ernest Wende, Health Commissioner of Buffalo, and Dr. G. W. Goler, of Rochester. Professor C. W. Dodge of the University of Rochester opened the discussion. The meeting was attended by about four hundred physicians and others. The speakers outlined the work done in preventing the extension of rabies in various parts of the country, and were unanimous in their opinion that rabies exists in Rochester and vicinity.

The muzzling ordinance has been promulgated by the Mayor of Rochester, but as yet not one dog in fifty is muzzled. As is usual in such outbreaks, a large number of cases must occur, human life be endangered and several deaths occur before the authorities compel the strict enforcement of the ordinance.

* * *

THE following open letter from Dr. Parker Syms, President of the New York County Medical Association, to the individual members of the Association, is self-explanatory:

My dear Doctor:

Finding that there is confusion in the minds of some of the members of the County Association as to its exact status, it is deemed wise that a circular letter be written embodying some explanation and also containing the request that each member who is conversant with the Association's affairs shall do all he can to explain the same to each member who does not comprehend them.

Last year, by its own action, the New York State Medical Association as an independent body was practically done away with, and it became, like the Government of the United States, a confederation of smaller bodies massed together under one constitution and with one set of common objects. It is to-day made up of the District Branch Associations and of the County Associations of the State, and it must be borne in mind that *they* are made up of their individual members who have a thorough representation in the central body because they can send to that central body as a governing committee one delegate or Fellow for each ten of their members. These Fellows with the Council of the State Association form its governing body.

There is no medical organization of which I know that presents so democratic a scheme of government, for each individual has his representation in his own local organization, in his District organization and in the State organization, through his representatives.

The conduct of the affairs of the Association, its dues, its by-laws, etc., are determined by the representatives of each member and not by any one central body independent of the local bodies. When we became a subordinate County Association of the State Association we did not relinquish any of our rights nor turn over any of our power to the State Association, but the State Association did give up its identity as an independent organization and became composed entirely of ourselves and of other County and District Associations. The requirement for membership in the American Medical Association for a resident of this State is that he shall be a member in good standing of the New York State Medical Association. The American Medical Association is to-day the largest and the most important scientific body in this country.

Your officers are endeavoring to do all they can for the advancement of the science of medicine and surgery in all its special branches, for the protection of public health, and for the promotion of the interests of the affairs of the Association and of its members, but they must depend upon the co-operative work of each member in the Association, therefore I call upon you to aid us as far as possible in the following matters:

1. In presenting to the Association your best scientific work. There is no place where it will be more appreciated.

2. In the prompt collection of dues, reminding your fellow members that a fine of $1 will be imposed upon all those in arrears at the end of three months.

3. In furnishing the Committee on Publication with all possible data for the Medical Directory which is now being revised for the coming year.

4. In aiding the Committee on Publication in affairs connected with the NEW YORK STATE JOURNAL OF MEDICINE, which is sent free every month to each of our members. Dr. James Hawley Burtenshaw, 381 West End avenue, New York City, is Chairman of the Committee.

5. When purchasing an article advertised in the JOURNAL or Directory, by letting the advertiser know that your attention was brought to it through this medium.

6. In furnishing the Executive Committee with your ideas as to the advisability of the Association undertaking the protection of its members against unjust suits for alleged malpractice. The Committee has this matter under consideration at present, and hopes to be able soon to formulate a plan for its performance.

7. In presenting to the notice of the Executive Committee all instances of which you know of violation of the medical laws by illegal practitioners, etc.

8. In attending our meetings and taking part in the scientific and executive work of the Association.

In closing, your President is glad to say that he can congratulate the New York County Medical Association upon the fact that its affairs were never so prosperous and its future never before shone forth so brightly.

I am, faithfully yours,

PARKER SYMS.

50 West 47th St.,
New York, Feb. 1, 1901.

* * *

BILLS BEFORE THE LEGISLATURE.—The following bills of interest to the medical profession were introduced during January in the State Legislature:

No. 20, Assembly. Introduced by Mr. Harburger. An Act to amend the insanity law relative to the commitment and custody of the insane.

No. 38, Senate. Introduced by Mr. Ambler. An Act to amend chapter 338, laws of 1893, entitled "An Act in relation to agriculture, constituting articles 1, 2, 3, 4 and 5 of chapter 33 of

the general laws," and to amend chapter 661 of the laws of 1893, entitled "An Act in relation to public health, constituting chapter 25 of the general laws," and to repeal chapter 1095, entitled "An Act to amend the public health law in relation to the appointment of a special committee to the State Board to investigate the disease of tuberculosis."

No. 197, Senate. Introduced by Mr. Ambler. An Act to amend the public health law.

No. 205, Senate. Introduced by Mr. Audett. An Act to amend the public health law, creating a State department of health and the office of commissioner of health, and abolishing the State Board of Health.

No. 217, Senate. Introduced by Mr. Stewart. An Act to amend the public health law by adding thereto a new section to be known as Section 207*b*, relative to cadavers in certain counties.

Any person interested in these or other bills before the Senate or Assembly may obtain copies by addressing the Senator or Assemblyman introducing them.

* * *

THE regular stated monthly meeting of the Kings County Medical Association was held on Tuesday evening, January 8, 1901, more than thirty members being present. This being the annual meeting, the order of business for such meetings was followed. The Treasurer's report showed that the Association is in excellent condition financially, there being a balance to carry over to the new year of $235.81 in a savings bank, and $107.00 in a national bank. The following officers for 1901 were unanimously elected: President, Hubert Arrowsmith; vice-president, George H. Treadwell; recording secretary, Frank C. Raynor; corresponding secretary, George F. Maddock; treasurer, Edward H. Squibb; member of Executive Committee, to fill a vacancy, J. Scott Wood; member of Executive Committee, L. Grant Baldwin.

The following new members were elected: Drs. L. T. Jackman, Stephen H. Lutz, and B. Onuf. They were considered as having joined in 1900, for the reason that their applications and other requirements, as far as they were concerned, were fully accomplished before the new year opened, but the practical detail of carrying out their formal election had to be postponed until this meeting.

The final report of the Executive Committee on the new by-laws to make them accord with the reorganized State Association was considered in detail and finally unanimously adopted.

Owing to the lateness of the hour Dr. L. Grant Baldwin agreed to postpone the exhibition of some interesting specimens of uterine fibroids.

Dr. Louis C. Ager then read a paper on "What Determines the Real Value of Medical Papers?" The character of this paper did not call for discussion but simply drew out some points from the President, Dr. Arrowsmith, who desired to emphasize what the writer expressed.

THE FIFTH DISTRICT BRANCH ASSOCIATION held a special meeting at Mott Memorial Hall, New York, City, on the evening of January 4, 1901, Dr. J. C. Bierwirth, the president, in the Chair. On motion of Dr. Charles M. Quimby, the by-laws printed elsewhere in this issue of the JOURNAL were adopted. The following were elected to fill the positions of vice-president, secretary, and treasurer: Dr. H. Van Hoevenberg, of Ulster county; Dr. Nathan W. Green, of New York county; Dr. E. H. Squibb, of Kings county. The next annual meeting will take place May 7, 1901.

By mail vote of the Executive Committee on January 22d, the following were elected to membership: Dr. Walton Jay Carpenter, Katonah, Westchester county; Dr. Archer W. Jagger, Flushing, Queens county; Dr. Charles D. Kline, Nyack, Rockland county.

* * *

DR. H. VAN HOEVENBERG, of Kingston, vice-president of the Fifth District Branch Association, and Dr. M. W. Townsend, of Bergen, president of the Genesee County Medical Association, were guests of the New York County Association at its regular monthly meeting on the evening of January 21st. Dr. Townsend said that during the past year he has personally interviewed every regular practising physician in Genesee County, with the gratifying result that at the present time all but three are members of the local Association.

* * *

THE following account of the life-work of Dr. Leroy J. Brooks, of Norwich, N. Y., a notice of whose death December 11, 1900, appeared in the last issue of the JOURNAL, will be read with interest:

"No eulogium need be pronounced to perpetuate the memory of Dr. Brooks. That has already been written in the hearts of the people of Norwich and nothing can be added to it at this time. The subdued tones with which the announcement of his death spread from lip to lip and the saddened faces with which the news was received, speak more eloquently of the esteem and affection in which he was universally held than the printed words can express. It is literally true that he gave up his own life to save the lives of others. Several years ago he discovered traces of the disease which he knew must sooner or later cause his death, but without any outward display of the burden which he was carrying he continued his ministrations, depriving himself of the rest and recreation which was so sorely needed and exposing himself to hardships which he knew hastened the progress of the disease. Neither personal comfort, his health nor the condition of the weather kept him at home when a patient required his attendance. He enjoyed a large practice and every case became a particular care and study. The sick commanded his interest and attention and

neither rank nor riches were ever allowed to measure the length of his devotion.

"Every citizen feels that he has lost a friend and the community feels that it has lost an honest, upright, devoted citizen.

"Dr. Brooks was the second son of Edwin and Helen Keyes Brooks and was born in Norwich August 2, 1850. He was educated in the village schools, graduating from Norwich Academy in 1866. He entered immediately upon medical studies, pursuing a course at Bellevue Hospital Medical College, from which he graduated in 1872. For two years after graduation he was on the staff of Bellevue Hospital, and in 1874 he came to Norwich and began the practice of his profession. He continued in active practice, without interruption, until about a year ago, when his health compelled him to abandon active work. For a time his life was despaired of, but skilful treatment at a Syracuse hospital, and later at his home, aided by a magnificent constitution which had never been undermined by irregular habits, restored him to comparative health, and for several months during the summer and early fall he resumed practice to a limited extent.

"Dr. Brooks' reputation was not by any means confined to the immediate scene of his practice. He was a member of the New York State Medical Association, the Bellevue Hospital Alumni Association, the Central New York Medical Association, the Chenango County Medical Association and the American Climatological Association. He was a frequent attendant at the meetings of the State and National medical associations and has often been upon the program at these meetings. Among eminent practitioners and specialists he was very highly esteemed and ranked among the most eminent physicians of the State."

The following beautiful verses were written by Dr. Brooks two weeks before his death:

THANKSGIVING.

How can I render thanks, oh, Lord,
When all the aspirations of long years
Are stricken down without one word
Of cheer to wipe away my tears?

How full of strength I built my castle high,
And hoped from off the heights great things to see,
As scanning lower earth and higher sky,
New fields of labor I found waiting me.

Dear Lord! and must I put it all aside,
And helpless watch the throng go by?
Must I sit waiting while the hurrying tide
Sweeps all beyond me, and yet ask not why?

Help me to know just what is best;
What hidden purpose Thou didst have for me.
Let me, oh Lord, e'en in this enforced rest,
Find something yet that I can do for Thee.

Help me by faith to bravely walk
The path unlighted which I cannot see,
Hold fast my hand and to me talk,
Till I unquestioning put all trust in Thee.

THE WESTCHESTER COUNTY MEDICAL ASSOCIATION was organized January 22, 1901. Drs. John A. Wyeth and Frederick Holme Wiggin, president and secretary, respectively, of the State Association, and Dr. Parker Syms, president of the New York County Association, were present at the meeting and spoke in detail of the recently adopted plan of reorganization under which new county associations are now being formed. The following officers were elected: President, Dr. N. J. Sands, of Portchester; vice-president, Dr. J. L. Porteous, of Yonkers; secretary and treasurer, Dr. D. T. McPhail, of Purdy Station; Fellow and member of the Nominating Committee, Dr. E. F. Brush, of Mt. Vernon; alternate and delegate to the American Medical Association, Dr. H. Eugene Smith, of Mt. Vernon. Drs. P. J. Sands and McPhail were appointed a committee on by-laws.

* * *

DR. ULYSSES H. BROWN, of Syracuse, died on the 27th of December last. Dr. Brown as an eminent oculist and aurist was well known in many parts of the State. As a careful and dextrous operator he was acknowledged to be surpassed by few if any in this country.

At a meeting of the Syracuse Academy of Medicine, of which he was a member, the following eulogy was adopted: "An active life is ended; one which has been passed quietly and modestly but yet has been replete with noble acts. The taking away of our colleague, Dr. Brown, has been so sudden as to shock the whole community in which he lived. The departed was so near and dear to all of us that at this time we can express but feebly in words the pangs which we in common with our fellow citizens feel at having sustained such an irreparable loss. Dr. Brown was to all a trusted friend, one whose heart always beat in sympathy with suffering humanity, whose hand was ever ready to answer the dictates of noble impulse. He was possessed of rare ability and extraordinary skill in his specialty. Thousands mourn with us the loss of this talent to the world, and as many whom he has benefited thank God for his benevolence and beneficence."

* * *

To ensure full representation in the list of Fellows, the organization of County Associations should be completed at once in accordance with Section 2 of Article VIII. of the by-laws of the New York State Medical Association, which reads as follows: "When the members of any District Branch Association residing in any County are ten in number, they shall forthwith organize as the County Association of the New York State Medical Association for that County." Each County Association will thus be entitled to elect one Fellow from every ten of its membership.

The sixteenth volume of *Transactions* contains lists of members by counties, some of which are already organized into County Associations,

while the following named counties have not yet been heard from: Oneida, 16 members; Columbia, 11; Brome, 13; Onondaga, 12; Monroe, 13; Dutchess, 10. The members of the State Association residing in the counties of Herkimer, 7; Montgomery, 6; Chenango, 9; Madison, 7; Chautauqua, 8; Livingston, 6; Steuben, 7; Wayne, 6; Orange, 6; Uulster, 6; and all others having less than six members should speedily add to their numbers as prescribed in Section 2, Article IX. of the by-laws: "Application for resident active membership shall be made in prescribed form to the County Association of the County in which the applicant resides, or, when no such County Association exists, to the District Branch Association."

* * *

In the list of papers read before the Association at its annual meeting in October last, as printed in the report of the proceedings in the January issue of the Journal, the title of that by Dr. A. H. Goelet, of New York, "The Resources of Modern Minor Gynecology," was unintentionally omitted.

* * *

Obituary.—Dr. George H. Elliott, of New York, died recently at the age of 55 years. He was a graduate of Denver Medical College, and at the time of his death was a Commissioner of Lunacy in this State. A widow and one son survive him.—Dr. R. V. K. Montfort, for forty years superintendent of public schools at Newburg, died December 29, 1900. He was born at Fishkill in 1835, and was graduated from Albany Medical College in 1856. In September, 1862, he entered the army as assistant-surgeon, and was on every battlefield of the Army of the Potomac from Chancellorsville to the end of the war.—Dr. Frederick Osborn Lloyd, of Hamilton, died a few days since of heart disease. He was at one time attached to the Presbyterian Hospital, New York City, and for some time practised his profession in that city.—Dr. J. Henry Fruitnight, of New York, died December 18, 1900. He was graduated from Bellevue Hospital Medical College in 1875.—Dr. Oren George Hunt died at his residence in New York on December 24, 1900.—Dr. John Edward Ware died recently at his home, in Flushing, L. I., after a short illness. He was eighty-three years old, and his death was due to old age.—Dr. Erastus E. Marcy, of New York, died December 27, 1900.—Dr. John Franklin Carey, of New York, died December 16, 1900.—Dr. William F. Farrell, of New York, died December 23, 1900. He was graduated from New York University Medical College in 1885.—Dr. Dr. John E. Losee, one of the oldest and most prominent physicians in northern Dutchess county, died recently at his home in Upper Red Hook, aged 74 years. He had practised medicine for forty-seven years in that locality. He was born in Saratoga County, and graduated from the Albany Medical College in 1852. After several months in the old New York Hospital in 1853 he entered active practice in Upper Red Hook. His two sons are physicians.

Dr. Joseph Garvin, of 308 East 119th street, New York, died of pneumonia January 11, 1901. He was twenty-nine years of age, and was graduated from Bellevue Hospital Medical College in 1894.—Dr. Lucius J. W. Lee died January 8th at his home, 655 Quincy street, Brooklyn, in his sixty-fifth year. He was attached to the Douglas Hospital in Washington, D. C., during the Civil War. He leaves a widow and an adopted daughter.—Dr. Charles B. Borden of Stamford, Conn., died January 9th at his home in that city. He was 49 years old. He was graduated from the Bellevue Hospital Medical School.—Dr. Harriet J. Barkeloo, of 915 Third avenue, Brooklyn, died January 9th.—Dr. Henry Foster, the founder and manager of the noted Clifton Springs Sanitarium, at Clifton Springs, New York, died January 15th at the advanced age of 80 years.—Dr. Joseph Mallon McDonald, of Albany, died January 18th.—Dr. Eliphalet Nott, sixty-seven years of age, died at Rexford's Flats, Saratoga County, January 22d.—Dr. James Watson Stronbach, who for more than thirty years had been practising medicine in New York City, died suddenly at his home in Belleville, N. J., January 22d, from heart failure, following an attack of neuralgia. Dr. Stronbach was a native of Scotland, a graduate of Glasgow University and the New York College of Physicians and Surgeons. He was sixty-eight years old and leaves a widow and two married daughters.

* * *

The New York County Association held its regular monthly meeting January 21st, at the Academy of Medicine, New York City. The President, Dr. Parker Syms, was in the Chair. The attendance was large in spite of the inclemency of the weather. The clinical cases, papers, and discussions showed careful preparation and consequently were followed with close attention throughout.

The specimens of Houston's valves, presented by Dr. J. P. Tuttle, should remove all doubt from the skeptical-minded as to the existence of these valves, and the fact that they assume physiologic as well as at times a pathologic importance.

Dr. Geyser read a paper on "The Treatment of Lupus Vulgaris by Static Electricity and X-ray," and exhibited two patients. Great pains were taken to explain and demonstrate the *modus operandi* and the possibility of giving this treatment without the most expensive apparatus. Dr. R. Abrahams read a paper on "Exophthalmic Goiter of Syphilitic Origin," which was ably discussed by Drs. C. W. Allen and W. M. Leszynsky. The three cases reported in the paper undoubtedly were of syphilis and the patients suffered from the symptoms also of Graves' disease, which disappeared under the antisyphilitic treatment alone.

Dr. W. R. Pryor described, illustrated with drawings, and demonstrated on the cadaver, a new position for the performing of cystoscopy in women, together with a new instrument for the carrying out of the same. For both the position and instrument he claimed originality and priority. Dr. F. T. Brown showed the advantages as well as the limitations of Dr. Pryor's method in an interesting manner.

During the executive session what promised to be a lively discussion was begun by a member offering a resolution to amend the by-laws in a manner which was not in accordance with the constitution of the State Association. The President made a clear explanation of the much misunderstood relation between the County and State associations. He said that the Bar Association of the City of New York is at present the best organized of any association in this country—better even than the powerful trades unions, and that the medical fraternity is the most disrupted. He pointed out the similarity between the best possible form of a National government and that form of organization which the medical profession is attempting to construct. The New York State Medical Association exists only as a composite of the county associations. The idea of a member belonging to one and not to the other, of being a member of a county association and deciding for himself whether or no he will be a member of the State association, is as impossible and foreign to the intents of the organization as it would be for a man to be a citizen of New York County and not be a citizen of New York State.

The following were elected to membership: Drs. Mary Appleton, Charles C. Barrows, John E. Dearden, William A. Downes, Henry Hall Forbes, J. Frank Gillespie, Robert Coleman Kemp, Hugo A. Levison, Oscar J. Meyer, Bruce G. Phillips, Preston Pope Satterwhite, Edmund E. Specht, Henry S. Stark, George Francis Swan, Henry Ling Taylor, F. M. Townsend, Chester F. S. Whitney, Orrin S. Wightman.

At the stated meeting held December 17, 1900, the following new members were elected: Drs. Harry Leach Bender, John Winters Brannan, N. E. Brill, W. Duff Bullard, Harry Hoyle Butts, Robert J. Carlisle, John J. Cronin, Edward C. Ehlers, Louis R. Eichberg, Sherman K. Foote, Eugene Fuller, Charles Ross Jackson, Smith Ely Jelliffe, Alexander Lambert, William G. Le Boutillier, Abraham Lustgarten, E. L. H. McGinnis, Francis W. Murray, John Joseph Nutt. Horst Oertel, Louis A. Rodenstein, George Knowles Swinburne, Mathilda K. Wallin, Joseph Weinstein, William A. White, Victor Cox Pedersen.

* * *

Dr. F. W. Higgins, of Cortland, reports that typhoid fever is unusually prevalent in his neighborhood. The number of cases so far reported is unprecedented for this season of the year.

At least two medical societies of other States are following the good example set by the New York State Medical Association, and are agitating the question of reorganization on modern lines. These are the Illinois State Medical Society and the Vermont State Medical Society. A circular letter recently issued by Dr. Carl E. Black, of Jacksonville, Illinois, Chairman of the Committee on Medical Legislation of the first-named organization, says, in part: "The State of New York has recently entirely reorganized its Medical Association. This plan makes membership in the local society include membership in the State society. The fees are paid to the local society, and the latter is thus made the basis of the organization for the whole State. If Illinois is to maintain its place in the first rank it must immediately improve its medical organization. Instead of having a State Society which embraces only a part of the local societies of the State and only a few hundred of the many thousand regular practitioners, an organization must be effected which will practically embrace all of our regular practitioners. Among the questions which demand solution in our State are the following:

"A thorough organization of city, county and State boards of health with proper relations to each other."

"More adequate sanitary laws, especially those relating to schools, manufactories and quarantine."

"To secure legislation to protect against tuberculosis and other preventable diseases."

"To protect against vicious legislation, for example, antivivisection and antivaccination."

"To protect from blackmailing, and to protect against unjust malpractice suits."

"To secure proper recognition of expert testimony."

"To protect the sick from quacks and charlatans."

"To protect and improve the medical-practice act and to secure a special board of medical examiners, aside from the Board of Health."

"To secure proper regulations for the protection of drinking waters, and in fact to aid in securing just and impartial legislation whenever and wherever needed."

"To secure equitable medical laws throughout the United States, with some practical form of reciprocity between the States."

"To secure the appointment of reputable and honorable medical men whenever public services of physicians are required throughout the State."

The letter states further: "We should be thoroughly alive to the importance of these measures and realize that the only way to secure any needed enactments or appointments is through harmonious organization of our profession. We have no doubt been chagrined to hear members of the Legislature say that the only thing which stands in the way of securing desirable medical legislation is the lack of harmony in the profession. We should remove the cause for this just

criticism." It will be seen that the Committee is fully alive to the importance of taking an active part in all that pertains to the public welfare and of raising the standard of professional influence.

The plan of reorganization brought forward by a committee appointed by the Vermont State Medical Society is based almost entirely on that of the New York State Medical Association. The report was accepted by a unanimous vote at a recent meeting of the Society and a new and larger committee appointed to formulate new by-laws and other details of the proposed reorganization.

* * *

NUMBER 1, Volume I, of the NEW YORK STATE JOURNAL OF MEDICINE is before us. It is published monthly by the New York State Medical Association and takes the place of the annual volume of *Transactions*. The journal consists of twenty-four large double-column pages of reading matter, with eight advertising pages. It makes a good appearance and the committee in charge is to be congratulated on its efforts. This makes the third State body to publish a monthly journal in place of an annual volume, the other two being the Medical Society of the State of Pennsylvania and the Illinois State Medical Society. In each of these States the enterprise is giving satisfaction. It is certainly better to have a monthly journal go to each member than to have an annual volume, and this to be placed on the shelf and soon covered with dust. Such a monthly journal gives an opportunity for the members of the medical profession of the State to exchange views on various topics of interest. We note that the new journal opens its pages to advertisers; this is sensible. There is no reason why respectable advertising should not be admitted to a medical journal, and we believe that it is common sense and business-like to accept such. Legitimate advertising is a benefit to the physician, as well as to those who supply him with the many things he needs in his work. —*Jour. Amer. Med. Assn.*, Jan. 12, 1901.

* * *

FORMALDEHYDE IN MILK.—A case of some interest was recently non-suited in the Supreme Court of the Rochester district. A milkman had been using formaldehyde for the preservation of cream. A sample of this cream was taken by the State Department of Agriculture, subjected by a chemist to various tests, which proved conclusively the presence of formaldehyde, and he was enabled to recover from the cream tested an amount of formaldehyde containing, approximately, more than $^1/_{50,000}$ parts. The law under which this case was brought provides that no unwholesome, impure or adulterated milk shall be sold. The plaintiff sought to prove his case by showing the harmful effects of formaldehyde, proving it an irritant poison, and showing by experiments that formaldehyde retards the coagulation of milk by rennet, and that both peptic and pancreatic digestion are retarded. He also corroborated the work of Arnett, Halliburton, and others, who show that milk or cream mixed with formaldehyde, even in the proportion of $^1/_{50,000}$, retards digestion, and that animals, chiefly kittens, fed upon a mixture of milk and formaldehyde do not increase in weight as rapidly as those fed upon pure milk alone.

In this case the judge held that, while these experiments were most interesting and instructive, the plaintiff had not proven his case, in that he had failed to show that the defendant had the cream and formaldehyde in his possession, or that they were in the possession of his servant.

The interest in the case lies chiefly in the fact that it was not defended by the milkman against whom it was really brought, but by a large manufacturing firm selling formaldehyde under the name of a milk preservative, and thus, if the decision stands, will be able to sell its product without hindrance. The case will doubtless be tried again at the next term of court, when, if the agricultural law is strictly interpreted by the judge, the plaintiff cannot fail to secure a conviction and collect a penalty.

* * *

MAKE the following changes in the Medical Directory of New York, New Jersey and Connecticut: *Removals, New York City:* Dr. William E. Weber to 109 West 133d street. Dr. M. L. Weil to 960 Park avenue. Dr. Frank Hevel to 117 West 79th street. Dr. J. H. Coughlin to 307 East Broadway. Dr. B. S. Talmey to 6 West 123d street. Dr. J. E. Murphy to 127 East 84th street. Dr. Percy Bryant to New Castle, Maine. Dr. Clarence G. Campbell to Phœnix, Arizona.

Corrected Addresses: Dr. F. L. Bennett, 17 West 90th street. Dr. Gustave Brown, 66 East 108th street. Dr. J. R. Cronin, 433 West 51st street. Dr. N. H. Henry, 36 West 11th street. Dr. H. P. Hirsch, 136 East 86th street. Dr. M. I. Knapp, 136 East 78th street. Dr. T. J. Larkin, 125 East 106th street. Dr. A. M. Lesser, 1540 Madison avenue. Dr. Jerome M. Lynch, 215 West 34th street. Dr. T. A. McNicholl, 221 West 132d street.

* * *

AT the last annual meeting of the Association the papers were as follows: Surgery, 8; Medicine, 4; Obstetrics, 5; Gynecology, 3; Genito-Urinary Disease, 1; Diseases of the Nervous System, 2; Diseases of Children, 1; Diseases of the Eye, 6; Diseases of the Nose and Throat, 2; Diseases of the Ear, 1; Diseases of the Skin, 2; Materia Medica, Therapeutics and Pharmacy, 2; Physiology, 1; Bacteriology, 7. Of these forty-five papers, the members of the 1st District contributed 1; 2nd District, 1; 3rd, 2; 4th, 5; 5th, 26. Connecticut contributed 1, Massachusetts 3, Wisconsin 1, Pennsylvania 4, Michigan 1. Seven counties of the five districts contributed the papers, as follows: Montgomery County, 1; Rensselaer, 1; Tompkins, 2; Erie, 4; Monroe, 1; Kings, 2; New York, 24.

Original Articles.

ASEPTIC MINOR SURGERY.

BY DOUGLAS AYRES, M.D.
Fort Plain, N. Y.

So much has been said and written during the past few years upon this very important subject it would seem that every one of our profession must be quite fully alive to all that pertains to the most approved surgical technics, and this paper is presented not with the thought of offering anything new, but by a repetition of the oft-told tale of keeping before us those principles that are so necessary to the perfectness of every operation. Many of us who began our work before the introduction of antiseptics recall very vividly the slight preparation which was made for an operation both as to ourselves and the patient. Our instruments with handles of ivory, bone, and other materials were made without thought of sterilization, our dressings which were of the simplest character, usually bandages and lint, were prepared and kept in some handy receptacle ready for use and used without any thought of previous sterilization. Our results in wounds from injury or operation were considered good if before healing there was a season of discharge of what we were taught to call laudable pus. At this time inflammation more or less intense seemed to be a logical sequence to wounds, and together with fever were considered the inevitable results. Pirogoff wrote that "the influence of the physician, the therapeutic resources, and mechanical dexterity are of no importance; the results of our operations are dependent entirely upon chance."

The records of our larger hospitals, both at home and abroad, gave evidence that a large proportion of all wounds were attacked by purulent infection, hospital gangrene or septicemia, and especially in complicated fractures these conditions were very frequent. We call to mind our misgivings as to the result in compound fractures, especially those of the ankle joint where we were taught that the only safe treatment was amputation. We find that the mortality in complicated fractures in the clinic of Volkmann, at Halle, were nearly or quite forty per cent., and that in 1871 and 1872 the mortality from erysipelas and pyemia was so great he chose to close for a time his department and suspend work.

In our own country, Ashhurst, in 1881, gave a death rate of 28 per cent. in 100 amputations performed by himself, which was said to be below the average. The records of the Pennsylvania Hospital preceding and up to 1857 show a death rate of 44 per cent. in 116 cases of compound fracture. At the New York Hospital during the same time it was 48 per cent. in 126 cases.

It is interesting to study the causes that the profession believed led up to these undesirable results. In England especially there were two prominent views, one attributing fermentation to the action of the gases of the air, particularly of the oxygen, on the discharges; the other, that it was a change, resulting from a natural law in organic fluids after leaving the body, and that it was the logical result of the change caused by loss of vitality. It was found, however, that all efforts to shut out these gases from wounds and so prevent putrefaction fell short of the desired result. This was called the method by "occlusion." Various means were made use of to seal up the wound, among which goldbeater's skin and collodion were the most prominent. Gases such as carbonic acid gas, and ointments and balsams which are now known to contain powerful antiseptics, were also used.

In 1859 the most valuable impulse was given in the right direction by a paper published by Adene and Demeaux on a paste in which the principal ingredient was coal tar. Lemaire investigated the matter closely, making his experiments with an emulsion of coal tar, and discovered that carbolic acid was the chief factor, and made use of it quite successfully in his practice. Nélaton advocated the use of alcohol, with good results. These means were made use of, however, without any definite idea of the cause excepting, perhaps, in the case of Lemaire, so that lack of precision and any definite form of procedure looking to the removal of the cause went far to produce an uncertainty in the minds of surgeons as to its efficiency.

But constant advances were being made, and with the abandonment of the theory that the gases of the air caused fermentation, experimentation revealed the fact that it is caused by something definite in the air, something which can be removed by heat, by filtration, etc., and destroyed by acid and other chemicals. The investigations of Schwann, Schroeder, Dusch, and especially Pasteur formed a working basis which led up to and finally culminated in true aseptic work. The result of the investigations of Sir Joseph Lister first presented to us in 1867 and 1868, soon took a deep hold upon the minds of surgeons of all nations, and was the opening of a new era in all surgical procedures, producing eventually a radical change in technic. To Pasteur is due the honor of proving conclusively that putrefaction is the result of micro-organisms, and to Lister the honor of finding and presenting in a systematic manner the means to shut out these micro-organisms from wounds and to render them inert if they have once found their way into them.

Cleanliness is a matter of the greatest importance in all surgical work, and if we all, and especially the young surgeons, cultivate the habit of strict attention to personal cleanliness, both as to the body and clothing, we will carry it into our work and the most minute details of the most approved technic will not be overlooked in the slightest, as well as the most important case of minor surgery. Our offices should be a model of

neatness. It is very easy to keep a clean and well regulated office, and an ever present pleasure to ourselves, as well as both a benefit and pleasure to our patients.

If we cultivate the habit of cleanliness and order, it is somewhat surprising to note the ease with which we maintain it, and we are constantly stimulated in the work by the manifest feeling of confidence and respect that it must necessarily beget in the minds of those who entrust their ailments to our skill and judgment. "A place for everything and everything in its place" is a saying that applies to the physician's office with a force that no one can appreciate more than himself. The great majority of minor surgical cases are emergent and if instruments and dressings and receptacles for instruments and antiseptics are so arranged that we can place the hands upon them at a moment's notice, and not be compelled to search for one article here and another there, consuming much valuable time and causing some embarrassment, we save to the patients time which many times may mean very much to them. The question arises, What would be considered a well arranged office for aseptic work? An office with hardwood floors closely laid and well dressed and filled is very desirable, as such floors can be quickly cleaned. The furniture should be good, but plain; that seated with wood or cane looks well, and can be easily kept clean. All bookcases should be low, so that their tops can be easily reached and kept free from dust. The room should be well provided with windows, and with as good ventilation as possible. There should be at least two windows, one of good size, in the room set apart for surgical work. This room should have a good operating table and means for lighting, especially at the table. A case for instruments should have a place conveniently near; it should be made either of hardwood with polished shelves and glass front, or with what is preferable, glass, with iron and wood frame, with shelves of glass. This should close tightly to protect from dust. Instruments should be so arranged that they can be seen at a glance, and such selections quickly made as are necessary for the work at hand. One of the approved forms of portable sterilizers should be conveniently near. A case should be provided for dressings, one part for the several varieties of gauze, antiseptic liquids and powders, another for sponges, cotton and bandages. Large glass jars with ground stoppers and with necks large enough to admit the hand, make excellent receptacles for sponges and bandages. In this case a place may also be provided for anesthetics, an ether inhaler, hypodermic syringe, tablets, etc. In a room near at hand there should be a well arranged washbowl with faucets for hot and cold water and a place for all articles necessary for perfect cleansing. A case may be placed here for bowls and pans for instruments, etc.

In the routine of preparation for minor surgical work the same careful attention should be given the hands and arms as in preparing for major operations, using hot water with a liberal application of good soap. It is not work that can be done very quickly, for sufficient time should be allowed to soften the natural exudation of the skin and the thin film of dirt containing the micro-organisms, then ether or alcohol will dissolve the fatty matter and thorough scrubbing with the brush will remove the softened dirt. With attention to the nails this thorough work renders the hands quite aseptic, and in many cases will answer every purpose, but the general rule should be to place the hands in a solution of bichloride of mercury 1 to 1,000. The same care should be observed in preparing the patients. Many times they are brought to us from the workshop or street with wounds filled with grease and various kinds of dirt, and the surrounding surface in the same filthy condition, and although it involves considerable labor we should not consider the wound ready for dressings until by repeated washings with soap and sterilized water and antiseptics we have rendered the parts as nearly sterile as possible. By this means and this only can we reasonably expect the results that are the pride of every surgeon of the present.

The application of dressings should receive the same careful attention. Small wounds after perfect cleansing may be dressed with aseptic gauze and bandage, or better—in some cases—sealed by collodion with an antiseptic; the larger, after uniting if practicable with catgut sutures, an antiseptic powder, with iodoform or bichloride gauze, with plain gauze or absorbent cotton and bandage. When we are called to attend the patient in the home, we can select such instruments as in our judgment may be required and arrange them for the bag in a receptacle made of heavy drilling or canton flannel with loops of tape to separate them; this should be wide enough to fold well over the instruments from either side. The edges of cutting instruments may be protected with absorbent cotton. I mention this, as I have found it simple and convenient, and by keeping several we always have a clean one at hand. We find in the average household earthen washbowls which we can utilize, and the ordinary table platter makes a very good receptacle for instruments, although as they are light pans for this purpose can be easily carried. If we require an operating table we find a very good one in the ordinary kitchen table, which can be covered with a clean sheet. After using instruments, early and careful attention to washing and drying thoroughly not only renders them partially at least aseptic, but prevents stain or slight rust, a condition that we all know is very desirable to avoid, as it is always very unsatisfactory to work with them in that condition. This care in following "in the spirit and the letter" all the details of aseptic surgery leads to the most eminently satisfactory results.

Knowing that the source of infection is usually through some lesion of the skin or in a mu-

cous surface, however slight that lesion may be, if it reaches an absorbent surface, and certain bacteria find lodgment there, the most serious results may obtain, even in some instances loss of life, the importance of asepsis appeals to us with renewed force. The wounds within the scope of this paper are those which are the most likely to become infected, especially those of a contused or lacerated character, and their proper treatment ranks with the most important work in surgery. It embraces the very foundation of asepsis, the great principle that leads all major operative work to a successful termination.

In conclusion, I would say that the responsibiil-ity in the main is with us, and that upon our ever watchful solicitude as to personal cleanliness, cleanliness of our surroundings and nicety of all the detail of aseptic work, rests the ideal result in every case entrusted to our care.

AN EPIDEMIC OF DIPHTHERIA TRACED TO A MILK SUPPLY.

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WELL authenticated instances of the transmission of diphtheria by milk are rare. Instances in which strong circumstantial evidence is in favor of milk being the means of transmission, are becoming more and more frequent. I have failed to find a report of an epidemic of diphtheria in which evidence pointed to a milk supply as being the source of contagion, in which the Klebs-Löffler bacilli have been demonstrated to be present in the milk. Streptococci are frequently found in milk that has been examined for the Klebs-Löffler organisms. I think that it is admitted that negative results in bacteriological work are not conclusive, and it may be that some methods may be resorted to by bacteriologists, that will help us to discover the one missing link in the chain of evidence. Until the discovery of the Klebs-Lôffler bacillus even the positive diagnosis of diphtheria was often difficult; bearing this in mind, it is not surprising that it was practically impossible to establish an unbroken chain of evidence to prove that a milk supply was the source of a given epidemic of diphtheria. During the few years that the culture methods of diagnosis have been in use, several epidemics have been reported in which the circumstantial evidence was very conclusive, and the connection between the milk supply and the epidemic of diphtheria was as complete as it could be without the demonstration of the organisms in the milk.

The Commissioners of the District of Columbia in their Annual Report of 1895 refer to 28 epidemics of diphtheria which were supposed to be transmitted through milk supplies. Seven of these epidemics occurred in England and were reported by Mr. E. Hart. The other 21 were collected by the Commissioners and occurred in England, Scotland and the United States.

With the exception of one, these epidemics occurred before the time of the present culture methods. They state that "in 10 of the 28 instances diphtheria existed at the farm or dairy, and in 10 instances the disease is attributed directly to the cows having garget, or chapped and ulcerated affections of the teats or udder, while in one the cows were apparently healthy but the calves had diarrhœa."

In explanation of the connection between chapped and ulcerated affections of the teats and udders and diphtheria it might be stated that, according to Dr. Lennox Brown, diphtheria of the teats in cows is known in England as chapped teats. In one epidemic, reported by the Commissioners of the District of Columbia, one of the dairymaids suffered from a sore throat of an erysipelatous character, and in another a patient continued to milk the cows while suffering from diphtheria, and in a third the driver of a milk wagon was suffering from a sore throat.

It is stated in the report referred to that: "It is difficult, if not impossible, to account for the infectious qualities of the milk in those epidemics where diphtheria could not be found at the milk farms or shops, unless we are permitted to look to the cows themselves as a source of infection." It is further suggested that in many of these cases it is probable that we have to deal with a staphylococcus or streptococcus infection. The report of one of these epidemics states: "No sickness at farm among men or beasts, although the outbreak affected within three days 15 persons in 11 households in good sanitary surroundings, and all supplied from this dairy." No deaths occurred.

In the investigation of the last of the 28 epidemics reported, which occurred in Ashtabula, Ohio, in December, 1894, bacteriological methods were employed. It is stated that: "A driver of a milk wagon was suffering from a sore throat." Of the 111 cases of diphtheria and 23 deaths that occurred during the epidemic, 100 cases with 21 deaths were in families that used this particular milk supply, yet the evidence pointing to infected milk was entirely circumstantial, as repeated cultures made from the milk and the throat of the driver gave negative results. A full report of this epidemic was made by Dr. W. T. Howard, Jr., and published in the *American Journal of the Medical Sciences,* in December, 1897.

Dr. Benj. Lee, Health Officer of Philadelphia, Pa., reports an epidemic of diphtheria which was undoubtedly due to a milk supply. This epidemic occurred in Germantown, a suburb of Philadelphia in May, 1898. From April 30 to May 7, 12 cases were reported which had the same milk supply. Besides these cases of diph-

theria many cases of tonsillitis were reported occurring in adults who drank this milk. These cases of diphtheria occurred in families of well-to-do persons in no way connected with each other and having no visiting relation. The only feature that they possessed in common was their milk supply.

A careful examination was made of the milk farm, and it was found that the conditions of the cow stable and surrounding yards were very filthy and unsanitary and that an overflowing privy-well discharged its filth into the cow-yard. Two malignant cases of diphtheria had occurred in a family, using this privy-well, only a short time before the outbreak of this epidemic.

It seems probable that the udders of the cows as they lay in the litter may have become infected and the bacilli may have fallen into the milk during the milking. Another possible factor in the contamination of the milk was a sick chicken found in the dairy-yard. "Clinically the fowl had true diphtheria. False membrane most typical in appearance was found in its throat and its nostrils."

Cultures were made from the milk but failed to develop the characteristic Klebs-Löffler organisms. A copious growth of streptococci developed that produced speedy death when injected into the abdomen of a guinea-pig. A significant fact in proof of this dairy-farm being the source of the epidemic of diphtheria, was that all the cases of diphtheria reported in Germantown during the first week of May, 1898, used this milk.

We may sum up in a general way the facts brought out by a study of the epidemics of diphtheria reported, which have been traced more or less satisfactorily to a milk supply, as follows: In quite a number the strongest evidence of milk infection is the fact that a large percentage of the patients were supplied by certain milkmen, yet the way in which the milk became infected could not be explained. That the milk was infected seems beyond question, as the epidemics subside quickly when the sale of the milk is prohibited. In an epidemic reported by Power, 140 cases were reported in October, 1886. These occurred in 57 households and 48 of the 57 households (84 per cent.) used the suspected milk. Ninety per cent. of the cases occurred during a period of ten days. The larger proportion of the cases were in the rich and this was accounted for by the fact that the rich consumed an average of over five pints of milk per person per day, while the poor consumed less than a pint each per day. Thirty-three per cent. of the consumers among the better class were affected as against 6 per cent. of consumers among the poor. The greater susceptibility of children is well shown in this epidemic, and also the greater susceptibility of those who drank milk freely. Twenty-nine per cent. of the adults among the better classes were affected and 54 per cent. of the children. While only 27 per cent. of the consumers who were not special milk drinkers were attacked, 78 per cent. of the special milk drinkers developed the disease.

Very strong evidence of the infected character of milk was shown in one epidemic in which liberal users of boiled milk wholly escaped.

In one epidemic in Ithaca there was a striking example of infection in a free milk drinker while the other members of the family escaped. One student in a family of over a dozen persons had diphtheria, while all the rest escaped. It was learned that this student drank milk in place of tea or coffee, and that although the whole family were using infected milk they all used it sparingly except the one student.

For five years previous to January, 1900, Ithaca had enjoyed a surprising immunity to diphtheria. During this period I was in active practice in Ithaca, and I did not see a case of diphtheria, nor have I been able to find any record of a true case that occurred in the city during this time. The Health Board records, or the memories of a number of the physicians who are in active practice in the city did not refer me to a single case occurring during this period. This seems to me to be an immunity that is quite unique and especially so as Ithaca is a college city with two thousand students that come and go two or three times a year. From January 31 to March 7, 1900, inclusive, 30 cases of diphtheria were reported to the Board of Health, and the diagnosis was confirmed in all cases by bacteriological examination. These 30 cases occurred in 24 households, in widely separated parts of the city. In five households more than one case occurred. In one family three cases occurred, with one death. The first case developed February 14, the other two on February 21. These cases were all in children under 10 years of age. In four families two cases occurred in each, as follows: February 6, a boy of 14 years developed the disease, and on February 13 his mother, who helped care for him, was attacked; in another family, on February 14 a child of 3 years was attacked, and on March 7 a child of 8 years in the same family. In still another family on February 25 two children, aged 5 and 7 years, developed the disease. In the last of the four families in which two cases occurred, a daughter of 15 years of age became ill of the disease on February 20 and her mother on February 25. With the exception of the one instance in which the disease developed in two patients in one family, upon the same day, it is probable that all the secondary cases could have been prevented if antitoxin had been given when the first case occurred. As we still have some physicians in Ithaca who will not use antitoxin in diphtheria, it is evident that we have a good deal to accomplish in the way of education before we can hope to reduce the number of cases to the minimum, by such advanced methods as the immunization of all exposed persons.

These 30 cases were reported daily as follows: 1900—January 31, one patient, aged 5 years; February 2, one, aged 30 years; February 6, one, aged 14 years; February 8, one, aged 16 years; February 13, three, aged 4, 35 and 37 years; February 14, two, aged 3 and 6 years; February 16, two, aged 16 and 21 years; February 17, one, aged 30 years; February 20, two, aged 1½ and 7 years; February 21, three, aged 4, 6 and 8 years; February 23, one, aged 15 years; February 24, four, aged 18, 40, 42 and 45 years; February 25, two, aged 5 and 7 years; February 27, two, aged 4 and 19 years; March 3, one, aged 35 years; March 5, one, aged 22 years; March 7, two, aged 8 and 44 years. Of these there were 13 under 10 years of age, 6 between 10 and 20 years and 11 between 20 and 45 years.

Of these 30 patients two died. The first death was that of a child 7 years old. The death occurred early in the epidemic, and the case was not reported until the fourth day of the disease, and the death occurred on the fifth. One dose of antitoxin was given a few hours before death. The second death occurred in a child of 6 years. The child had two doses of antitoxin and recovered from the diphtheria, but died on the fourteenth day of the disease from paralysis of the heart.

We have been disposed to congratulate ourselves that we were able to arrest the disease in the households where it occurred with so few scondary cases. Up to the present time no other secondary cases have been reported in these households with one exception, to which I will refer later. When the families were poor, or the number of persons in the family large, the patient was immediately taken to the hospital for contagious diseases. Under these conditions we considered it impossible to establish an efficient quarantine at the home, that would protect the other members of the family.

The Health Board decided soon after the beginning of the epidemic to inquire into the milk supply in each case reported. Although the cases developed in widely separated parts of the city and among people who had no close relations, either socially, commercially or otherwise, yet it was believed that there must be a common source of infection. We were soon impressed with the fact that in nearly half of the households in which diphtheria occurred the milk supply was the same.

The Board of Health investigated the milk-farm from which this milk came, and found the sanitary condition about the barns good and could find no cases of illness in the milkman's family or in the families of any of his employees. We then asked if he produced all the milk that he sold. This question led to the information that he bought milk of a wholesale milkman who lived several miles from him. Just at this time a case of diphtheria was reported to the Health Officer that we found to be in the sister of an employee of the wholesale milkman. In following the matter further we found that this young woman was employed in a well-to-do family in the city but that her home was about two miles out of the city and that her family occupied a house that belonged to the wholesale milkman, and that previous to her illness she had spent several nights at home helping to care for members of her family who had been ill with sore throats. Further investigation proved that four of the members of the family had had sore throat some time during the month previous; that during this time two of her brothers who had been sick were in the employ of the wholesale milkman, and when they were able to be out, milked the cows and washed the milk cans. When the investigation of the wholesaler's milk-farm was made, these two young men were doing this work. One of them was the last member of the family to recover from the epidemic of sore throat which had gone through the family, and a culture was taken from his throat. This culture was made on February 18 and was reported positive.

The wholesale milkman was prohibited from selling any more milk in the city for a period of about ten days, and during this time all his cans and utensils which contained milk were thoroughly disinfected under the supervision of a representative of the Health Board. During this time no further cases of diphtheria developed in the wholesaler's family nor in the family of the employees, and he was then allowed to again sell his milk in the city. Nearly all the cases reported subsequent to those already given could be traced quite satisfactorily to one or another of the primary cases and we had no further evidence of infection in our milk supply.

The twenty-four households in which the 30 cases occurred received their milk supply from nine milkmen. Three were supplied by the wholesaler whose milk was infected, ten by a milkman who bought milk regularly of the wholesaler, three bought of a milkman who was the nearest neighbor to the wholesaler and who had a child sick with what was called tonsillitis, five families bought milk of three milkmen who bought milk a part of the time of the wholesaler, three families were supplied by three milkmen whose milk supply was not traced to the infected milk.

The last of the 30 cases referred to was reported on March 7. The next case was reported on the tenth day after the last one of the series of 30 cases. With these cases we begin a second series of fourteen cases, with four deaths. With one exception, to which we have already referred, these cases all occurred in households in which the disease had not previously existed. As has already been stated, the first one of this series developed on March 16, the tenth day after the last one of the primary series of 30 cases. From March 16 to April 26, inclusive, 14 cases were reported in ten households. Five were adults and nine were children. This second series of

cases were not due to milk infection but were due to the inability of the health authorities to establish an efficient quarantine at two or more places where one or more of the primary cases had occurred. The inability to establish an efficient quarantine at one place, the one which was altogether the most important in the spread of the disease, was owing to the lack of co-operation on the part of the family physician with the health authorities. Fourteen cases occurred in ten households: one case each in nine households, and five cases in one household—14 in all. It has been previously stated that no secondary cases have developed in the infected households since March 7, with one exception. It is to this exception that we wish to call your attention in order to trace to its source the infection in one-half of the 14 cases that were reported between March 16 and April 26. On February 24 a case was reported at what we shall designate as No. 316 James street. The patient was not a member of the family but was a visiting relative. The house was quarantined and the quarantine, as reported by the neighbors, was frequently broken. At the time there were quite a number of houses in the city under quarantine because of the presence of diphtheria. When the health authorities had the co-operation of the family physician, and a disposition on the part of the family quarantined to be reasonable, very little difficulty was experienced. In this particular case, however, we had neither the co-operation of the family physician nor the disposition on the part of the family to be reasonable.

The health authorities had not felt justified in stationing policemen in front of quarantined houses, and in this particular case the quarantine was a farce. After this inefficient quarantine, which was an annoyance to the family and no protection to the neighbors, had lasted for about four weeks, the patient (who was a girl of about 18 years) deliberately went to her home several miles away. After this patient had eloped the head of the household demanded that the diphtheria sign be removed from the house. It was then found that one of his own children had been sick with a sore throat, from which she had recovered. The first case in this series, at No. 316 James street, had been treated in the beginning, and reported to the Board of Health, by a physician who had lost his standing in the family by his efforts to protect the neighborhood and observe the regulations of the Board of Health. He had been summarily dismissed. It is presumable that his successor, the regular family physician, had visions of similar treatment when the child of the family developed diphtheria, and he decided not to report the second case. When this fact was called to his attention he admitted that this child had had diphtheria, but added that the house was under quarantine because of the first case and that as this case had left the house and the second had recovered there was no reason for continuing the quarantine. After several days' delay, and some unpleasant experiences, a culture was obtained from the child's throat, and it was found to contain the Klebs-Löffler bacilllus. This culture was made on March 24. The child was about fifteen years old, and had numerous friends in the neighborhood among the children, of about her own age. For something more than a week previous to the time the culture was made she was in the street and playing with some of these children. One of her friends developed the disease on March 20, and died on the 21st. Another developed the disease on March 23. A family in which there were five cases lived at No. 304 James street, only a few doors away. Four of these cases were in children from three to thirteen years of age and the fifth case was the mother. Of these five cases two died, and the attack in the mother was followed by an extensive and prolonged paralysis. These cases were under the professional care of the physician who was called to the second case, at No. 316 James street, and were not treated with antitoxin, as he did not believe in it. There was no question in the minds of the health authorities that the infection to this household came from No. 316 of the same street. This traces seven of the fourteen cases in the second group, with three of the four deaths, to the case in which the quarantine was not maintained. Of the other seven cases, two were friends of two of the primary cases and visited them either just before the attack or during the period of convalescence. Another, the fourth fatal case, occurred in a child who was the second-door neighbor to a family in which there were five children, two of whom were among the thirty cases of the first group.

This family of five children was poor, and the sanitary conditions were bad. The two children who were attacked were removed to the hospital, but it is probable that a neighboring child might become infected. This accounts in a fairly satisfactory way for the infection in ten out of the fourteen cases. The source of the infection in the other four was not determined.

From April 26 to September 24 only two cases were reported in the city. One occurred in a boy of fourteen, who was a resident of an adjoining town and was in the city temporarily, and the other case came to us in the convalescent stage from the country. There were several cases in the country house, with two deaths, and the infection was said to have been brought from Binghamton.

On September 25, 1900, one case of diphtheria was reported and on September 26 three cases. These occurred in different parts of the city, and were all in children or young persons. We were much alarmed over this sudden and unexpected outbreak and were unable to account for it, but we were not obliged to wait long for an explanation, for on the next day, September 27, one of our physicians was called into the

country and found three well-marked cases of diphtheria in the household of a farmer, who was supplying milk to one of our milkmen. Two of the three cases showed the Klebs-Löffler bacilli on the first examination.

The sale of the milk was immediately forbidden and all of the milk utensils of the milkman were disinfected. The milk supply of the four cases was not given when the cases were reported, but as soon as the cases in the country were discovered the milk supply of the city cases was ascertained and it was found that they were all supplied by this one milkman. One of the four cases has died. This infected milk supply was in no way connected with the infected milk supply of last Spring.

It is of interest to note that the home supply of all of the milkmen, whose infected milk was the means of spreading diphtheria, was only infected through milk which they bought. In our city milkmen buy milk of farmers and of each other. Farmers who wholesale milk do not take as good care of it as the milkmen themselves, and the danger of disease from this source is much greater than from the milkman's own herd. In going over the literature on the subject of milk epidemics it has seemed to me that in many cases the failure to trace it to the source of milk infection was due to the fact that the authorities rested with an inspection of the milkman's herd and did not inquire sufficiently into the possible infection from milk obtained from other sources.

It seems to me to be a matter of considerable interest that two distinct epidemics of diphtheria should be traced to milk supplies, in a small city, in one year. Judging from our experience it would seem that milk infection is a means of spreading the disease much more frequently than would be supposed from the small number of epidemics reported that have been traced to milk.

Our experiences have taught us the importance of thoroughness in our attempts to trace infection. I have just learned since writing this paper that diphtheria probably came to Ithaca last Spring through the mother of the first family infected. A short time before our epidemic she visited a married daughter in a small country village, some miles away. This daughter's child and husband had sore throats, from which they did not recover in weeks. While we have no positive evidence that these cases were diphtheria yet the circumstantial evidence seems very convincing.

Dr. H. Arrowsmith's name, by an unfortunate oversight, was omitted from the list of members of the Nominating Committee of the State Association, as published in our last issue. Dr. Arrowsmith is Secretary of the Committee.

THE CONTROL OF DIPHTHERIA IN SMALL CITIES AND COUNTRY DISTRICTS FROM THE BACTERIOLOGICAL STANDPOINT.

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BACTERIOLOGY won its place in the medical sciences by dealing successfully with many of the difficult problems involved in the etiology, treatment and prevention of infectious diseases. More directly than any other of the natural sciences have its investigations tended toward results of an immediate, practical nature. Already it has removed the mystery concerning the cause of many diseases and made it possible for the sanitarian to adopt methods for controlling them based upon the deductions of an exact science. There is probably a no more striking illustration of this than in diphtheria. Certain it is that there is no other serious disease which modern methods have more fully circumscribed and brought more completely under the possible control of the physician and the health official. The success lies in a specific etiology, which constitutes a rational basis for the intelligent development of preventive and therapeutic measures.

The methods adopted and the gratifying results obtained from the bacteriological control of diphtheria in our large cities have been so fully described by the workers in those fields that the general plan is well known to the profession and the success attained precludes further questioning concerning the desirability of the methods. In following them the physician is enabled to positively differentiate true diphtheria from various other throat affections, thereby enabling the health officer to limit with safety the enforcement of quarantine to the dangerous alone. Further than this they have rendered it inexcusable for practitioners to continue to attribute conditions favorable for the spread of the disease as its exciting cause.

After finding the specific cause of diphtheria and the subsequent discovery of diphtheritic antitoxin, methods were sought for by which this definite knowledge could be applied in controlling the spread of the disease and in treating it properly. It was natural that the first experiments in practically utilizing this knowledge should have been made by the health authorities of our large cities and it is to them and to the bacteriologists in their employ that we are indebted for the present methods for its bacteriological management, commonly referred to as the "culture method." Although this method, now enforced in our large cities, affords great protection to their inhabitants, it has not, in this State, at least, been generally adopted outside of the thickly populated centers.

Without discussing other methods, which may or may not have been successfully applied in controlling diphtheria, let us consider briefly a few

facts already demonstrated and generally accepted, which warrant the bacteriologist in holding certain definite views concerning its management.

1. Diphtheria is a disease produced by the presence of and the effect of the multiplication of the Klebs-Löffler bacillus, usually in the throat or nares of the individual attacked. Without this organism true diphtheria cannot exist.

2. The Klebs-Löffler bacillus often is, and always could be discovered, in the throat or nares prior to the development of symptoms of the disease.

3. After the local manifestations have disappeared the organism may still be present. Usually it remains but a short time, but occasionally it continues for several weeks and sometimes for months.

4. Individuals who come in contact with diphtheritic patients, or those seemingly well but who have the Klebs-Löffler bacillus in their throats, may be infected with it.

5. Persons who become infected with diphtheria bacilli, either from a case of the disease or a "germ case," may or may not develop the disease. If not, they may unconsciously carry the organisms in their throats for an indefinite period, possibly infecting others but remaining themselves perfectly well.

6. Individuals who are found to have virulent Klebs-Löffler bacilli in their throats prior to the development of symptoms of diphtheria are known as "germ cases," sometimes referred to as laboratory diphtheria.

7. All persons who are carrying virulent diphtheria bacteria in their throats, whether suffering from the disease, convalescent, or immune, are sources of danger to susceptible people coming in contact with them.

The culture method provides for the full utilization of these facts and consists simply in examining, bacteriologically, the throats of suspected cases and those of the convalescent to determine whether or not this organism is present. It thus affords a means of great value in detecting, positively, diphtheria, thereby not only indicating the specific treatment but safe isolation. When the clinical appearances of the disease are gone the bacteriologist must determine when the Klebs-Löffler bacillus has disappeared and when the patient is safe to mingle with other people. Further than this, it enables one to determine the actually infected from among those who have been exposed, thus indicating the individuals who should be isolated and who should immediately receive prophylactic treatment. The work which is already in progress shows the helpfulness of this procedure in that the culture, like an instrument of precision, removes almost entirely the danger of error in diagnosis, especially in obscure cases, over which clinically experienced minds are, as yet, prone to disagree.

It would seem from the definite results uniformly reported, wherever the culture is used, that it would be more than welcome wherever the disease exists. The inner history of the development of the method, even in our large cities, suggests very clearly, however, the potency of official power in applying the bacteriological tests. In smaller communities this influence is not so strong and the health officer and the bacteriologist meet many obstacles. The people themselves are not familiar with the process and often they do not understand sufficiently its merits to submit willingly to the procedure. They do not like to have a culture taken, and they object to isolation, especially after the membranes have disappeared. These objections, however, could in most cases, at least, be easily overcome if the attending physician would aid the health officer in explaining the necessity for public good of the method imposed. It is here that the trouble often arises, for unfortunately the family physician is frequently willing to take the chances rather than avail himself of this method of precision to insure against secondary infections. There sometimes seems to be a lack of desire to know the exact truth or an unwillingness to accept a means which, from its very nature, must be more accurate than a judgment based on conditions of an undetermined origin. The masque of uncertainty also permits them to acquiesce in the selfish or inconsiderate desire of the patient not to be quarantined. This was well illustrated at Ithaca, where such lethargy on the part of a single physician allowed a child, clinically recovered, to mingle with her playmates while she still harbored, as shown by subsequent examination, the Klebs-Löffler bacillus in her throat, resulting in a local epidemic with four fatalities.

It is often affirmed that the bacteriological management of diphtheria is well enough for the large cities, where there is an abundance of facilities, but in the smaller ones and in the country districts it cannot be applied. Such people seem to feel that modern and best medicine is for the great centers only. Fortunately, however, there are many physicians who recognize the true purpose of the medical profession and who are trying to dispel the popular delusions fostered and disseminated by quacks and irregulars concerning the nature of diphtheria. These men believe that this disease should, and can be, treated as scientifically and with as good results in the hamlet as in the metropolis. As an exemplification of this opinion I wish to call attention to the results of the culture method in controlling an epidemic in a small city. We have not solved any of the well-known and troublesome problems or made any startling new discoveries, but simply applied the method in new territory, encountered the objections, met them as best we could, and enforced the procedure to the extent hereafter mentioned. The purpose in reporting such ordinary results is to procure suggestions from the experienced to help us in the future, and which may encourage those who have not yet adopted the culture method to do so.

The epidemic so carefully discussed by Dr. Biggs occurred in a city where for a number of years diphtheria seems to have been absent. For this reason, perhaps, the physicians were a little skeptical concerning it and, with few exceptions, both physicians and laity had not kept in as close touch with recent developments in methods of handling it as they otherwise would; a condition which may be predicated for other localities. Suddenly there appeared almost simultaneously several cases of the disease. They were widely separated and could not be traced to infection from one another. This condition tended to increase the general anxiety concerning its spread and what to do was the paramount question. The Board of Health recognized the situation, and promptly invited a full explanation of the method and results of handling diphtheria in the large cities. The evidence in favor of the culture method was so convincing that the board at once arranged for the bacteriological examinations and directed that cultures should be made from every suspicious case, and that all those in which the Klebs-Löffler bacillus was found should be placed in quarantine. It ordered, further, that the quarantine should not be discontinued until there were three successive negative cultures on three consecutive days. The sudden springing up of so many cases necessitated prompt action, and we adopted the general plan followed in large cities, and later modified it to meet our local conditions.

The boxes, containing a serum tube, swab and directions, were placed in each of several drug stores and left with the Health Officer. Some of the physicians kept them on hand for immediate use. After they were inoculated they were sent to the laboratory, where they were examined as soon as they developed, and the results were reported, usually by telephone. Of the 62 primary examinations, 33, or 53 per cent., contained the Klebs-Löffler bacillus, and 29, or 47 per cent., did not. From 11 cases primary cultures were not taken. The majority of these were well marked clinically, but a few others are attributed to the neglect of the attending physician. This does not include a large number of examinations of students who came to the laboratory with slightly disordered throats, and from which cultures were made. None of these were suggestive of diphtheria and none proved to be such.

The three negative cultures were usually obtained between the fourteenth and twentieth days. The first of the negatives was obtained in one case in seven days and in one case in eight days after the primary culture was taken. At the other extreme, the bacilli remained in one throat for fifty and in another for sixty-three days. In these there were, toward the end, appreciable modifications in the form of the organisms, but they retained their virulence, as tested on the guinea-pig.

Our little city proved no exception to the rule that in the beginning of an epidemic many people, including sometimes physicians, question the efficiency of the culture method. Nevertheless, the directions of our Health Board were very generally followed, and so promptly and accurately were the true cases detected and the spurious, though often very suspicious ones, eliminated that the method finally demonstrated its efficiency and was recognized by the profession, with the exception of a very few irregulars, as being far more trustworthy than the judgment of the clinicians, which it aims to assist and not, as some have stated, to supplant. Although the method may have its weak places and may sometimes fail, it enabled our board to accurately, promptly and positively diagnosticate to the final satisfaction of the practising physician every suspected case reported. This early diagnosis followed with quarantine, which was not removed until negative cultures were obtained, accounts for the very few secondary cases as pointed out by Dr. Biggs.

The culture method proved to be of special value in tracing the source of infection. It was learned that many of the first cases were on a single milk route. This was investigated, and it was found that one dairyman employed, to assist in milking, a boy who came from a large family in which all of the children, including himself, had recently passed through a course of some form of tonsillitis as diagnosticated by the attending physician. This was the only clue, and in the face of the positive diagnosis of tonsillitis it would have yielded nothing definite but for the bacteriological examination. Blood-serum tubes were inoculated from the boy's throat, and nearly pure cultures of the Klebs-Löffler bacillus were obtained. To confirm the identity and to determine the relative infective power of the organism, guinea-pigs were inoculated with the culture. These died in the usual time, and exhibited typical lesions from which the diphtheria bacterium was obtained in pure culture. After this source of infection was removed, and the milking utensils thoroughly disinfected, there were no more cases traceable to the milk.

Recently a second appearance of the disease occurred and, like the first epidemic, the cases were on a single milk route. An investigation made known the fact that there were three cases of diphtheria in the family on a farm supplying part of the milk to this dealer. The culture method was again used and the diagnosis confirmed by finding the Klebs-Löffler bacillus in their throats. It is of interest to add that in the house which was somewhat recently occupied by this family one of our physicians had a fatal case of diphtheria about ten years ago, and since that time the report is that other families occupying it have suffered from the disease.

In small places the enforcement of quarantine, especially after the membranes and symptoms have disappeared, must, if resistance is avoided, be based on some explainable condition.

The natural history of the disease shows that justice to the patients and to the public precludes an ironclad rule for all. The method provides, therefore, that quarantine shall be maintained during the stay of the diphtheria bacterium. In two of our cases it remained for an unusually long time after the membranes had disappeared. It is in connection with these that the method is often threatened. With us the strain was intensified by the fact that certain physicians maintained that there was no reason to continue quarantine. We were told that the organisms were pseudo-forms, that they existed in every throat, that so long as the membranes were gone there was no disease, no danger, no matter what bacteria were there. In each of the cases, however, the organism continued to be virulent so long as it remained in the throat. Our board considered this virulence sufficient to maintain quarantine to the end, and the bacteriologist saw no reason for changing such a ruling. The justice of such a procedure is often questioned and the time and extent of the seclusion of such patients and their attendants are among the difficult problems before us. With us the justification rests in the most gratifying result that from the cases kept in seclusion, in accordance with this method, no secondary cases occurred. When once established the people quickly become reconciled to the exact requirements of this method, and actually glory in the relief it brings concerning suspected cases. A positive culture means prompt isolation of patients and the careful inspection of the throats of the exposed, and prophylactic treatment if the Klebs-Löffler bacillus is found. If the culture is negative the anxiety is as promptly dispelled.

The search for "germ cases" in the schools and among the possibly exposed was not as thoroughly made as the most advanced methods would warrant. The winning of the people to this method of diagnosis and quarantining were quite as much as a single epidemic seemed to make possible. At the Willard State Hospital the search for "germ cases" has been made with most gratifying results. It is reported that in certain cities they are sought with great vigilance, with the result that schools are no longer broken up and real epidemics are avoided. In this State the Board of Health seems to hesitate to consider " germ cases " to be of sufficient danger to warrant the treating of them, so far as quarantine is concerned, in the same category as membranous ones. This seems to be unfortunate for the enforcement of safe quarantine as defined bacteriologically will in some cases be impossible, unless the local authorities are sustained by the State Board. In Ithaca we had difficulty with one such case, and the defendant secured competent legal advice that quarantine could not lawfully be maintained, if the throat showed, macroscopically, no signs of disease; and this opinion was acquiesced in by the Commissioner of the State Board of Health, to whom the matter was referred. It is to be hoped that ere long the law will recognize the carrier of virulent diphtheria bacteria, no matter what the physical condition may be, as a fit subject for therapeutic or prophylactic treatment and isolation.

The important question arises concerning the extent to which this method may be applied in small places and country districts. With us it proved to be of great value, and there seems to be no reason why it should not be generally practised. The objector points out the lack of facilities. Certainly every physician should know how to take the cultures, and every city of any considerable size has its laboratory, which could easily be availed of for this kind of work by the surrounding communities. All small cities and intervening places are within a few hours of them. A culture can be taken and sent to the nearest of these laboratories, and the answer returned by wire within twenty-four hours, from almost every place in the State. With the first cases there might be delay in procuring the tubes, but thereafter the work should be prompt. If the centralization does not obtain, it would seem that the large variety of conditions, other than diphtheria, which appeal to the laboratory worker, would warrant one physician in each of the larger of these smaller places to equip a small working laboratory. The expense of the necessary apparatus would not be excessive, and the patronage of nearby physicians should fully justify such a course.

The need in all localities for the protection offered by the culture method is fully explained in the simple fact that diphtheria often produces serious epidemics in country districts, and not infrequently it is brought, either directly or indirectly, into cities by those who have been allowed to escape while still infected. This condition could not occur if the bacteriological teachings were strictly observed. Laxity in controlling diphtheria in the country, opens, often in the most unexpected manner, the channel for its introduction into more thickly populated centers. Had this method been rigidly enforced in the family of the employee of our milkman the epidemic at Ithaca would not have been.

Another benefit from the culture method is that it indicates the cases for the specific or antitoxin treatment. The reports show, that for the best results, it must be administered early. Some physicians, especially in the smaller places, give it as a last resort, when the disease is far advanced or the patient is practically dying, and, because it fails, they denounce it, or worse, as one recently stated, "the antitoxin killed the child." While professionally, such statements signify buncombe rather than knowledge, they have much weight with the laity and tend to obstruct the adoption of the safe, simple and direct methods indicated for the control of diphtheria by the teachings of bacteriology, which may be summarized with great clearness in early diagnosis, early use of antitoxin, strict quaran-

tine, release on negative cultures only, and thorough disinfection. Five well-defined, logical procedures based on the natural history of the disease and which must be universally and rigidly adhered to if the number of epidemics and the high mortality of earlier times are to be reduced to the possible minimum.

BY-LAWS OF THE FIFTH DISTRICT BRANCH ASSOCIATION OF THE NEW YORK STATE MEDICAL ASSOCIATION, ADOPTED JANUARY 4, 1901.

ARTICLE I.

INCORPORATION.

SECTION 1. This body, organized under and by the authority of The New York State Medical Association for the Counties of Dutchess, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Sullivan, Ulster and Westchester, and designated as The Fifth District Branch Association of The New York State Medical Association shall be composed of the several associations that are or may hereafter be organized in the above named counties and of unattached members residing in any of said counties where no such association exists.

ARTICLE II.

ORGANIZATION.

SECTION 1. The organization of this body shall consist of four officers, namely a President, a Vice-President, a Secretary and a Treasurer, and of two Standing Committees, namely, an Executive Committee and a Committee on Nominations.

ARTICLE III.

DUTIES OF OFFICERS AND COMMITTEES.

President and Vice-President.

SECTION 1. The duties of the President and the Vice-President shall be such as commonly pertain to those officers, and the President shall also make himself familiar with the character and quality of work performed by the County Associations in his jurisdiction, and report on their condition at the annual meeting of the District Branch Association.

Secretary.

SEC. 2. The Secretary shall perform the usual duties pertaining to that officer, and shall make an annual report of the proceedings of the Branch Association to the Secretary of the State Association, and shall give therein the names of the Fellows elected as members of the Nominating Committee of the State Association for his District Branch Association.

Treasurer.

SEC. 3. The Treasurer shall collect the initiation fees, annual dues and fines of unattached members, and shall receive and disburse these and other funds of the Association as provided in Article X of the By-Laws of the State Association.

Executive Committee.

SEC. 4. The Executive Committee shall be composed of the officers of the District Branch Association and of the several Presidents of the component County Associations. This Committee shall be charged with the general management of the affairs of the District Branch Association and shall hold at least one meeting annually at which five members shall constitute a quorum.

Nominating Committee.

SEC. 5. The Nominating Committee shall be composed of one member chosen from and by each of the component County Associations, and shall present at the annual meeting a list of nominees for the several elective offices, and two members of the Committee on Nominations of the State Association.

ARTICLE IV.

MEMBERSHIP.

SECTION 1. Resident membership in The New York State Medical Association and in this District Branch of said Association shall be obtained by physicians eligible thereto residing in counties within the jurisdiction of this Branch Association having no County Association, through application to and election by the Executive Committee in a manner prescribed by said Committee, or as prescribed by Article IX, Section 2, of the By-Laws of The New York State Medical Association. The Council may elect members at the annual session when the application is approved by three (3) members of the Executive Committee of his District Branch Association, provided there is no County Association in the County in which the applicant resides.

ARTICLE V.

INITIATION FEES AND DUES.

SECTION 1. Initiation fees and dues shall be as fixed by the By-Laws of The New York State Medical Association. The dues of the Fifth District Branch shall be determined by the Executive Committee at its annual meeting.

ARTICLE VI.

RESIGNATIONS AND REMOVALS. ETHICS AND DISCIPLINE.

Resignations.

SECTION 1. Power to receive and accept resignations under the limitations fixed by the By-Laws of The New York State Medical Association shall be vested in the Executive Committee.

Removals.

SEC. 2. The procedure in cases of removal of unattached members shall be that prescribed in Article IX, Sections 6, 7, 8, 9, 10 and 11 of the By-Laws of The New York State Medical Association.

Ethics and Discipline.

SEC. 3. All questions of ethics and discipline relating to an unattached member shall be referred by the Executive Committee to the County Association nearest to the residence of the accused member, in so far as relates to the adjudication of his case, and to all intent and purposes he shall be a member of said County Association.

ARTICLE VII.

MEETINGS AND ORDER OF BUSINESS.

Meetings.

SECTION 1. An annual meeting shall be held on the first Tuesday in May, at which shall be chosen, by ballot, the officers of the District Branch Association and two Fellows as members of the Committee on Nominations of the State Association.

Special Meetings.

SEC. 2. Special meetings may be called by the Executive Committee.

SEC. 3. Twenty-five members shall constitute a quorum in executive session.

Order of Business.

SEC. 4. Order of Business:

1. Calling the meeting to order.
2. Reports of Standing and Special Committees.
3. Reports of delegates to other District Branch Associations.
4. Report of the Treasurer.
5. Unfinished business.
6. New business.
7. President's address.
8. Scientific business.
9. Reading of the minutes of the meeting and action thereon.
10. Adjournment.

ARTICLE VIII.

SEAL.

SECTION 1. The seal of this Association shall be as describel in Article XIII, Section 2, of the By-Laws of The New York State Medical Association.

ARTICLE IX.

AMENDMENTS.

SECTION 1. Amendments or additions to these By-Laws may be made by a two-thirds' vote of the members present at an annual meeting or at any stated meeting provided that notice of such amendments or additions shall have been presented in writing, and that a copy of such amendments or additions shall have been sent to each member with the notice of the meeting at which they are to be considered.

LINSEED MEAL POULTICE.—Warm a basin, pour in boiling water; sprinkle in the meal, stirring vigorously, till it becomes of the consistency of thick porridge; spread on tow or old linen, turning in the edges all around; before applying put it against one's cheek to feel that it is not too hot. Retain in position with a broad flannel roller, secured with safety-pins. Renew every four hours or oftener. The poultice should not exceed half an inch in thickness. Caution is necessary in poulticing the chest of infants in order not to overload the chest and tire out the respiratory muscles.—*Pediatrics.*

GUAIACOL OINTMENT.—Guaiacol applied locally seems to be a safe and efficient remedy in relieving the pain of arthritis deformans, acute articular or muscular rheumatism, sciatica, orchitis and epididymitis. One part of guaiacol to 10 or 15 parts of vaselin or lanolin should be applied to the painful parts.—*New England Medical Monthly.*

OINTMENT FOR EXTERNAL PILES.

℞ Chrysarobin .....gr. xv
Iodoformi .....gr. v
Ext. belladonnæ.....gr. x
Vaselini ..... ʒ iv

M. Ft. unguentum. Sig. Apply locally night and morning, first cleansing the parts well with water.

The New York State Journal of Medicine.

Published Monthly by The New York State Medical Association.

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VOL. I. MARCH, 1901. NO. 3.

Association Notes.

COMMITTEE ON NATIONAL LEGISLATION OF THE AMERICAN MEDICAL ASSOCIATION.—The meetings of this committee were held at Washington, D. C., February 20th and 21st, delegates from fifteen States being present. Dr. Charles E. Quimby, of New York, represented the New York State Medical Association. Much important business was transacted, although the real work of the conference was more in the way of developing a mutual understanding of the common needs of the profession, rather than adopting measures for the introduction of specific legislative measures. After a general report of the American Medical Association Committee the delegates were called on for reports of any nature bearing on the special work of the conference or on the subject of organization of the several State Associations. Dr. Quimby briefly presented the main points of the reorganization plan of the New York State Medical Association, which were received with marked interest, many of the members afterward asking for more information on the subject.

The attention of the conference was called to certain provisions of the new post office bill, now before Congress, which, if allowed to go through, would put a tax on the American Medical Association of at least $20,000 a year, for increased postage on the *Journal*. Inquiry developed the fact, however, that this section would be struck out or modified.

Surgeon-General Sternberg explained the provisions of the new army bill, relating to the medical service, and some impetus was given to the passage during the present session of the bill giving more power to the Marine Hospital Service. There was some discussion on the subject of inter-State reciprocity in medical legislation, but nothing definite was arrived at in this direction.

The correspondent of the JOURNAL, in summing up the results of the meeting, says: "Personally, I feel that the annual meetings of this committee will do a great deal toward securing the object for which we are all striving—union of the profession; and I am sure that every man present came away fully determined that the meetings must be continued, and that he would do all in his power to have every State represented by a delegate next year. Dr. H. L. E. Johnson, chairman of the committee, deserves great credit for the immense amount of good work he has done in watching the course of medical legislation before Congress, a task that few of the uninitiated can appreciate."

* * *

FIRST DISTRICT BRANCH ASSOCIATION.—A special meeting of the First District Branch Association was held at the Butterfield House, Utica, Monday, February 25, 1901, for the purpose of reorganization, in conformity with the recently adopted by-laws of the State Association. Dr. C. B. Tefft, of Utica, presided. The following were present: Drs. J. C. Hunt, and H. C. Palmer, of Utica; W. B. Reid and J. O. Stranahan, of Rome; W. P. Earle, C. H. Glidden and E. H. Douglas, of Little Falls; J. W. Douglas, of Boonville; S. S. Richards, of Frankfort; Douglas Ayres, of Fort Plain; C. W. Munger, of Knoxboro, and Charles R. Mahady, of Westernville.

Dr. Tefft delivered the following address: "Fellow laborers in a field without bounds, a field whose soil is ever fruitful, yielding to the laborer a just proportion for brain and brawn

expended. Brothers, it gives me great pleasure to welcome you to our beautiful home city, Utica. The published call indicates there is labor to be performed. Last October the New York State Medical Association completed its reorganization, which gave it a standing in the law that the highest court declares is equal to any association or society in the State. The Branch Association exists, and should provide for the adoption of a constitution and by-laws, and elect its officers.

"The State Association provides for the organization of associations in counties having ten members in good standing. There are no County Associations in this district. Oneida and Herkimer counties have each the required membership, and I most sincerely hope we may at this session take the necessary steps for organization in these counties. Our time will be wisely spent if we secure such organization. Who will be the first in the district?

"If there be disappointment in the number of papers presented you will kindly place the blame among my short-comings as your president. My opinion was and is now that the demand is for organization as a preparation for work that can only be accomplished by, and through, organization. Lack of organization has kept the medical fraternity from being felt in the affairs of everyday life. We sit idly by, and permit men void of any pretense of knowledge of the laws of health to make our statutes and formulate the detail of rules and regulations for the protection of the people from disease and death. This we ought not to do without protest. Organize, be active, be a unit in action upon matters of health, and our protests will be heard in the halls of legislation."

Dr. Frederick Holme Wiggin, of New York, was then introduced, and outlined the plan of reorganization recently adopted by the State Association. A Committee on Nominations was then appointed, consisting of Drs. J. C. Hunt, C. H. Glidden and W. B. Reid. Dr. J. W. Douglas, of Boonville, was elected vice-president, and Dr. E. H. Douglas, of Little Falls, secretary and treasurer. The annual meeting will be held at Utica on the third Tuesday in May. Drs. C. H. Glidden, of Little Falls, John Edwards, of Gloversville, and Douglas Ayres, of Fort Plain, were appointed a Committee on By-Laws, to report May 21st.

The following new members were elected: W. P. Earl, of Little Falls; Charles R. Mahady, of Westernville; F. J. Douglas, of Utica; J. O. Stranahan, of Rome; Howard J. Teller, of Rome, and Maynard G. Burgess, of Herkimer.

* * *

Oneida County Medical Association Organization.—The Oneida County Medical Association was organized February 25, 1901. The following officers were elected: President, W. B. Reid, of Rome; vice-president, H. C. Palmer, of Utica; secretary, J. O. Stranahan, of Rome; treasurer, John Croman, of Utica. The following Committee on By-Laws was appointed: C. B. Tefft, H. C. Palmer and James Hunt, of Utica.

* * *

Changes in the Medical Directory.—*Removals, New York City:* Dr. Frank P. Howser, from 152 West 101st street to Centerville Station, Sullivan County, New York; Dr. J. L. Waldie, from 466 Hart street, Brooklyn, to 394 Decatur street, Brooklyn; Dr. Henry T. Kelly, from 37 West 118th street, New York, to White Plains, N. Y.; Dr. John Milton Holt, from 308 Macon street, Brooklyn, to Cairo, Ill., care of U. S. Marine Hospital Service; Dr. John Horn, from 255 East Broadway to 221 East Seventeenth street; Dr. Samuel F. Brothers, from 227 Madison avenue to 1547 Madison avenue.

Removed, Addresses Unknown, New York City: Dr. C. J. Sharretts, formerly at 241 East Eighty-first street; Dr. E. W. Weiss, 218 East 114th street; Dr. H. Klamer, 31 First street; Dr. Wolf Kaplan, 172 East Ninety-fifth street; Dr. Albert W. Sully, 117 West Sixty-fourth street; Dr. Julius H. Escobar, 220 West 121st street.

* * *

New York County Association.—The regular monthly meeting of the New York County Medical Association was held at the Academy of Medicine, New York City, on the evening of February 18th, and was very largely attended. Dr. Eden V. Delphey reported a case of ulceration of the placenta, and was followed by Dr. S. B. Allen, who read a paper on "The Lack of Uniformity in Prescribing Myopic Glasses," which was discussed by Drs. Henry Oppenheimer, Frank Skeel, J. H. Woodward, and J. Herbert Claiborne. Dr. Eugene Fuller then read a paper, entitled "A New Operative Method of Exposing the Seminal Vesicles and the Prostate for the Purpose of Extirpation or Drainage. A Preliminary Report." This paper and the succeeding one, by Dr. L. Bolton Bangs, on "The Bottini Operation for Enlarged Prostate," was discussed by Drs. Willy Meyer, John Rogers, J. W. S. Gouley, and S. Alexander. The importance of the after-treatment was emphasized by all the speakers. The cases reported appeared to demonstrate that, while the Bottini operation is less dangerous than prostatectomy, the results, as a rule, are less satisfactory.

At the executive session the following were elected to membership; James Alexander Ferguson, Lind avenue and 166th street; Christian A. Herter, 819 Madison avenue; C. S. James, 316 East Eighteenth street; Frederick Knowles, 204 Lenox avenue; P. W. Nathan, 28 East 131st street; Edward Schnaper, 860 Lexington avenue; David Gilbert Yates, 67 West 104th street.

* * *

Orange County Medical Association Organization.—A meeting for the purpose of organizing the Orange County Medical Association was held at the office of Dr. M. C. Conner,

Middletown, February 12, 1901. Dr. John A. Wyeth, president of the State Association, was present, and explained in detail the recently adopted plan of reorganization. At the conclusion of his remarks the new association was lor, of Otisville, and W. E. Douglas, of Middletown, being elected president, Dr. F. W. Deems, of Unionville, vice-president, and Dr. C. I. Redfield, of Middletown, secretary, and treasurer. Drs. C. E. Townsend, of Newburgh; R. A. Taylor, of Otisville, and W. E. Douglas, of Middletown, were appointed a commitee on by-laws; Dr. C. E. Townsend and Dr. F. D. Myers, of State Hill, a committee on legislation; Drs. Joseph B. Hullett, of Middletown, William Evans, of Westtown, and Charles A. Canfield, of Middletown, a committee on public health; and Drs. Edward Woodhull of Monroe; Henry B. Swartout, of Port Jervis, and E. H. Nugent, of Unionville, a committee on medical charities.

The association then adjourned, to meet again March 12th, at which time by-laws, in conformity with those of the State Association, will be adopted.

Dr. C. I. Redfield, the secretary and treasurer, writes as follows concerning the new association: "Judging from the great interest manifested at this meeting, I think the association will grow rapidly in popularity among the physicians of this county. We expect to invite all the regular practitioners of Orange County to attend one of the meetings very soon."

* * *

Importance of Examining Water Supply.—A member of the Committee on Public Health of the State Association sends us the following:

"It seems very opportune to call the attention of the profession frequently to the great importance of examining carefully into the condition of the sources of supply of the waters that are used for drinking throughout our State. With the rapid increase in population, especially in our larger cities, correspondingly large quantities are required, and many times sources must be utilized that require great care to keep them free from deleterious germs. When we take into consideration the importance of water, the amount consumed in the daily life of every person, this subject appeals to us with renewed force.

"Many of our larger villages take their supply from small streams from one to several miles distant from them, and the most important point is to tap the stream where the lay of the surrounding lands would prevent a marshy source and a more or less filthy watershed surrounding it, for in this we find, during the summer months, especially if unusually dry, a source of disease-bearing germs from decaying animal and vegetable matter, that could easily be avoided by such care and close observation as would ordinarily be exercised and made use of by those who are fully alive to their importance.

"The writer lives in a village situated in a valley surrounded by gently sloping hills from which various streams find their way into the river below. From one of these streams we take our water supply. During the past summer there were a number of cases of fever in our village, which led me to have the water analyzed, and the result was a very unfavorable report as to its purity. Investigation revealed the fact that the stream was pure a short distance above the intake-dam, but that the dam was located just below a low marshy point covering several acres, which was contaminated by a herd of cows which was allowed to feed about it and stand in it, as well as by the decaying vegetable matter which rapidly obtains during a season of drought.

"This is only one instance in many that must exist in the hundreds of similar sources throughout the State, and this short article is prompted by the thought that frequent allusions to this very important matter will cause us to frequently investigate in our various localities and make sure that the water we drink is of the best and purest quality."

* * *

Kings County Medical Association.—The regular monthly meeting of the Kings County Association was held Tuesday evening, February 12th. The vice-president, Dr. George H. Treadwell, presided. About thirty members and guests were present. The order of business, recently adopted by the association at the time of its reorganization, was carried out for the first time.

Dr. L. Grant Baldwin exhibited three interesting specimens of uterine and ovarian fibroids. He called attention especially to the fact that the size of these tumors is not in proportion to the pain and discomfort they give rise to.

The paper of the evening was read by Dr. B. Onuf, and was entitled "Syphilis of the Nervous System." The discussion was opened by Dr. Joseph Fraenkel, of New York, who brought out many interesting points, not only emphasizing those advanced by the reader of the paper, but many others of a practical nature. He said that general practitioners are either too prone to diagnosticate a gonorrheal condition, or to pass it by unrecognized, and that the possibility of the existence of such a condition should, therefore, be more often borne in mind when making a diagnosis. He illustrated his point by saying that facial paralysis is very often due to gonorrheal infection. As this condition is not usually attributed to such infection, its possibility should always be considered.

A short executive session followed, at which a resolution was unanimously adopted appealing to the governor of the State not to reduce the appropriation to support the Pathological Research Institute, which is now in danger of being much hampered in its work.

* * *

Nominations for Office.—Attention is called to the fact that at the March meeting of the New

York County Association nominations will be in order for officers, for member of the executive committee, for Fellows and alternates of the State Association, and for member of the nominating committee of the Fifth District Branch Association. The Fellows and their alternates are respectively delegates and alternates of the State Association to the American Medical Association, which meets at St. Paul, Minn., June 4-7, 1901. The annual election occurs at the April meeting of the County Association.

* * *

Chautauqua County Medical Association Organization.—The Chautauqua County Medical Association was organized February 13, 1901. The following officers were elected for the ensuing year: President, Dr. Thomas D. Strong, Westfield; first vice-president, Dr. William M. Bemus, Jamestown; second vice-president, Dr. O. C. Shaw, Cassadaga; secretary and treasurer, Dr. H. A. Eastman, Jamestown. Member of nominating committee of the Fourth District Branch Asociation, Dr. Morris N. Bemus, Jamestown; alternate, Dr. J. W. Morris, Jamestown. Fellows, Dr. V. D. Bozovsky, Dunkirk; Dr. A. T. Livingston, Jamestown; alternates, Dr. E. S. Rich, Kennedy; Dr. E. A. Rood, Westfield. Trustees, Dr. J. W. Morris, three years; Dr. L. Hazeltine, two years; Dr. H. W. Davis, one year.

After the election of officers fifteen new members were elected. A committee was appointed to draft by-laws, which will be acted on at the next meeting. Much enthusiasm was shown by those present at the meeting, and a highly successful future is predicted for the new association.

* * *

Sullivan County Medical Association Organization.—A meeting for the purpose of organizing the Sullivan County Medical Association was held at Liberty, February 19, 1901. The following were present: Drs. C. S. Payne, of Liberty; Frank P. Howser, of Centreville Station; Stephen W. Wells, of Liberty; J. L. C. Whitcomb, of Liberty; C. W. Piper, of Wurtsboro; R. D. Maynard, of Rockland; R. A. De Kay, of Liberty; J. S. Curlette, of Mountaindale; George R. Bull, of Bloomingburg; R. W. Stearns, of Long Eddy, and A. B. Sullivan, of Liberty. The following officers were elected: President, C. S. Payne; first vice-president, Frank P. Howser; second vice-president, S. W. Wells; secretary, J. L. C. Whitcomb; treasurer, C. W. Piper.

* * *

Membership Certificates.—At a meeting of the Council of the State Association, held February 15th, it was decided to issue an annual certificate, signed by the president, secretary and treasurer, to all members, on the payment of yearly dues.

Department for Short Advertisements.—For the convenience of members of the Association, To Let, For Sale, and Exchange advertisements will be accepted for publication in the Journal, beginning with the April issue, at the nominal price of $1.00 per inch (sixty words) or fraction thereof, each insertion. Cash must accompany order. "Copy" must be sent in by the 20th of the month preceding publication.

* * *

Biographical Sketch of Dr. Homer O. Jewett.—The following account of the life of Dr. Homer O. Jewett, of Cortland, N. Y., has been contributed to the Journal by Dr. Frank H. Green, of Homer.

"Dr. Homer O. Jewett, one of the founders of the New York State Medical Association, and always an active and interested member, died at his home in Cortland, January 30, 1901, aged 81 years and 10 months. The immediate cause of his death was pneumonia, which developed the day before the fatal termination, but for several months previous to that time he had been in feeble health and confined to the house, his once strong constitution gradually breaking down under the increasing infirmities of age.

"Dr. Jewett was of Norman descent, his ancestors having emigrated from the North of England about the middle of the seventeenth century, and settled in the central part of Massachusetts. His father, Walter Jewett, was a native of Lanesboro, Massachusetts, being the son of a Revolutionary hero, who faithfully served his country throughout that war, and who married Betsey Rockwell and moved to Lebanon, Madison County, New York, in 1816. Seven sons and two daughters were born to them, of whom the subject of this sketch was the youngest and last survivor. Dr. Jewett was born March 31, 1819, in Lebanon, and in 1832 his father moved with his family to Homer, in order that better educational advantages might be enjoyed by the children at the academy at that place, which was under the administration of Prof. Samuel B. Woolworth, to whose counsel and encouragement Dr. Jewett attributed much of the success which resulted from his work while a student at that institution. On leaving the academy he taught school for three years, and while thus engaged began the study of medicine, and entered the office of Dr. A. B. Shipman, in Cortland, alternating medical study with teaching in order to enable him to defray the expenses of a lecture course, much of the time devoting sixteen hours out of the twenty-four to teaching and study.

"During the winter of 1841-42 he attended the first course of lectures ever delivered in the medical department of the University of the City of New York. He also attended the second course, and was graduated from the institution in 1843. The faculty of the school at that time consisted of Drs. Valentine Mott, Martin Paine, Granville Sharpe Pattison, John Revere, John W. Draper

and Gunning S. Bedford, one of the most successful and brilliant bodies of teachers that ever graced the halls of medical learning in this country. Dr. Paine was his oracle, an oracle well chosen, and in him he saw only what was wise, noble and generous. Dr. Paine showed his pupil many kind attentions, proffering him the freedom of his private office, giving him several valuable medical works, together with much safe advice, all of which proved a healthy stimulus to his ambition.

"After practising a few weeks with his preceptor, he established himself, in 1843, at Summer Hill, Cayuga County New York, where he remained six years. Here he had a wide and unobstructed field of practice, which he thoroughly and successfully cultivated, acquiring much valuable experience in the way of diagnostic skill and therapeutic tact. In the summer of 1849 he moved to Cortland, where, for fifty years, he actively pursued the duties of his calling. For more than forty years it was his rule never to refuse a call that he could attend, regardless of the condition of the patient, the inclemency of the weather, the state of the roads, the time of the day or night, or the distance from home. He never concerned himself with politics, nor sought political preferment, nor did he engage in enterprises outside his profession. He seldom enjoyed a vacation, or was absent from his duties.

"Dr. Jewett was a member of the Cortland County Medical Society, the American Medical Association, the Medico-Legal Society of New York, and, as stated at the beginning of this sketch, a member and founder of the New York State Medical Association. For several years he was a member of the Council of the latter, and as a member of the Third District Branch Association was chosen its vice-president and president. He was a frequent contributor to medical literature, and always took an active interest in medical meetings. Many volumes of the *Transactions* of the State Association contain articles from his pen.

"Dr. Jewett, through the long years of his practice, was loved to a remarkable degree by his patients. He was proverbially kind and attentive to the sick, rich and poor alike, oftentimes without hope of reward other than the thanks of his patient. Of him it may be truly said: 'He was advertised by his loving friends.' He was cautious and conservative in all his treatment, striving to work in harmony with the curative efforts of Nature. He often spoke of recoveries, but not of cures.

"Dr. Jewett was married October 1, 1850, to Matilda E. Ingalls, of Summer Hill, who, with two sons, G. S. P. Jewett, of Utica, and A. S. Jewett, of Cortland, survive him. Dr. and Mrs. Jewett celebrated their golden wedding anniversary last fall."

* * *

New County Associations.—Five new County Associations have been formed during the past month with a total membership of seventy-six.

* * *

A Journal Supplement.—With the April number of the Journal will be distributed an attractive supplement containing the paper by Dr. E. H. Squibb, of Brooklyn, entitled "Brief Comments on the Materia Medica, Pharmacy and Therapeutics of the Year Ending July 1, 1900," read at the last annual meeting of the State Association. The publication will be of the same size as that of former papers on this subject by the author, and will be found invaluable as a book of reference regarding the advances that have been made during the year in the branches of which it treats. If any member of the State Association fails to receive a copy promptly, one will be forwarded on application to Dr. Squibb, P. O. Box 760, Brooklyn, N. Y.

* * *

Spread of Infection by Clothing.—At the recent meeting of the American Public Health Association Dr. A. H. Doty, Health Officer of the Port of New York, read a paper with the above title. In his opinion the danger of infection from this cause is very slight. The paper has given rise to much criticism, to which Dr. Doty has replied as follows: "What I presented was not a theoretical conclusion, but a plain statement of facts which have come under my observation during a continuous experience of twenty years with infectious diseases, both in connection with this Department and the New York City Board of Health. I am well aware that what I said is antagonistic to the views held by many physicians, nevertheless it is the result of careful, practical observation, and such observation must receive the most careful consideration in making rules and regulations for the protection of the public health. Some of the most careful observers, both in this country and abroad, are in accord with the views which I have presented. As a matter of fact, these views are apparently endorsed by the medical profession, both in private practice and in matters relating to public health, inasmuch as physicians daily visit infectious disease and go from them directly to other patients without disinfection and change of clothing. Moreover, health departments throughout the country permit their inspectors and diagnosticians to visit infectious disease in the same manner. In families where scarlet fever exists, for instance, the adult members who are actively employed outside are allowed to continue their business without interruption. Of course they are usually admonished not to enter the apartment of the sick when at home. In a large percentage of the cases the patient roams about the house or apartment at will. Therefore, if the clothing actually worn by well persons were a medium of infection to the extent which is commonly believed, we would certainly and surely have indisputable evidence of it, which we do not. If such were the case, physi-

cians and health department officials would be continually aiding and abetting the propagation of infectious disease in the most serious and pronounced way, inasmuch as they go directly from one patient to another, sometimes within an interval of only a few minutes.

"I have distinctly and clearly stated in my paper that infectious diseases may, in some instances, be transmitted through the medium of the clothing of well persons. This statement gives no license to ignore reasonable precautions which may be deemed necessary to prevent the transmission of infection in this manner. I believe this answers the point raised by the committee in regard to smallpox quarantine. As a matter of fact, a smallpox patient should, under no circumstances, remain with the family; and either the patient, or the remainder of the family, should be removed from the immediate premises. Therefore, no excuse would exist for persons aside from the nurse or physician visiting or being in contact with the patient, which would be done at a personal risk.

"My object has been to show that infectious diseases are not commonly transmitted in the clothing actually worn by well persons, and we must not give this undue consideration in making rules and regulations for the protection of the public health. While this does not release us from every reasonable effort to prevent danger from this source, it teaches us that we must also look elsewhere for the origin of outbreaks of infectious disease. It is an easy means of satisfying ourselves and the public, to assume that outbreaks of smallpox, scarlet fever, etc., have their origin in infected clothing worn by well persons, whereas in many of these instances, the appearance of the disease is unquestionably due to mild, ambulant or convalescent cases in our midst, which are unrecognized. If we are satisfied that in some way the clothing of well persons is responsible for the outbreak, then we are apt to make no further investigation, which I believe to be decidedly wrong. Bacteriological reasearch goes far toward confirming what I have already said regarding this matter, and we know that pathogenic organisms are exceedingly short lived in the presence of air and sunlight. My experience in the New York City Board of Health, for fifteen years before assuming this office, both in the capacity of diagnostician and Chief of the Bureau of Infectious Diseases, has given me an opportunity for the investigation of this subject which comes to very few. We cannot preach one thing and act another. If it is true that the clothing of well persons commonly acts as a medium of infection, then both physicians and health departments are committing a serious error in the manner in which they visit these cases. On the other hand, if the clothing actually worn by well persons only in rare instances acts as a medium of infection, as I believe, then the attitude of physicians and health departments in regard to their inspection of these cases is proper."

THE WORD "DISEASE."—A member of the Association, with the signature Iatros, inquired if it would not be advisable to substitute for "disease" a more significant word. The query was referred to another member, who, signing his answer Medicus, said:

"While it is acknowledged that 'disease' does not convey the idea that modern physicians conceive of those abnormal conditions of which *dis*-ease is but a symptom, the time is not yet ripe to discard this word, which, throughout the medical world, is accepted to signify some disordered bodily function or some alteration of structure, and has been so understood for a score of centuries by civilized nations, each, in its own tongue, using an equivalent term.

"That the word 'disease' has been used in differing senses is shown in the works of ancient and even modern writers. One example would seem sufficient. In Chauser's 'Troilus and Creseide,' the following occurs:

And therewithall Creseide anon he kist,
Of whiche certain she felt no disease,

meaning that she felt no *dis*-ease, no lack of ease from the osculation, and surely no disinclination to be kissed.

"In the old French is the word *desaise,* and in the new, *malaise,* signifying literally *no ease* in the one and *ill ease* in the other case. It is true that the itch-mite gives *dis*-ease, even pain, in the skin, and that disorder of a function often causes much *dis*-ease and distress; nevertheless the itch continues to be called a skin disease, and a disordered function a functional disease.

"The original use of the word 'disease' was due probably to the fact that early beginners of the study of human ailments looked at their phenomena and sought not to discover their essence; hence the faulty symptomatic basis of medical nomenclature. It may be more than a century before we are rid of the ill-effects, on medical literature, of this symptomatic basis of nosonymy, and not until then need we hope for a realization of the ideal of Iatros, who, in the meantime, may take his choice among those convenient synonyms of 'disease,' such as affection, ailment, complaint, distemper, illness, infirmity, sickness, etc.

"The improvement in terminology should keep pace with medical advancement, but this improvement is likely to be much slower than students of the science of physic and practisers of the art of healing have a right to expect, owing to an obstinate adherence to mouldy, inexact terms which, in many minds, long usage seems to sanction."

IMPORTANT MEDICAL BILLS IN THE LEGISLATURE.

Assembly Bill No. 155. Introduced by Mr. Burnett. An Act relative to the manufacture and sale of beer, ale and porter.

Assembly Bill No. 641. Introduced by Mr. Allds. An Act to establish the New York State Hospital for the care of crippled and deformed children.

Assembly Bill No. 529. Introduced by Mr. Conger. An act relative to the cadavers in the counties of Tioga, Tompkins, Broome, Chemung, Schuyler, Monroe, Seneca, Steuben, Wayne, Yates and Ontario.

Assembly Bill No. 89. Introduced by Mr. Sullivan, in relation to the manufacture and sale of cigarettes.

Assembly Bill No. 160. Introduced by Mr. Cotton. An Act to exempt from taxation the property of certain medical societies situated in cities of the first class.

Assembly Bill No. 1034. Introduced by Mr. W. H. Smith. An Act providing that a person, duly authorized to practice physic or surgery, shall not be allowed to disclose any information which he acquired in attending a patient in a professional capacity, and which was necessary to enable him to act in that capacity; and that any one acting under the direction of such physician or surgeon as nurse to a sick person shall not be allowed to disclose any information acquired while so acting as nurse.

Assembly Bill No. 280. Introduced by Mr. Fitzgerald. An Act providing that no person shall practice massage, mechanotherapy, hydrotherapy or electrotherapy in this State who shall not have been duly licensed and registered.

Assembly Bill No. 527. Introduced by Mr. McKeown, and referred to the Committee on Affairs of Cities. An Act regulating and restraining the practice of midwifery in the city of New York by others than legally authorized physicians.

Senate Bill No. 146. Introduced by Senator Grady. An Act relative to hospitals.

Section 1. No hospital incorporated under the laws of this State, sustained in whole or in part by charitable contributions or endowments, shall be liable for the neglect, carelessness, want of skill, or for the malicious acts of any of its officers, agents or employees, in the management of, or in the care or treatment of, any of the patients or inmates of such hospital.

Sec. 2. It shall not be lawful for any such hospital to make or enter into any agreement whereby liability shall be incurred for such neglect, carelessness, want of skill, of malicious acts, and any such agreement shall be void.

Assembly Bill No. 759. Introduced by Mr. Seymour and referred to the Committee on Public Health. An Act regulating and legalizing the practice of osteopathy in the State of New York, and fixing penalties for the violation thereof.

Section 1. Any person having a diploma or certificate of qualification regularly issued by any duly incorporated school of osteopathy, which is a member of the associated colleges of osteopathy, who shall have practised the system, method or science of treating diseases of the human body commonly known as osteopathy, for the period of six months or more prior to the first day of February, 1901, in the State of New York, and who shall file such diploma or certificate for record in the office of the clerk of the county wherein he resides, together with his affidavit that the diploma or certificate is genuine . . . shall be entitled to practice said science known as osteopathy. Any person not having practised osteopathy in this State as above provided, but having a diploma or certificate of qualification, regularly issued by any incorporated and regularly conducted school of osteopathy, which is a member of the associated colleges of osteopathy and who shall have been in personal attendance as a student in such a school for at least four terms of not less than five months each before receiving such diploma or certificate, shall be entitled to treat diseases of the human body according to the osteopathic method, after having passed a satisfactory examination in the studies adopted in the curriculum of the associated colleges of osteopathy before an examining board duly appointed by the regents of the State of New York. . . .

Sec. 3. Any person who shall practice or pretend to practice or attempt to use the system, method or science of osteopathy in treating the diseases of the human body without having complied with the provisions of this act, shall be deemed guilty of a misdemeanor and upon conviction thereof shall be fined in a sum not less than fifty dollars, nor more than two hundred and fifty dollars for each offence, and in default of the payment of such fine, may be imprisoned in the county jail not exceeding six months. This article shall not be construed to affect any legally qualified physician or surgeon duly authorized under the laws of the State to practice medicine therein.

The following resolution was adopted unanimously at the last meeting of the New York County Medical Association: *Resolved,* That the Committee on Legislation be instructed to oppose the Assembly Bill No. 759, known as the Osteopathic Bill, and such other bills as are jointly agreed on by the Committees on Legislation of the New York State and County Associations.

Assembly Bill No. 167. Introduced by Mr. Bell, and referred to the Committee on Public Health. (As here printed the bill shows the amendments, in italics, offered by the registered pharmacists and manufacturing druggists, and by the chiropodists, and accepted by the introducers.)

An Act to amend section 152 of Chapter 661 of the laws of 1893, entitled "An Act in relation to the public health, constituting chapter 25 of the general laws."

Section 1. Any person shall be regarded as practicing medicine within the meaning of this act who shall profess to heal or who shall give treatment to any other person by the use of any remedy, agent, or method whatsoever, whether with or without the use of any medicine, drug, instrument or other appliance for the relief or cure of any wound, fracture or bodily injury, infirmity, physical or mental, or other defect or disease. This article shall not be construed as prohibiting *the manufacture, sale or use of any proprietary or patent medicine when the diagnosis is not made by the maker or seller thereof, or the giving of temporary relief in an emergency by a regularly registered pharmacist;* nor the service of any person in an emergency, or the domestic administration of family remedies; nor shall it be construed to affect commissioned officers serving in the United States army, navy or marine hospital service, while so commissioned; or any one while actually serving on the resident medical staff of any legally incorporated hospital; or any legally registered dentist exclusively engaged in the practice of dentistry; *or any rights of chiropodists under existing laws;* or any manufacturer of artificial eyes, limbs or orthopedic instruments or trusses, or manufacturers or constructors of optical instruments in fitting such instruments on persons in need thereof; or any lawfully qualified physician in other States or countries meeting legally registered physicians in this State in consultation; or any physician residing on a border of a neighboring State and duly authorized under the laws thereof to practice medicine therein, whose practice extends into this State, and who does not open an office or appoint a place to meet patients or receive calls within this State; or any physician duly registered in one county called to attend isolated cases in another county, but not residing or habitually practicing therein.

This article shall be construed to repeal all acts or parts of acts authorizing conferment of any degree in medicine *causa honoris* or *ad eundum* or otherwise than on students duly graduated after satisfactory completion of a preliminary and medical course of not less than that required by this article, as a condition of license.

The following amendment was offered by the Christian Scientists to Section I.: *"But this article shall not be construed to apply to any person who ministers to the sick and suffering by mental or spiritual means without the use of any drug or material remedy."*

The following substitute amendment to the bill has also been submitted: *"And any person not then being lawfully authorized to practise medicine within this State, and so registered according to law, who shall advertise or in any manner hold himself or herself out to the public as a healer of disease or as able to abolish disease or symptoms of disease, or as competent to do surgery, or who shall in any manner treat or prescribe for the sick or injured for gain, gift or compensation, shall be guilty of a misdemeanor, and on conviction thereof shall be fined not less than fifty dollars, and not more than two hundred and fifty dollars."*

* * *

Remonstrance of the New York County Medical Association Against the Passage of the Bill, Entitled "An Act to Amend the State Charities Law Relating to the State Board of Charities."

To the Senate and Assembly of the State of New York.

The New York County Medical Association respectfully but earnestly remonstrates against the passage of an Act now before your honorable bodies, entitled "An Act to amend the State Charities Law, relating to the State Board of Charities," which abolishes the present board, composed of twelve unpaid members and substitutes therefor a single paid commissioner with whom is to be associated two members selected from State officials already appointed by the governor to other offices, for the following reasons:

1. State supervision of charitable institutions has long been recognized in this and other States as good public policy, and to this end the State has maintained for thirty-four years a State Board of Charities which the last Constitutional Convention, after a thorough investigation of the work of the board and the needs of these institutions, made a permanent department of the State government.

2. It has also been recognized that the body exercising State supervision should be so constituted that all parts of the State shall be represented, and that neither political nor religious influences should control its acts; the present organization is admirably adapted to secure these ends, namely:

a. By having one commissioner from each judicial district and additional members from New York and Brooklyn, the interests of all charitable institutions are equally represented.

b. An unpaid membership relieves the board of the possibility of being influenced by partisan politics.

c. A large board admits of representation of the principal religious denominations.

d. It also admits that variety of qualification of membership growing out of the different professions—the present board having four lawyers, one formerly attorney-general, two physicians with large experience in the management of institutions, five members of varied business experience, and one woman, familiar with the charitable and reformatory institutions of the State.

3. As there has never been any allegation that the board as now constituted has not fulfilled in every respect the purposes for which State supervision of charitable institutions is required;

We respectfully and earnestly remonstrate against the change in the organization of the State Board of Charities, as provided in the amendment to the State Charities Law now under consideration by your Honorable Bodies.

Resolved, That copies of this remonstrance, signed by the president and secretary of the New York County Medical Association, be forwarded to the governor of the State, the president of the Senate, the speaker of the Assembly, and to the chairmen of the committees in the Senate and Assembly. (Adopted unanimously.)

BOOK REVIEWS.

Introduction to the Study of Medicine. By G. H. Roger, Professor Extraordinary in the Faculty of Medicine of Paris. Authorized Translation by M. S. Gabriel, M.D. Pp. 545. New York: D. Appleton & Company, 1901.

The author very concisely states the object he had in view in preparing this book, as follows: "We all know from experience how much time is wasted by not knowing with what subject to begin, what books to read, and also by being compelled frequently to refer to a dictionary for an explanation of technical terms encountered. With the view of relieving beginners of much useless embarrassment, the Faculty of Medicine (of Paris) intrusted me with the course of lectures which I now publish."

The plan of the book is to show the object of medicine and by what means it may be studied. Why and how an individual becomes sick is explained, and then the morbific causes which constantly tend to modify the unstable state of health are considered. These causes give rise to manifestations through the lesions and reactions they determine, some of which can be detected only after death, while others are appreciable during life. This leads to the study of the mode of reaction of the organism, or pathological physiology; the organic changes, or pathological anatomy; and the functional disturbances, or semiology. In this manner the author unfolds the whole science and art of medicine. The range of subjects treated is very great, including inflammation, infections, septicemia and pycmia, tumors, heredity, cellular degenerations, evolution of diseases, examination of the sick, diagnosis and prognosis and therapeutics. One of the longest and most interesting chapters is on the "Examination of the Sick," which every practitioner can consult with great advantage. Though the work is intended for students it will prove instructive to the physician who desires to learn the most advanced opinions on current medical subjects. The translator has performed his task most acceptably and the execution of the work is in the usual excellent form of the publishers.

Enteroclysis, Hypodermoclysis, and Infusion. A Manual for Physicians and Students. By Robert Coleman Kemp, M.D., New York. Illustrated. Pp. 349. New York: T. Dougherty, publisher, 409 West Fifty-ninth street.

This book is an admirable one in every respect, and its appearance is especially timely. Much uncertainty exists on the part of many practising physicians, not only as to the proper technique of enteroclysis, hypodermoclysis and infusion, but as to the underlying principles involved in their application. These points are clearly brought out by the author, than whom none is more competent to speak authoritatively on these subjects. The space at the disposal of the reviewer precludes a detailed description or analysis of the methods described; the work has been well done, and Dr. Kemp is to be congratulated on the result. Up-to-date physicians cannot afford to be without a copy of the book.

A short introduction by Dr. William H. Thomson, of New York, clearly defines the advantages to be obtained from lavage and hypodermoclysis. Chapters follow on Enteroclysis, the Enema, Irrigation with a Single Tube, Double Current Irrigation, Application of Dry Heat or Cold in the Rectum, Hypodermoclysis, Infusion and Shock. The Nauheim Treatment and description of the carbonic-acid bath is next detailed, and the book closes with Therapeutic Addenda, containing many valuable features, such as the use of campho-carbolic solution for infected wounds, mustard-menthol solution as a counter-irritant, contractile collodion as a restricting band for infiltration anesthesia, the effect of different anesthetics on the kidneys, etc.

Original Articles.

REMOVAL OF A PIN EMBEDDED IN THE TISSUES TWELVE YEARS.

BY CHARLES T. BELL, M.D.,
Assistant Surgeon, Department of the Nose and Throat, Bellevue Hospital, Out-Patient Department,
New York.

THE following case is of interest because it shows that a foreign body may remain in the body a number of years, and, by a positive movement of Nature, be expelled through the tissues of the body without inflicting serious injury, suffering, or material inconvenience. My attention was called to the case while on duty at the Bellevue Hospital Dispensary.

Mr. E. W. J., aged 25 years, married, present occupation driver, well nourished, height 5 feet 8 inches, weight about 140 pounds. About twelve years ago he was employed in a dry-goods store in New York City. While pinning on tags

Fig. 1.

he carried a number of pins in his mouth. He had used all but one, when a friend, approaching from behind, slapped him on the back. Turning with surprise, he was about to speak, when the remaining pin disappeared down his throat. The swallowing was immediately followed by a violent fit of coughing, which soon ceased. On reaching home, shortly after the occurrence, he had a severe attack of vomiting. The family doctor made a thorough search for the pin, using mirrors, etc., but failed to find any trace of it. He concluded that no pin had been swallowed.

The patient was confined to his bed for two weeks, without medical attendance, suffering during that time with a painful and swollen throat. In a lesser degree this continued through a period of five months, the pain and swelling gradually disappearing. Since then, up to a few months ago, he had no particular trouble with his throat, no local pain or inconvenience, either in speaking, eating, or swallowing. He noticed, however, after long intervals, the return and disappearance of a slight swelling under his lower right jaw. Three months ago, while eating, he noticed that bits of food would at times be caught beneath his tongue, and placing his finger at the point of detention he discovered the sharp point of the long missing pin. Pressure on this caused pain at the base of the tongue. After enduring this as long as possible he called for examination and treatment.

On opening the mouth and elevating the tongue a sharp metallic point was distinctly discernible at the junction of the tongue and the floor of the mouth, to the right of the frenum. It

Fig. 2.

was dark in color and solidly buried in the tissues. Beneath it the epithelial cells were slightly abraded, but no inflammatory area was found around the point of metal. The point projected about one-sixteenth of an inch, as shown, slightly exaggerated, in Fig. 1. To determine the exact location and direction of the pin, an X-ray photograph was taken, shown in Fig. 2.

I applied a 4 per cent. solution of cocain on a pledget of cotton, to the mucous membrane about the projecting point, and holding the point

with forceps, an eye cornea gouge was passed along the body of the pin. An obstruction was encountered which subsequently proved to be a deposit of lime salts, forming a calculus about the middle of the pin. By passing the instrument around this and exerting gentle traction on the point, separation from the surrounding tissues was easily effected and the pin removed. It was found to be extensively eroded, probably having lost one-third of its original weight, was almost black along its entire length, and was partially encrusted by lime salts. Very little bleeding followed the operation, and since the removal the patient has experienced no ill effects therefrom.

THE ETIOLOGY AND GENERAL PROPHYLAXIS OF TUBERCULOSIS.*

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I WILL start with the assumption that the bacillus isolated by Koch in 1882 is the sole exciting cause of tuberculosis. Without this micro-organism, tuberculosis does not and cannot exist. The researches of capable men in all parts of the civilized world have in all instances confirmed the claim of Koch, that he had discovered and isolated the specific cause of this disease. However, with the discovery of the exciting cause, every etiological problem connected with tuberculosis was not solved. Much has been accomplished, but much more remains to be done. Indeed, the discovery of the specific cause only enables us to proceed in the study of the etiology of tuberculosis in a scientific manner.

Recently the claim has been made that the bacillus tuberculosis may multiply and develop as a saprophytic organism, under ordinary conditions outside of the animal body. If this be true, many of our ideas concerning the dissemination of tuberculosis must be greatly modified, and the restriction of the disease becomes a much more difficult problem than the profession has heretofore supposed. If it be true that the specific cause of tuberculosis not only lives indefinitely, but grows and multiplies in the soil and elsewhere outside of the body of animals, those of us who have enlisted in the war for the extermination of this disease may, with cause, be appalled by the magnitude of the task that we have undertaken. Let us, therefore, inquire concerning the evidence upon which this claim of the saprophytic growth of the bacillus tuberculosis is founded.

It must be admitted that the morphology of this germ is not so simple and so constant as was at first assumed. As early as 1884 Petrone, in studying the organisms found in a case of meningeal tuberculosis, discovered forms of the bacillus which led him to believe that, morphologically, it should be classified in a group intermediate between the micromycetes and the schizomycetes. Three years later, Nocard and Roux described branched and budding forms of this organism, and, in 1888, Metschnikoff, probably working with the bacillus of avian tuberculosis, found similar forms in old glycerine-agar cultures, grown at temperatures from 43.6° to 44°. Other observers have confirmed these reports, and the studies of Fischel demonstrated the similarity between the branched and budding forms of this bacillus and the ray fungus of actinomycosis. Coppen Jones and many other investigators have noticed this resemblance. Craig found the branched form in tuberculous sputum. Babes and Levaditi obtained the ray fungus-like growths of the bacillus tuberculosis after subdural inoculations of rabbits with somewhat attenuated cultures, and concluded from their studies that these morphological variations result from degenerative changes in the organism, but Friedrich obtained like results by the intra-arterial injection of virulent cultures. More recently, Schulze has observed the ray form of growth after both local inoculation and intra-arterial injection in rabbits of cultures of different degrees of virulence. In short, these and other studies seem to show quite conclusively that, under conditions the exact nature and limitations of which we do not yet know, the bacillus tuberculosis shows forms of growth which indicate that it does not belong to the bacteria, but to the fungi. There has recently been made another discovery that is of considerable interest in this connection. Several pseudo-tubercle organisms have been discovered. Some of these have certain striking resemblances to the Koch bacillus. The stain produced in them with carbolic fuchsin is not washed out with acids or alcohol. Tinctorially they respond to the test upon which we generally depend for the recognition of the tubercle bacillus, and consequently for the diagnosis of tuberculosis. There is no reason, at present at least, for fearing that these micro-organisms are found in sputum or are likely to lead us into error in our examination of sputum for diagnostic purposes. but at least one of them occurs not infrequently in butter, and consequently a microscopic examination of this food is not always sufficient to enable us to say that it is infected with the tubercle bacillus. Another micro-organism which responds to the stain test for the tubercle bacillus is found in cow dung. This was once believed to be the tubercle bacilus, and its abundance in cow dung was explained by Eber on the theory that the tuberculous cow does not expectorate, but swallows her infected sputum, and eliminates the same per anum. Since bits of cow dung, which may contain this organism resembling the bacillus tuberculosis tinctorially, frequently find their way into milk, it follows that a microscopical examination of this food also is not sufficient to enable us to say that it is specifically infected with the tubercle bacillus. Pseudo-tubercle micro-organisms have been discovered by Möller in infusions of timothy and

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other grasses. It seems quite reasonable to infer that the organisms of this group found in hay, in cow dung, and in milk and butter, are all varieties of the same organism, originally existing in the hay and modified, to some extent, during its passage through the alimentary canal of the cow and, further still, in milk and butter.

The timothy bacillus resembles the tubercle bacillus not only tinctorially, but morphologically the two are somewhat alike in their branched forms. The rod from the timothy bacillus is both thicker and longer than the tubercle bacillus, and the two are not likely to be confounded. The most striking morphological similarity between them lies in the fact that under certain conditions both appear as branched and budding moulds or fungi. Culturally the two are easily distinguished, inasmuch as on certain media at least the timothy bacillus is a chromogenic organism.

The effect of the timothy-hay bacillus on animals has been studied by Möller, Lubarsch and others. Lubarsch, after comparing the pathological changes induced in rabbits by local inoculation and intra-arterial injection of both the bacillus tuberculosis and the timothy bacillus, says that it is wholly impossible by histological and micro-parasitic study to distinguish with certainty between the tubercles induced by the two organisms, but he has also shown that the timothy bacillus is practically without pathogenic action on man. He inoculated himself under the skin of the arm. In the course of from eight to ten days round, hard, red nodules formed at the points of inoculation. Excision and microscopic examination of these nodules revealed but little resemblance to tubercle. There was found only slight inflammatory proliferation, principally confined to the sweat glands. Flexner and others, however, have shown that some of the pseudo-tubercle organisms are pathogenic to man.

From the above mentioned facts some have assumed that the tubercle bacillus is capable of living and multiplying quite abundantly and indefinitely outside of the animal body under ordinary conditions as a true saprophyte. Hueppe says that "the so-called tubercle bacillus is consequently not a bacillus at all, but the parasitic growth-form of a pleomorphic mold." This conclusion is a mere assumption without sufficient scientific evidence. Because certain other organisms have been discovered to be possessed of certain properties formerly supposed to be characteristic of the bacillus tuberculosis is by no means a demonstration that one of these saprophytic molds is ever changed into the parasitic organism that causes tuberculosis in man. Some other specific pathogenic bacteria are known to have pseudo-relatives. We may mention the pseudo-bacillus of diphtheria and the typhoid-like bacilli. The evidence that the bacillus tuberculosis is a strictly parasitic organism, except when specially cultivated, is too strong to be shaken by any evidence yet adduced. The studies of the pseudo-tubercle organisms, hastily sketched above, are of great value, but have not altered the evidence concerning the specific and parasitic nature of the bacillus tuberculosis. We have learned that we cannot always depend upon stain reactions in the demonstration of the tubercle bacillus, and we have also ascertained that there are other organisms that may induce histological changes, including giant cells, which cannot be distinguished from those found in true tubercle. It is probably true that the bacillus tuberculosis and the timothy bacillus belong to the same family, and they may have developed from a common ancestral stock, but there is not the slightest evidence that one is nothing more than the parasitic growth form of the other. Edible and poisonous mushrooms bear a close family resemblance, but, so far as I know, no botanist claims that one may be converted into the other.

The bacillus tuberculosis is not capable of continued saprophytic existence under natural conditions. It does not in nature multiply outside of the animal body. When thrown off in the excretions of the tuberculous, it may retain its vitality for some weeks, and, under certain favorable conditions, for some months, and then it dies unless it finds its way into some other animal. The tubercle bacillus is not ubiquitous, but is found only in the vicinity of tuberculous animals. Even the tuberculous individual is not a source of danger to others until he begins to cast off the specific bacillus in some excretion from his body, and even then, if he will follow a few simple rules for the disposal of these infected excretions, he may freely mingle with his fellowmen without fear of disseminating the infection. So long as the tubercular processes in an individual are limited to areas that are closed to the outside world there is no danger of the infection from such a source reaching any one else. Moreover, as has been shown time and time again, the expired air from the lungs, even in an advanced stage of pulmonary tuberculosis, is free from the specific infection, unless it bears droplets of mucus or saliva, as happens in coughing and sometimes in speaking. Articles of food, cups, glasses, knives, forks, plates, etc., may become infected, and from these the infection may be transmitted. Infected sputum dries on the floor, and its contained bacilli may be inhaled. The person or the clothing may be soiled with infected material. Milk, butter and meat from tuberculous animals may convey the infection. In all cases tuberculosis is acquired by transference of the specific infection from the body of one animal to that of another. This transmission is seldom direct, but is usually mediate. Rarely the transmission is direct. This is true in cases in which the disease has been transmitted in ritual circumcision, and in those cases in which surgeons have inoculated themselves while operating on tuberculous tissue, and in those in which tattoo markings have been moistened with tuberculous saliva. All such cases, and the total number on record

is now considerable, as well as those resulting from infection acquired in the post-mortem examination of tubercular tissue, and those in which the fingers of washerwomen are infected by the handling of soiled handkerchiefs, have the weight of positive demonstration equivalent to that resulting from the experimental inoculation of animals.

The avenues of infection are the skin, through wounds, the mucous membrane of the alimentary tract and the air passages. In inoculation into the skin, local tubercles form at the point of infection, and gradually the disease extends to neighboring lymph glands. When the infecting material is carried through or under the skin, the first evidence of infection may appear in a lymph gland and the point of introduction may show no evidence of the disease.

Infection through mucous membrane may occur with or without break in the continuity of this tissue. It is highly probable that decayed teeth open up avenues for infection, which first shows itself in induration of the submaxillary and adjacent glands. It is also probable that diseased tonsils occasionally serve as ports of entry for tubercular infection. That the tubercle bacillus may pass through the intestinal walls without producing any pathological changes at the point of entry is quite well established. Experimental evidence concerning the extent to which the milk of tuberculous cows is a source of infection has been somewhat conflicting. All agree that milk is likely to carry the infection when the udders are involved, and when the disease is widely disseminated in the body of the animal without involvement of the udder. I shall not go into the literature of this subject, because it has been recently reviewed by Rabinowitsch, who has also made important and apparently conclusive experiments on this point. This investigator furnishes experimental evidence that animals with initial tuberculosis, without detectable involvement of the udder, and even those in which latent tuberculosis can be detected only by the application of the tuberculin test, may, and often do, furnish milk that contains living and virulent tubercle bacilli. This finding confirms me in the belief, first expressed some years ago, that every dairy cow should be tested with tuberculin, and the use of milk from those that react to this test should be prohibited. No dairyman should be allowed to sell milk without a license, and no license should be granted without proper inspection of the herd and the application of the tuberculin test to every cow in the dairy. I am aware of the fact that some competent sanitarians think so radical a measure as this unnecessary, but I believe that if this should be done tuberculosis, both in man and in cattle, would soon become much less prevalent. Cattle seem to be only slightly susceptible to the human tubercle bacillus, and it is not probable that cows acquire the infection from man. On the other hand, Theobald Smith has shown that the bovine tubercle bacillus is more virulent than the sputum variety. Moreover, Klein finds that the sputum bacillus increases in virulence when grown in milk.

Nearly nine-tenths of all cases of tuberculosis in man involve the lungs. It does not, however, follow from this that all cases of pulmonary tuberculosis are due to inhalation infection. It is undoubtedly true that the tubercle bacillus finds the conditions suitable for its growth and development more favorable in the lungs than in any other part of the body. Moreover, the chances of the infection becoming a mixed one are better in pulmonary than in surgical tuberculosis, and most of the deaths from this disease result from mixed infection. Tuberculosis always begins as a local disease, and is, for a greater or less period of time, confined to a minute portion of the body, and it is more likely to remain latent in other tissues, the lymph glands for instance, than in the lungs. Destructive changes, as a rule, proceed slowly until the infection becomes a mixed one. So long as tuberculosis remains an unmixed infection it is not possessed of great malignancy. This is shown in the numerous recoveries from tuberculous affections of the joints and Pott's disease, also in the slow progress of tubercular scrofula.

That the tubercle bacillus has a predilection for pulmonary tissue is shown by the frequency with which the lungs become involved in the lower animals after subcutaneous and intraperitoneal inoculations. However, we know that many men live for years with local tuberculosis without the lungs becoming affected.

Making every possible allowance for other methods of infection, it undoubtedly is true that the majority of cases of pulmonary tuberculosis in man are due to the inhalation of infected air. Dried and pulverized sputum containing the bacilli may be inhaled, and Flügge and his students have shown that in coughing, sneezing, and sometimes in speaking, the consumptive may scatter about him, for a distance of one meter or more, minute droplets laden with the bacillus. They have succeeded in transmitting tuberculosis in this way from man to a guinea-pig. In order to avoid distributing the virus in this way tubercular individuals should be instructed to hold a handkerchief before the mouth while coughing or sneezing, and to take care not to eject saliva while speaking.

It is unnecessary for me to dwell upon the necessity of disinfecting the sputum and all other tubercular-infected excretions. The enlightened members of our profession need no instruction on this point. The establishment of special hospitals for the treatment of this disease, and the instruction of tubercular individuals in the methods of procedure necessary to prevent their transmitting the infection to others, should receive our most hearty cooperation. Our ancestors succeeded in liberating the race from leprosy, and I believe that our descendants will accomplish a like result with tuberculosis.

Without the establishment of special sanitaria or hospitals, we will not make much progress in stamping out tuberculosis. How the money necessary for the construction, equipment and maintenance of these hospitals is to be raised is a question yet unsolved. We cannot depend, in any systematic scheme, on the chance liberality of the rich. In Germany, where the greatest advance has been made, money has been raised by life insurance. Every working man, except agricultural and domestic employees, must be insured. The law makes this mandatory, and also compels the employer to pay part of the insurance. It is cheaper to build hospitals, and keep the tubercular alive, also curing a considerable per cent., than it is to pay death policies. In this country the money may be obtained by some form of taxation. Since all are benefited by the restriction of this disease, taxation for this purpose cannot be considered unjust.

There are a few additional points upon which I wish to touch briefly. It is more than probable that there are marked variations in the virulence of the tubercle bacilli with which different persons become infected. In my opinion, there is no constitution sufficiently robust to withstand infection with the most virulent forms of the tubercle bacillus, introduced into the body in large numbers. The most rapidly fatal case of acute miliary tuberculosis I ever saw occurred in a man, who, as an example of a fine animal, was almost perfect. Within three months after he began to cohabit with a mistress, who was in an advanced stage of tuberculosis, he died of the disease himself. I believe that this point needs emphasis, and if this opinion be correct, even those who are already tubercular should be protected from infection from others who may carry still more virulent cultures of this microorganism.

On the other hand, that individuals differ widely in their susceptibility to this disease there can be no doubt. This difference in susceptibility shows itself not only in the readiness with which some become infected, but in the more rapid progress that the disease makes in some after infection. Susceptibility varies among individuals, and in the same person, from time to time. I saw a most striking illustration of the effect of untoward conditions upon tuberculosis among our soldiers during the Santiago campaign. It is safe to assume that among the regular soldiers who went to Cuba in June, 1898, there was not one in an active stage of the disease at that time, and yet not less than fourteen died of tuberculosis within the three months following that time, and many others developed an active form of the disease. I suppose that many of these had the infection in a latent form, which became active on account of the lessened resistance, due to the influence of climate and other diseases, especially malaria and yellow fever. The large number of deaths from tuberculosis in Havana during the year 1898 is another illustration of the influence of privation and unfavorable sanitary surroundings on the progress of tuberculosis. According to Gebhart, the number of deaths from tuberculosis among the inhabitants of Hamburg, who have an income of over $500 per year, is 15 per 10,000, while among those whose income is less than this amount the deaths from this disease number 40 per 10,000. This shows the necessity for improving the conditions of the poor in our attempts to stamp out tuberculosis.

In order to accomplish much in a curative way in cases of pulmonary tuberculosis, the disease should be diagnosticated before the infection becomes a mixed one. This can be done by percussion and auscultation, together with a temperature record, provided that the individual comes under competent medical observation at that time. In this stage, in a large per cent. of cases, the disease may be arrested. With this in view I recommended, three years ago, at the International Medical Congress at Moscow, that physicians advise all persons, especially those who have been subjected to unusual exposures, to submit to frequent examination, even in the absence of any observable evidence of the disease. From my experience as a physician, from my knowledge of the literature of the subject, and from laboratory experiments upon animals, I believe that tuberculosis, so long as it remains an unmixed infection, is often a curable disease, even to the extent of a complete *restitutio ad integrum* of tubercular tissue.

SOME UNUSUAL CASES OF INFECTIOUS DISEASE.

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Diphtheria.

CASE I.—George D., American, aged four years. On December 19, 1899, I found the boy with a sore throat that had developed about midnight on the 18th. His pulse was 80, of good quality and rhythm; temperature 100° F. His pharynx was red; he was not hoarse, but had slight rhinitis. I took a specimen from his throat as a routine practice and was surprised at the report of pure culture of the Klebs-Löffler bacillus received the morning of the 20th. I immediately gave him 2000 units of antitoxin, although there was no exudate visible and the constitutional disturbance was no greater than the day before. Twelve hours after the administration of the antitoxin he discharged two large pieces of membrane from his nose. Twenty-four hours later he appeared better, but thirty-six hours after, that is, on the morning of the 22d, both tonsils and the posterior wall of the pharynx were covered with membranous exudate and there was a rise of temperature to 101.5° and of pulse to 120. The child was given 1000 units

more of antitoxin and Löffler's solution applied to the exudate. In thirty-six hours the exudate had almost entirely disappeared, and in forty-eight hours the throat was clear, the temperature normal and the pulse 80, and of good quality. The diphtheria bacillus had disappeared by December 30th.

CASE II.—C. W., English by birth, female, trained nurse, was first seen by me March 14, 1900. She complained of cough and a little sore throat. Temperature was 103° F., pulse 100. There was some hoarseness and feeling of soreness under the sternum and the physical signs of general bronchitis. The pharynx was a little red, and as a matter of precaution, I took a specimen for culture. The report was pure culture of Klebs-Löffler bacillus. She was given 2000 units of antitoxin March 15th. Twenty-four hours later a slight exudate appeared on the left tonsil. The temperature continued high and the pulse frequent and she had the appearance of profound toxemia. The respirations also began to increase in frequency and the hoarseness was more marked. Headache was violent and restlessness and sleeplessness were present. Under the circumstances, fearing that the bronchitis was diphtheritic in character, I gave her 2500 units more, March 17th, and applied Löffler's solution to her throat. After this there was slight improvement in her general condition for about twelve hours and then she became decidedly worse as far as her general symptoms were concerned, the throat improving in its appearance although the slight exudate still persisted on the tonsil. She was given 2000 units more, March 18th. Thus in eighty hours she had received altogether 6500 units of antitoxin. Twenty-four hours later her throat was clear of exudate, but her general symptoms persisted and physical examination of the chest revealed the general bronchitis still present and a decided consolidation of the lower lobe of the right lung. At the same time she began to expectorate more freely, the sputum having in a mild degree the physical characteristic of pneumonic sputum, but not quite as tenacious and more blood streaked than rusty. Nevertheless, examination showed it to be swarming with the pneumococcus in pure culture. Nine days after her admittance to the hospital, culture from her throat showed the disappearance of the diphtheria bacillus. On the afternoon of March 23, the tenth day of illness, her temperature which had ranged between 101° and 103° F., began to fall reaching 99.8° F. at 10 A. M., but in the afternoon it rose again to 101.3° F. and remained between that point and 100° for twenty-four hours. At 10 P. M., March 25, she vomited. From midnight her temperature began to rise steadily so that by 6 P. M. of the 26th, it was 103° F., pulse 120 and respiration 38. At the same time she complained of intense headache and there was pronounced twitching of her muscles in her sleep. On the 27th, her temperature ranged between 100° and 102.5° F. and she began to cough severely and complained of some pain in her limbs. On the 28th, being the fifteenth day of disease, her temperature, pulse and respiration rose steadily, reaching 104° F., 130, and 40 respectively. At the same time she complained of great pain and soreness of limbs and chest, pain on motion of joints, and broke out in a profuse red macular rash over her body and limbs, but not on face. After reaching 104° F. at 10 P. M., March 28, her temperature, together with her pulse and respiration, began to fall and continued to do so, accompanied by profuse sweating, through the 29th and 30th, reaching 98°, 84 and 24 respectively at 6 A. M. of the 31st. From that time on her convalescence was rapid and uninterrupted and she was discharged from the hospital April 9th, twenty-eight days after she was taken ill.

These two cases are interesting as showing the importance of making cultures in all cases of sore throat. By this means I was able in each case to make a positive diagnosis fully twenty-four to forty-eight hours earlier than could otherwise have been done. They also illustrate the value of large doses of antitoxin given early, together with the local application of Löffler's solution, in causing the early disappearance of the organism from the throat. The second case illustrates the importance of the use of all methods of diagnosis and the possibility of synchronous infection by two virulent micro-organisms. If it had not been for the examination of the sputum, we might have been justified in considering the bronchitis and the pneumonia as diphtheritic in origin and might have continued giving even larger doses of antitoxin. The urine remained normal, except for slight diminution in amount of chlorides, thus showing the possibility of an individual's suffering from two violent infections without the production of albuminuria. The joint and muscle pains, the high rise in temperature, pulse and respiration of the last two days before the crisis, and the appearance of the rash, I think were probably due to the antitoxin—the real crisis having started in three days before.

Scarlatina sine Eruptione.

On November 8, 1899, I was called to see J. L., a boy, aged eight years, who had come from school complaining of feeling sick, had vomited, and when I saw him had headache. His temperature was 102.5° F., his pulse 120, respiration 28. On inquiry of his mother I learned that there was no scarlet fever in the neighborhood. On examining him I found a marked bronchitis with a few patches of pneumonic involvement at the base of both lungs. I gave the boy calomel, cupped his chest and ordered hot mustard foot-baths every two hours. The next morning the nurse called my attention to the fact that with the foot-baths he became very red, but when I saw him there was no rash on his body and his tongue and throat showed no evidences of scarlet fever. In five days he was feeling very well and in eight days I had discharged him.

On November 18th I was called to see his two little sisters, both of whom were fretting and a little feverish—99.5° F. and 100° F. respectively. Their throats were not sore, but there was a slight mottling of the skin; both had vomited.

In none of the three cases was there any albuminuria.

November 26th, eighteen days after the boy was taken sick, I vaccinated both him and his brother. I noticed that his fingers were desquamating. The doubt as to his having had scarlatina was settled when the oldest boy developed a typical case.

A Second Attack of Scarlatina.

J. Q., male, aged five, entered the Buffalo General Hospital December 17, 1899, with the history of exposure to a case of scarlet fever during the stage of desquamation the week before. The day before entering he suffered from nausea and vomiting, followed by fever and a slight punctate rash. His case was diagnosticated as scarlet fever by Dr. George Himmelsbach, a physician of large experience in both hospital and private practice and he was sent by him to the hospital. During the time that he was under my observation, the rash persisted eight days; the tongue was red and showed the papillæ prominently; the throat was slightly sore; the tonsils were swollen but showed no exudate; the cervical glands and neighboring connective tissue of neck were swollen. He had a faint trace of albumin in urine; no casts. December 25, he began to desquamate and desquamation was completed January 10, 1900. About January 6, another case of scarlet fever of very severe type, with an eruption almost vesicular in character, was placed in the same room with the convalescent. On January 12th I ordered the first boy to have his disinfectant bath and be discharged the next day. But when I made my visit on January 13th I found that he had a sore throat and that his temperature had risen to 101.8° F. The following day his temperature was 104° F. and he was covered with a bright coarse rash, vesicular and punctate in character, his tongue was coated but the edges were decidedly red and the tip showed the elevated papillæ. He had headache and slight delirium. On January 16th he developed an acute nephritis of marked degree; in fact, he went through a second attack of scarlet fever of a severe type, desquamating freely. He was discharged from the hospital February 15, 1900.

During the primary attack he was seen by Dr. Himmelsbach, who sent him into the hospital; by Dr. McCarthy, who was the interne in charge of the contagious wards; and by me. During the second attack he was seen by the three who had seen him in the first attack and by Drs. Stockton and Wende. There was no doubt as to the correctness of the diagnosis. So far as I know this case is unique in the fact of its recurrence only three days after the completion of the desquamation of the first attack.

THE LONG PERIOD OF INCUBATION IN ANIMALS AFFECTED BY RABIES.

BY G. W. GOLER, M.D.
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ABOUT two years ago an epidemic of rabies began in Buffalo and vicinity. During the last six months evidences of the disease in the neighborhood of Rochester have been slowly accumulating, until now the disease is assuming an epidemic form. In the city of Rochester alone a dog a day with distinct symptoms of rabies is being reported. The long period of incubation in rabies in animals makes it most important that a shorter means of determining rabies in animals should come into daily use.

Recently Van Geheucten and Nali have discovered certain changes in the plexiform ganglion which they consider diagnostic of rabies. Ravenel, of the University of Pennsylvania, has worked out this method, and considers it all that the authors claim for it as a rapid method of diagnosis.

By the old diagnosis of rabies by inoculation a period of from twelve to twenty-four days, to, in some cases, fifty-six days to three months, must elapse before a rabbit or guinea-pig subdurally inoculated with medulla from a rabid animal may develop the disease. The newer method proposed by Van Geheucten and Nali, and elaborated by Ravenel, is capable of determining rabies in forty-eight hours. The plexiform ganglion is removed and treated as follows: It is first put in Müller-formol for one hour; then washed in running water for half an hour; put into 95 per cent. alcohol one hour; then in absolute alcohol one hour; next in aniline oil one hour; then in xylol one hour; changed to fresh xylol once; put into xylol paraffin; and then put into pure melted paraffin and built up in a block, which is immersed in cold water as soon as possible.

In mounting the specimen the following directions should be followed: Cut, then spread sections on warm water. Put on slide, press down with filter-paper moistened in absolute alcohol; dissolve out paraffin with xylol and add a little absolute alcohol. Fix sections to slide with very thin celloidin (1 c.c. of thick celloidin to 60 c.c. of absolute alcohol and ether). A drop of this is put over the section and allowed to dry. Next add 95 per cent. alcohol and put into water.

The changes observed on microscopic examination of a section thus prepared and mounted are the invasion of the nerve cell by nucleated cells, cloudy staining of the nerve cell, with a loss of its nucleus, and alteration in structure and form of the cell.

This method may be caried out in from twenty-four to forty-eight hours. By the method of rabbit or guinea-pig inoculation many days are required. Sometimes it is possible that the bitten

patient may develop hydrophobia while waiting for the animal reaction.

The following cases in three horses, traced to the same stable, in which the rabbit reaction did not take place until the fifty-sixth day, are instructive. Horse No. 1 was not violent. It had been sick less than twenty-four hours, and had been used the day before. It died after an illness of forty-eight hours. The animal showed lack of co-ordination and fell in the stall because of its inability to co-ordinate. There was no paralysis. The horse had spasms of the head and jaws; it tried to breathe through the mouth, Mouth breathing is said to be characteristic of dying horses. The temperature was normal, the pulse slightly elevated, 48.

Horse No. 2 was ill three days. At first it was dull and apathetic. The temperature and pulse observation were not recorded. The near approach of any object soon served to make it vilolently delirious. It bit and snapped at things and tore pieces from the stall. It finally became so violent that it had to be chained. Just before it was possible to fasten it, it reached over and bit horse No. 3 on the hip.

Horse No. 3, eighteen days after receiving the bite, was taken ill with symptoms similar to those in horse No. 2. It was very violent and had to be chained and tied with ropes. Pulse and temperature were not recorded, because of the violence of the animal.

All of these horses were visited by dogs, which were in the habit of licking the horses on the nose, in some cases the horses returning the dog's caresses.

Autopsy.—The brain of the third horse was removed and found much congested, the meninges being adherent by small spots of extravasated lymph. On November 3, 1900, Dr. Veranus A. Moore, of the State Veterinary College at Ithaca, inoculated a pair of rabbits from this horse. A pair were also inoculated from the horse at the Health Department Laboratory. On November 23d, Dr. Moore reported as follows: "One of the two rabbits inoculated with the brain of the horse died with symptoms of rabies November 22, 1900. The other rabbit is still living." Of the two rabbits inoculated at the Health Department one died twenty-four hours later as a result of the operation. The other died November 22d, the same day on which the rabbit died that was inoculated by Dr. Moore.

NOTE—Another horse, with furious rabies, and forty or fifty dogs, most with paralytic rabies, have been observed since the above was written.

A valuable emmenagogue in chlorosis:

℞ Ferri peptonatis .....gr. xii
Mangani peptonatis .....gr. ii
Acidi oxalici .....gr. ii
Alcoholis .....℥iii
Aquæ, q. s. ad. .....℥iv

M. Sig.: Two teaspoonfuls t. i. d. p. c.

TREATMENT OF THE PATIENT DURING THE WEEKS PREVIOUS TO EXPECTED CONFINEMENT.*

BY EDWARD P. DAVIS, A.M., M.D.,
Professor of Obstetrics in the Jefferson Medical College, Philadelphia, Pa.

WE shall best understand the treatment needed by the pregnant woman during the later weeks of gestation by reference to her condition. If she be healthy, the mother's nutritive processes are well performed. The anemia of early pregnancy has given place to plethora. The patient's excretion is often better than at seven or eight months. In those who are overtaxed, ill-nourished and living in unfavorable surroundings, the later weeks of pregnancy develop toxemia, which may lead to eclampsia. In neurotic women, and those who habitually excrete badly, the later weeks of pregnancy form a period of increasing danger. In women of normal shape and tissues the pelvis undergoes changes during the later weeks of pregnancy. Its joints become more filled with synovial fluid, more elastic and capable of motion. This is an important factor in securing accommodation. Uterine contractions become more pronounced, and aided by the action of the abdominal muscles, cause the entrance of the fetus into the brim of the pelvis in primiparæ, and its presentation at the pelvic brim in multiparæ. Observation shows that a very important function in securing accommodation is that of the voluntary muscles, as seen in pregnant women who in the later months take exercise.

To estimate the perfection of the patient's assimilation and excretion, we study the clinical symptoms of toxemia, and ascertain, chemically, the condition of the excretory processes. Attention has been drawn to violent frontal headache, lassitude, disturbance of vision and high pulse-tension, which often precede eclampsia. There are other symptoms which mark the pre-eclamptic state. The persistent presence of gas in the intestines, with a furred and coated tongue, points to deficient elimination. Neuralgia, disturbance in cardiac rhythm, changes in temperament, loss of appetite, deficient action of the skin, with eruptions, vague headache, frontal, but not severe; failing excretion by the kidneys, liver and bowels, form a clinical picture not difficult to recognize. In rare cases uterine hemorrhage is a symptom of profound toxemia.

In examining the urine we ascertain quantity, amount of solid material, and the presence or absence of débris from the kidney, as of primary importance. Of secondary value is the presence or absence of serum albumin and of lactose. The estimation of urea assists in measuring the quantity of solid matter excreted, and indicates that assimilation is well or ill performed, and that nitrogenous food is well digested, or broken up into irritating and poisonous compounds. Hence

* First paper read in the Symposium on Obstetrics at the Seventeenth Annual Meeting of the New York State Medical Association.

the estimation of urea during pregnancy is an important clinical resource, the value of which experience has fully confirmed. It is sometimes difficult in dealing with patients to induce them to measure accurately the quantity of urine passed, and to send specimens regularly for examination. Kidney débris may be obtained by the use of the centrifuge or by sedimentation. The character of the epithelia, the degree of degeneration present, the number and character of casts, and the presence or absence of blood, give reliable information as to the condition of the kidney. Serum albumin in excess is accompanied by kidney débris, and indicates a seriously impaired condition of the renal epithelium. Serum albumin alone is of little significance as an indication of danger. Anemic multiparæ are sometimes seen with much swollen legs, who have noteworthy quantities of serum albumin in the urine, but who excrete well in other ways, and pass through pregnancy without danger. The presence of sugar in the urine suggests interesting problems. Lactose is referred to the mammary glands. Other forms of sugar may be seen in highly nervous women, who have ravenous appetites and eat very largely. In a case now under observation, at the fourth month of pregnancy, a highly nervous multipara had 1 per cent. of sugar, which was not lactose, in the urine. This was accompanied by polyuria and excessive appetite. Sugar is now absent, without especial modification of the diet or medical treatment.

The treatment of the toxemia of pregnancy is too large a subject to occupy us extensively at this time. The part which the liver plays in the production of poisonous compounds causing eclampsia is recognized more and more. The physician must satisfy himself that the liver, intestines, kidneys, skin and lungs are doing their part in digestion and excretion.

The diet of the patient should be, as nearly as possible, milk, fruit and bread. If heartburn be annoying, milk may be diluted with Apollinaris, Vichy, or any carbonated water, with advantage. It may be peptonized. Buttermilk is very useful for those who can take it. In our experience the majority of women in comfortable circumstances can limit the consumption of meat during the latter two-thirds of pregnancy to once daily, with advantage. The alkaloids of tea and coffee check excretion very markedly with some women. Coffee is especially injurious to those who suffer from chronic intestinal indigestion. Alcohol in toxemia is not indicated, but injurious. The mistake must not be made to so limit the diet as to reduce strength. The skilful preparation of milk-food is of great assistance. When thoroughly ripe fruit is not available, fruit should be stewed or baked, and when fresh fruit cannot be obtained, dried fruits and those put up with little sugar may be used. The use of water in toxemia deserves especial mention. At least one quart should be taken internally, daily. Externally, water should be used in a cool sponge bath, in the morning, and a warm tub bath at night. The evening bath is our best reliance in diminishing irritability and insomnia. Water may also be used in flushing the colon, and by injection into the bowel. The patient must spend as much of the day as possible in the open air, and her house must at all times be well aired.

The choice of drugs in the treatment of toxemia is, in our experience, limited. Salines should be selected for their freedom from potassium. Sulphate of magnesium is especially valuable. Those patients who are annoyed by the presence of gas often complain that salines increase the gas in the intestine, and this statement is borne out by observation. We know of no drug which so efficiently influences the throwing out of solid waste in the body as calomel. In doses of $^1/_{20}$ of a grain, night and morning, or in $^1/_{100}$ of a grain, three times daily, in our experience, it is most successful. We have continued this for several weeks without signs of mercurial irritation. It is sometimes necessary to supplement this by salines, while many do well upon this drug only. Under its use, the percentage of solids in the urine increases, the percentage of urea is increased, the pulse tension is lessened, the patient's symptoms are improved and her condition benefited. If the patient complains of insomnia, restlessness and headache, the physician would naturally be tempted to give sedatives, notably bromides. This is a mistake, as treatment addressed to increasing elimination causes the disturbance of the nervous system to cease. If a sedative is needed in toxemia, choral or some derivative of it gives the best success.

Up to the present time, we have been uniformly successful in the treatment of toxemia during pregnancy by the methods described. An illustrative case is the following: The patient was in her sixth pregnancy. The first was followed by a miscarriage, on violent exertion. During the second she was exposed, while yachting, to severe cold, followed by a sharp attack of nephritis, from which she was rescued with difficulty. Her next pregnancy was followed by an abortion, at six months. In the next pregnancy, at eight months albuminuria developed rapidly, and labor was induced, with the birth of a living child. At the next pregnancy she had eclampsia, and labor was induced, followed by the birth of a child, which soon died. She came under observation, when one month pregnant, for the sixth time. She was in other respects strong and robust, and, in previous pregnancies, had strictly followed the general hygienic precautions which her physicians ordered. The examination of her urine showed it to be normal. Owing to the bad previous history, pregnancy was considered very hazardous. When seven weeks of pregnancy had elapsed, hyalin and granular casts, with a trace of albumin, were found in the urine. The amount of solids continued good. The interruption of pregnancy was declined by the patient. Accordingly, between the tenth and twelfth week of

gestation, she was put upon a diet from which meat was omitted, and nitrogenous food reduced very largely. Examinations of the urine were made each week, and she was seen frequently by her attending physician. The only medication was calomel, in $^1/_{20}$-grain doses, and a saline taken in the morning. She gave up her entire life to the continuation of the pregnancy, and followed strictly precautions in general hygiene. As pregnancy progressed, her urine was examined daily. At eight months she suddenly expelled a living child, weighing five pounds fourteen ounces. This child survives in excellent condition, and is still nursed by its mother. Both have made an excellent recovery.

Every preparation was made to empty the uterus, should the patient fail at any time during the pregnancy. In view of the fact that she had taken very careful precautions regarding diet, and in other ways during previous pregnancies which had resulted disastrously, the success of the last pregnancy may be thought owing, not only to general precautions, but to the use of calomel.

While the descent of the fetus into the pelvic brim is a spontaneous process, it may be aided by the voluntary acts of the mother. Such exercise as causes the muscles of the lower extremities, and of the abdominal region, to contract while the patient is erect or bending forward, is most efficient. To utilize the muscles of the upper portion of the body, the patient must contract them while in the kneeling or squatting posture. Scrubbing a floor or stairs, while kneeling, is very efficient, an exercise not available among those well to do. Walking is useful, and is the most available exercise for all classes.

The arrangement of the patient's clothing is not without influence in furthering or hindering the accommodation of the fetus. It is possible, by extreme compression of the abdomen, to force the child down upon the pelvic floor. Long-continued compression, however, so weakens the abdominal muscles that accommodation is imperfectly secured. The patient should remove all constriction from the abdomen, to allow the uterus to assume its natural situation. The bowels should be kept open, and the patient urged to take exercise. Should the abdomen be pendulous and the uterine wall stretched, it may be necessary to apply an abdominal supporter.

The presence or absence of accommodation is ascertained by palpation, and the comparative test of fitting the child's head into the pelvic brim. If the head has entered the brim, this will be detected by seizing the head between the thumb and fingers, or by grasping the head with the two hands, pressing deeply into the tissues parallel to Poupart's ligaments. A vaginal examination will confirm the diagnosis, and inform us of the degree of descent. The child's head may lodge at the brim of the pelvis, and strong lateral flexion taking place, may force down one of the parietal bones, giving a very deceptive impression to the finger of the examiner. Mistaking the parietal eminence for the vertex, he may imagine that descent has begun, when the head has not entered the pelvic brim. In cases where the induction of labor must be accepted or rejected, if there be difficulty in making an examination, an anesthetic agent should be employed. In patients who take ether badly, chloroform may be used. With anesthesia, the physician can make a bi-manual examination of the position of the head, fitting it into the pelvis with one hand, while the fingers of the other study its position and relation to the pelvic brim. It is well to catheterize a patient who is under an anesthetic, because the nervous apprehension of anesthesia often results in a free, sudden secretion of urine. Aseptic precautions should be observed in this, as in all other manipulations during pregnancy. For disproportion and disease threatening life, the induction of labor is clearly indicated.

We can mention but briefly the most recent papers upon the induction of labor and its results. Heymann* reports 107 cases. For disproportion he chose the thirty-third or thirty-fifth week of gestation; 64.3 per cent. of the children survived. The shortest antero-posterior diameter of the pelvic brim in his cases was 7 c.m. He could trace no mortality among the mothers which he could fairly assign to the induction of labor. He failed in some cases to rescue the mother from a dangerous condition. Aside from disproportion, he induced labor most frequently for threatened eclampsia, lesions of the heart, and tuberculosis. His method was that of Krause, the introduction of an aseptic bougie to excite uterine contractions. In Schauta's Festschrift,† Skorscheban reports forty-four cases of induced labor, eleven of them for contracted pelvis. He chose the thirty-fourth to thirty-eighth week, and secured 91.7 per cent. of living children. There was a large mortality among these children during the first year of life. The mothers had no mortality traceable to the operation. In thirty-three patients he induced labor three times for osteomalacia, fourteen for lesions of the heart, in seven for nephritis, in three for pernicious nausea, in five for tuberculosis, and in one for paratyphlitic abscess. The mortality was 6 per cent. among the mothers; 97.4 per cent. of the children were born living. The success of induced labor is emphasized by Grusdew's report.‡ He terminated pregnancy in this way nine times in one patient. A new method of inducing labor is advocated by Spinelli.§ He carries a strand of gauze, soaked in ichthyol and glycerine, between the membranes and the wall of the uterus. A plea for the revival of Kiwisch's method of inducing labor by vaginal douches is made by Sarwey.‖

* Archiv für Gynäkologie, Band 59, Heft 2, 1899.

† Monatschrift für Geburtshülfe und Gynäkologie, Band 11, Heft 1, 1900.

‡ Centralblatt für Gynäkologie, No. 17, 1900.

§ Arch. Ital. di Gin., December 31, 1898.

‖ Archiv für Gynäkologie, Band 60, Heft 3, 1900.

Disorders of the blood during pregnancy become most pronounced in the later months. An examination of the blood will reveal the nature of the disease, and the severity of the process. If leucocytosis is well marked, we may suspect a chronic inflammatory process, with the development of a focus in the pelvis, which may occasion septic infection after confinement. If the patient is highly anemic, and the corpuscles are much disintegrated, the danger of hemorrhage during and after labor will be great. In the treatment of these conditions the action of the intestine must be stimulated, and arsenic, iron and bitter tonics employed liberally. The abundant use of milk is especially valuable with these patients.

One of the causes of anemia in pregnancy is syphilis. The treatment of syphilis during pregnancy must be not only constitutional but local, and thorough disinfection with green soap, mercurial solutions, and lysol or carbolic acid, is demanded. The danger of septic infection following labor, in syphilitic women having an active lesion in the vagina or cervix, is so great that heroic measures may be justified during pregnancy. The use of strong antiseptic mixtures, such as carbolic acid and iodine, upon these lesions, or even the application of the cautery, may be demanded.

In the later months of pregnancy, infection by gonorrhea must receive attention. The free use of douches of tincture of green soap and water, followed by bichloride injections, gives good results. The region of the urethra and meatus must be thoroughly cleansed and disinfected.

Cancer in the later months of pregnancy may increase, with distressing rapidity. If the cervix be extensively diseased, it is better to extract the child by Cæsarian operation, removing the entire womb.

The possibility of autogenetic infection is of great interest in connection with the responsibility of the physician to prevent sepsis by the disinfection of the patient before labor. At the recent Paris Congress, Doléris, Menge and Krönig and Pestalozza read papers upon this subject, reiterating the belief that previous infections leave a patient, during her pregnancy, with infectious germs within the birth canal. While in perfectly healthy women the birth canal is aseptic, and its secretion antiseptic, if this canal has been invaded by gonorrhea, syphilis, cancer, or other mixed infection, in pregnancy subsequent to this infection the patient must be considered as capable of autogenetic sepsis. It is the duty of the physician, in the later months of pregnancy, to know whether his patient has a vaginal discharge indicative of infection. If possible, a bacteriological examination of suspicious discharges should be made, and such disinfection practiced as the results of the examination indicate. Certainly no obstetrician could be held entirely responsible for puerperal septic infection in the case of a patient, who, at the time of labor, was known to be suffering from a pre-existing infection. So difficult is it to thoroughly disinfect the birth canal that our efforts to do so are not always attended by success. That this effort must be made is evident, but we must also remember to so conduct labor as to give the least opportunity for infection, and we must recognize the danger of infecting others from such a case.

During the later weeks of pregnancy, the drawing out of the nipples, the cleansing of their surfaces, and the healing of cracks and fissures in the epithelia, should receive attention. Sterile cocoa butter or olive oil, subnitrate of bismuth and castor oil, and a borated lanoline or oxide of zinc ointment, are all useful. Congenital fissures of the nipple expose the patient to added danger, because the epithelia is often thinner than usual upon these surfaces.

Abnormal conditions of the fetus may often be diagnosticated during the later weeks of pregnancy, and demand attention. The coiling of the cord about the child's neck may be recognized by its murmur, and warns the obstetrician not to permit the labor to continue indefinitely, lest pressure upon the cord and asphyxia should result. Abnormal presentations may be corrected in the first stage of labor. Rapidly increasing polyhydramnios calls for the interruption of pregnancy, and the patient must be warned that sudden rupture of the membranes may occur at any time. During the later weeks of pregnancy occur those hemorrhages, from beginning separation of the placenta, so dangerous to mother and child. In cases where direct violence is present, the accident is sufficient to warn the obstetrician. An abnormal position of the placenta can often be detected by auscultation and palpation. The presence of a serious heart lesion in the patient, of advanced kidney disease, and of any condition interfering seriously with the circulation of the blood through the abdominal viscera predisposes to hemorrhage in the later months of pregnancy. By placenta previa we understand such an attachment of the placenta that it is separated from the uterus when dilatation begins. If the placenta be as low in the womb as the lower uterine segment, it is a placenta previa. It is often possible to diagnosticate such an attachment, if the placenta be upon the anterior wall of the uterus. The papers of Ponfick* and Fraenkel† describe recent investigations into the anatomy of placenta previa, which illustrate the point in question. In treatment, the diagnosis of central placenta previa at any time during pregnancy must be followed by the immediate termination of the pregnancy. This may be done by the gauze tampon, or the elastic bag, as recommended by Von Holst,‡ in a recent paper. If the patient be near term and the child viable, if the conditions for operation are favorable, some urge delivery by Cæsarian section. Experience in this application of the Cæsarian operation is not yet suffi-

* Archiv für Gynäkologie, Band 60, Heft 1, 1900.
† Archiv für Gynäkologie, Band 59, Heft 3, 1899.
‡ Centralblatt für Gynäkologie, No. 46, 1899.

cient to warrant a positive recommendation. The treatment of placenta previa by rapid dilatation and version is not without danger, as illustrated by Schutze's case,* in which rupture of the uterus followed delivery in placenta previa by rapid dilatation and version. The use of elastic bags may lead to accident, as in Jardine's case.† In inducing labor for contracted pelvis and placenta previa, a De Ribe's bag was introduced as a dilator. The bag burst, and the fluid which it contained rapidly separated the placenta, causing severe hemorrhage.

The later weeks of pregnancy give opportunity for a most useful study of the pregnant patient, by which the possibilities for spontaneous labor may be ascertained, abnormalities detected, complications foreseen, and such measures taken as to safely conduct the woman and her child through the perils of parturition. A physician loses a great opportunity, not only to enhance the welfare of his patient, but to increase his own knowledge and skill, if he neglects this period of gestation.

BIOGRAPHICAL SKETCH OF DR. JOHN P. SHARER.‡

BY CHARLES H. GLIDDEN, M.D.
Little Falls, N. Y.

DR. JOHN P. SHARER died on January 8, 1899. The end came suddenly and unexpectedly, though he had been ailing for a few weeks. Dr. Sharer was born in the town of Little Falls, N. Y., only three miles from the city of the same name, on June 10, 1825. a was, therefore, nearly seventy-four years of age. During his whole life he had been a resident of this town and city. His parents were Christian and Catherine (Rasbach) Sharer, natives of Herkimer county, of German extraction. While he was quite young his father removed with his family to the then Far West (Illinois), and John was left with an uncle and by him was educated in the schools of his native town, and in the academy of the adjoining town of Herkimer, also attending the old Fairfield Seminary. Among his schoolmates was the Hon. Robert Earl, ex-Chief Justice of the Court of Appeals, and the friendship thus early formed continued through life. At the age of seventeen he became clerk in the post-office at Herkimer, remaining a year or two in this position. In 1844 he began the study of medicine in the office of Dr. Daniel Belknap of Little Falls, a physician of wide reputation in the Mohawk Valley and well remembered by all the older inhabitants of Little Falls and Herkimer County. Receiving his degree at the College of Physicians and Surgeons of New York in 1848, he at once began active practice in his native village, and, thereafter, for fifty-one years he was an honored member of the profession.

In 1857 he became associated with Dr. Benjamin E. Bushnell, and the firm of Drs. Bushnell & Sharer continued until failing health, on the part of Dr. Bushnell compelled a dissolution of the copartnership about 1884. Thus, for about twenty-seven years, this firm occupied a very important and prominent position in Little Falls.

Dr. Sharer was a member of the Herkimer County Society for nearly forty years, and one of its ex-presidents. He was also for many years a permanent member of the New York State Medical Society and one of its censors. He was an original Fellow of the New York State Medical Association and rarely missed attending its annual meetings. In the Association and all pertaining to its welfare and growth he took the liveliest interest. The same may be said of the American Medical Association, of which he had for many years been an enthusiastic member and almost constant attendant at its meetings, making the journey to Atlanta, Denver and San Francisco, as well as to all the nearer meetings.

In the community in which he lived so many years, Dr. Sharer enjoyed the respect and esteem of its people to an extent that falls to the lot of but few. His integrity was never impeached. His friendships were sincere and lasting. In his associations he was a genial companion and a charming man. None who knew him will ever forget his most affable manners and unaffected politeness. His presence in the sick chamber was ever welcome, and his smile was like a ray of sunshine. "A friend to the poor" could truthfully be made his epitaph, and would be more expressive than volumes of memorial sketches. As a consultant he will be very pleasantly remembered by the other members of the profession with whom he came in contact. In his opinions he was firm, but his loyalty and kindness to younger men made them feel at ease and gave them confidence not only in him but in themselves.

Dr. Sharer never sought political favors, but for many years he unselfishly served his town as Supervisor and the village as its Executive, bringing to these positions the same careful attention to details and honesty of purpose that he bestowed on his private affairs.

Dr. Sharer married in 1859 Miss Maria R. Caldwell, a daughter of Matthew Caldwell of Little Falls. One child was born to them, but died in 1865 while quite young. Mrs. Sharer died in 1881.

THE SECRETARIES of County Associations are requested to immediately communicate the names of newly elected members and their addresses to the Secretary of the State Medical Association, Dr. F. H. Wiggin, 55 West 36th street, New York City, in order that they may be added to the mailing list of the JOURNAL.

* Centralblatt für Gynäkologie, No. 19, 1898.

† Glasgow Medical Journal, January, 1899.

‡ Read at the Annual Meeting of the New York State Medical Association, October 15, 1900.

The New York State Journal of Medicine.

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Association Notes.

THE JOURNAL SUPPLEMENT.—With the current number of the JOURNAL a Supplement, containing the paper read by Dr. E. H. Squibb, of Brooklyn, entitled "Brief Comments on the Materia Medica, Pharmacy and Therapeutics of the Year Ending July 1, 1900," read at the last annual meeting of the State Association, is sent to each member. If any one fails to receive it, a copy will be forwarded on application to the author P. O. Box 760, Brooklyn, N. Y.

* * *

NEW YORK COUNTY MEDICAL ASSOCIATION, MARCH MEETING.—The regular monthly meeting of the New York County Association was held at the Academy of Medicine, New York City, on the evening of March 18, 1901, Dr. Parker Syms presiding. More than 250 members and guests were present. Two very interesting specimens, primary carcinoma of the tip of the appendix, and primary carcinoma of the sphincter muscle of the bladder, were shown by Dr. J. Riddle Goffe. A paper, on "Operative Treatment of Hemorrhoids," was read by Dr. William Duff Bullard, and was discussed by Drs. James P. Tuttle and John F. Erdmann. Dr. Isaac Adler followed with a paper on "Arterio-Sclerosis," which was discussed by Drs. C. E. Quimby and N. E. Brill.

During the executive session the following were unanimously elected to membership: Drs. Samuel M. Brickner, 136 West 85th street; Eben Foskett, 303 West 18th street; Frank Hartley, 52 West 50th street; Henry S. Pascal, 318 West 52nd street; Ira Van Gieson, 1 Madison avenue; William S. Whitwell, 30 West 11th street.

Nominations for officers for the ensuing year, the election to occur at the April meeting, resulted as follows: For president, Dr. Parker Syms; for first vice-president, Dr. Alexander Lambert; for second vice-president, Dr. F. W. Murray, Dr. Wolff Freudenthal; for secretary, Dr. Ogden C. Ludlow; for recording secretary, Dr. M. L. Maduro, Dr. John Joseph Nutt, Dr. Seymour Oppenheimer; for treasurer, Dr. Charles E. Denison; for member of executive committee, three years, Dr. Charles Sumner Benedict; for member of nominating committee of the Fifth District Branch Association, Dr. J. W. S. Gouley. Eighty-five Fellows and alternates of the State Association, who will be respectively, delegates and alternates to the American Medical Association meeting in June next, were also put in nomination.

The recently offered amendments to the so-called anti-Christian Science or Bell bill, now before the Legislature, were discussed and the matter referred to the Committee on Legislation.

* * *

CHAUTAUQUA COUNTY MEDICAL ASSOCIATION.—The meeting of the Chautauqua County Medical Association which was to have been held March 19th was postponed until the middle of May.

* * *

STATE ASSOCIATION DUES.—It must be remembered that members of county and district branch associations are not eligible for election as Fellows or alternates of the State Association, and consequently, as delegates and alternates to the American Medical Association meeting at St. Paul in June, if in arrears for annual dues. Payments of such arrears should be made without delay. The State Association now issues an engrossed certificate, signed by the president, secretary and treasurer, to all members on payment of yearly dues.

Spread of Infection by Clothing.—A member of the Association comments as follows on the letter of Dr. A. H. Doty, Health Officer of the Port of New York, published in the March number of the Journal:

"I regard the position taken by Dr. Doty as extremely unfortunate. Of all the precautionary measures against the spread of contagious and infectious diseases that of the isolation of the sick from the well is not only most efficacious, but it is the measure that most appeals to the common sense of the people, and which they most readily and effectually enforce. Any attempt of health authorities to weaken the popular faith in the necessity of immediately isolating a case of contagious disease will prove to be a blunder if not a crime. But perhaps the greater danger from the publication of such opinions will be found in their influence on the practice of younger physicians, who, without adequate experience, will readily accept the teachings of so eminent an authority as Dr. Doty. I am sure, however, that the older family practitioners, who recall innumerable instances in which the infection of scarlet fever and diphtheria has clung tenaciously to the walls, the hangings, and the upholstered furniture of the sick-room for months, will continue to prohibit the access of the well to the sick of contagious and infectious diseases."

* * *

Changes in the Medical Directory.—*Removals, New York City*: Dr. George D. Bleything from 66 East 77th street to 27 East 81st street. Dr. P. J. Byrne from 369 Willis avenue to 336 Alexander avenue. Dr. Ramon L. Miranada from 146 Central Park West, to 5 West 102nd street.

* * *

Dr. O. C. Shaw's Removal.—Dr. Orrin C. Shaw, formerly of Kennedy, Chautauqua county, has located at Cassadaga, New York.

* * *

Orange County Medical Association, March Meeting.—The regular monthly meeting of the Orange County Association was held at the office of Dr. Milton C. Conner, Middletown, N. Y., March 12, 1901. Dr. F. H. Wiggin, secretary of the State Association, was present and aided in formulating by-laws in accordance with those of the State Association. Previous to the regular meeting an adjourned meeting for the purpose of electing a member of the nominating committee of the Fifth District Branch Association and a Fellow and alternate of the State Association was held. The election resulted as follows: Dr. M. C. Conner, member of nominating committee; Dr. W. E. Douglas, Fellow; Dr. R. A. Taylor, alternate.

At the regular meeting Dr. E. F. Brooks, of Newburgh, was elected to fill a vacancy in the committee on legislation; Dr. William Evans, of Westtown, to fill a vacancy in the committee on medical charities; and Dr. E. D. Woodhull, of Monroe, was recommended for reinstatement in the State Association. The make-up of the several committees, as corrected, reads as follows: On By-Laws—C. E. Townsend, Newburgh, chairman; F. D. Myers, State Hill; E. T. Brooks, Newburgh. On Public Health—Joseph B. Hullett, Middletown, chairman; William Evans, Westtown; C. A. Campbell, Middletown. On Medical Charities—William Evans, Westtown, chairman; E. A. Nugent, Unionville; E. D. Woodhull, Monroe.

The association then adjourned, to meet hereafter on the third Wednesday of each month. The next meeting will be held April 17, 1901. Several applications for membership were received, but no action taken at this meeting.

Dr. C. I. Redfield, the secretary of the association, writes: "The members of the new association are enthusiastic over what has already been accomplished, and voted this meeting a great success. We are endeavoring to stimulate interest by inviting those physicians of the county who are not members to attend the meetings, and the results so far have been very gratifying. Our next meeting will be devoted entirely to scientific subjects and promises to be very interesting."

In the published report of the organization of this association, as it appeared in the March number of the Journal, an error inadvertently occurred. Dr. Milton C. Conner, of Middletown, should have been named as president; Dr. F. W. Dennis, of Unionville, vice-president, and Dr. C. I. Redfield, of Middletown, secretary and treasurer.

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Dr. Orton's Vacation.—Dr. J. G. Orton, of Binghamton, is spending the winter at Daytona, Fla., where he went with the hope of obtaining relief from a severe attack of sciatica.

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Biographical Sketch of Dr. Martin J. Hutchins.—The following sketch of the life of Dr. Martin J. Hutchins, of Redwood, N. Y., has been contributed to the Journal by Dr. J. R. Sturtevant, of Theresa:

"On March 1, 1901, at his home at Redwood, N. Y., occurred the death of Dr. Martin J. Hutchins, who, for more than half a century, was one of the best beloved physicians of Northern New York. He was born at Schuyler, Herkimer County, November 7, 1825, and was the son of Benjamin and Patience Hutchins, who were sturdy New Englanders. When he was eight years old the family moved to Orleans, Jefferson County, and the country lad improved the slender opportunities of that time, became a school teacher, studied medicine with Drs. John D. Davison and Oliver Brewster, well-known physicians of Theresa, and when but twenty years of age began active practice at Plessis, afterward receiving his diploma from Castleton Medical College.

"He practised with marked success at Plessis seven years, Alexandria Bay eight years, and Redwood thirty-five years, the last five years of

his life being spent in retirement, owing to ill health. The three places mentioned are all now embraced in the town of Alexandria, so that practically his professional work covered the same ground during these fifty years.

"At various times he filled the offices of town superintendent of schools, county superintendent of the poor, collector of customs at Alexandria Bay, and supervisor, and was an able contributor to the county press. For four years he was also a member of the board of United States pension examining surgeons in this county. He was one of the founders of the Jefferson County Medical Society, its president in 1874, and contributed many papers of interest to medical journals. He was seldom absent from the meetings of the society, until prevented by his infirmities from attending.

"As a physician he possessed those characteristics which made his presence in the sick-room welcome. With him came good cheer and hope, with remarkable skill in ready diagnosis and successful treatment. As a consultant he was much in demand, and the younger generation of his fellow workers learned to love and venerate him for his always generous and encouraging treatment of them. He was a prominent mason and a member of Alexandria Lodge, Theresa Chapter, and Watertown Commandery. During twelve years he was master of his lodge. His wife and two sons survive him. One of the latter, Martin J., is a journalist, a member of the *Chicago American* staff, and the other, Frank F., is a prominent physician at Antwerp, N. Y. The funeral, which was largely attended, took place on March 4th, large delegations being present from the societies of which he was a member."

* * *

Dr. Killen Returns from Florida.—Dr. J. Killen, of Binghamton, has recently returned from a stay of several weeks' duration in Florida. On February 19th last he read an interesting paper before the Binghamton Academy of Medicine, in which he highly commended the therapeutic value of Florida's winter climate.

* * *

Erie County Medical Association, Annual Meeting.—The annual meeting of the Erie County Medical Association was held in the Natural Sciences room of the public library, Buffalo, on the evening of March 11, 1901, Dr. Delancey Rochester, the president, being in the chair. Dr. Alvin A. Hubbell read a paper on "The Reason for Two New York State and County Medical Organizations," and was followed by Dr. Allen A. Jones, who reported a case of gastroplasty. Dr. George A. Himmelsbach read a paper entitled "The Value of Normal Salt Solution by Hypodermoclysis, with Report of a Case." Dr. Nelson G. Russell read a "Report of a Case of Ruptured Ectopic Pregnancy," and Dr. Chester T. Stewart one on "Ruptured Tubal Pregnancy and Normal Delivery Ten Months After Operation." The papers were freely and interestingly discussed by Drs. C. G. Stockton, C. S. Jewett, Julius Ullman, Bernard Cohen and J. W. Grosvenor.

After discussion, it was decided that the Erie County Association, as a body, should oppose Senate bill No. 456 and Assembly bill No. 472, relating to the State Board of Charities, and resolutions were adopted to this effect. The election of officers for the ensuing year resulted as follows: President, De Lancey Rochester, of Buffalo; vice-president, William H. Jackson, of Springville; secretary, Arthur G. Bennett, of Buffalo; treasurer, C. A. Wall, of Buffalo. Dr. A. A. Hubbell was elected a member of the executive committee for three years, and Dr. Francis O'Gorman, of Buffalo, correspondent for Erie county of the New York State Journal of Medicine. Dr. Rochester and Dr. M. B. Shaw, of Eden Centre, were appointed a committee to choose the delegates to the State Medical Association meeting in October next. The meeting was largely attended, and the interest manifested by all assures the success of the Erie County Association during the coming year.

* * *

Kings County Medical Association, March Meeting.—The regular monthly meeting of the Kings County Association was held in Brooklyn Tuesday evening, March 12, 1901. The president, Dr. H. Arrowsmith, was in the chair, and about sixty members and guests were present. The scientific session was opened by the reading of a paper entitled "Surgical Diagnosis," by Dr. William B. Brinsmade. The subject was so broad in scope, and was so thoroughly treated, that it elicited an interesting and prolonged discussion. Professor Jarvis S. Wight opened the discussion and related his experience and difficulties in formulating diagnoses during his medical service throughout the War of the Rebellion. Dr. Walter C. Wood discussed, in an interesting way, differential diagnosis in relation to abdominal lesions, and Dr. L. Grant Baldwin considered the subject in connection with pelvic lesions.

A short executive session followed, at which Dr. George W. Welty, of 500 Clinton street, was unanimously elected a member of the association. The executive committee reported that applications for membership were before it from Dr. Jane H. Harris, Flatbush, and Dr. Lawrence P. A. Magilligan. The usual social intercourse and refreshment followed adjournment.

* * *

Obituary.—Dr. Michael G. Cunningham, of Binghamton, N. Y., died February 11, 1901, aged forty-four years.—Dr. Rudolph Ludovici, of New York, died at the State Hospital, Middletown, N. Y., recently, aged sixty-three years. He had been an inmate of the institution eleven years.—Dr. Abbott Hodgman died at his home in New York, February 26, 1901, in his sixty-ninth year. He was graduated from the New York University in 1858.—Dr. Hugo A. Levison, twenty-four years old, died at his residence, 44 West Thirty-

fifth street, New York City, March 16th. Dr. Levison was born at Mannheim, Germany, and was graduated from the College of Physicians and Surgeons, New York, in 1895. In accordance with his wishes, the body was cremated at Fresh Pond, L. I.—Dr. Corydon J. Phillips, of Jamestown, N. Y., died March 8, 1901, aged sixty years. He was graduated from the University of Buffalo, and had practised at Jamestown thirty-seven years.

* * *

Reports of Meetings: New Members.—Secretaries of county associations are earnestly requested to promptly forward reports of meetings, for publication in the Journal, and names of new members, for the mailing list, to the chairman of the committee on publication, Dr. J. H. Burtenshaw, 381 West End Avenue, New York City. Names of new members should also be sent to the secretary of the State Association, Dr. F. H. Wiggin, 55 West 36th street, New York, for incorporation in the official list.

* * *

Binghamton and Milk Inspection.—The Board of Health of Binghamton is urgently insisting on the need of a milk inspector for that city.

* * *

Care of the Insane.—The following has been received from a prominent member of the Association: "It is so absolutely true that too much money, as a rule, is spent on the chronic insane and too little money on the acute and possibly curable insane that we need not occupy space in attempting to prove that the above propositions are true. Stop a moment, if you please, and think. Five millions of dollars, or thereabouts, are spent annually for caring for the insane—and how are they cared for? The State hospital system comprises, we believe, eleven or twelve massive institutions, institutions that resemble feudal castles more than they do hospitals or buildings in which sick people should be cared for. These buildings represent an aggregate outlay of more than nineteen millions of dollars, and to support the insane in them costs the State, as before mentioned, in the neighborhood of five millions of dollars annually.

"Before the State-care Act went into effect some eight or ten years ago, there was little or no attempt made toward classifying the insane into proper groups. Since then, when all the insane were taken from the counties, there has been some attempt at classification, but it has not gone far enough; it should go further. The one thing needful to-day for the insane of the great State of New York is the building of a small psychopathic hospital or reception hospital; or call it by any name you choose, so long as you do not burden it with a name that will make people afraid of it; so long as you do not cause people to feel that it is a madhouse, where lunatics are kept. Build one of these structures in connection with every large city—give New York one, give Albany one, Syracuse one, Rochester one, and Buffalo one. Grade them in size according to the requirements of the various cities. As fast as suitable insane subjects come to light care for them in these small institutions, where the best brains that money can buy preside; where the best skilled physicians that time and study can produce are always on duty; where the best pathologists are studying the causes of the disease and endeavoring to outline better methods of treatment.

"Make these small hospitals *teaching centers.* Let there be a separate building in connection with them, in which physicians, graduates, even old men, if they so desire, may go and learn something or learn more of insanity. Whatever pathological work is done in the State, let it be done in connection with these institutions.

"The entire matter may be summed up in these words: Let the State of New York, with its vast insane population, that now numbers more than 21,000, *spend less on its chronic insane,* by colonizing them in agricultural colonies, where their per capita cost may be reduced to perhaps $100 a year; then care for the *acutely insane at far greater cost,* in institutions as above described, in connection with the great cities. We believe the State has a serious problem to consider in the care of its insane. There is a money side to everything, and there is a tremendous money question involved in the care of the insane in this State. We fear there will be a limit to the taxpayers' endurance. So far they have not objected, but extension in the way of the cost of caring for the insane has been so rapid during the past few years that the taxpayer has hardly had time to catch his breath and take a really impartial and accurate view, if that is possible, of the situation. Some day he will wake up to what is going on, and then we fear the results will be disastrous for the entire State-hospital system.

"Why not begin now to economize by colonizing 4,000 or 5,000 of the chronic insane—those absolutely incurable and dead, so far as their contact with the world is concerned—and by spending more money on the acutely insane—those who can be cured and turned back into society?"

* * *

Finances and Growth of the New York County Association.—The treasurer of the New York County Medical Association, Dr. Charles E. Denison, reports that up to March 18th more than twice as many members had paid their dues for the current year than had paid during a corresponding period of 1900. This is in spite of the fact that the combined individual dues of the County and State Associations have been increased by five dollars by the reorganization plan which recently went into effect. The affairs of the New York County Association were never so prosperous as now. Ninety-seven new members have been admitted since the beginning of the year.

IMPORTANT MEDICAL BILLS IN THE LEGISLATURE.

Copies of these or other bills before the Senate or Assembly will be forwarded on request to any applicant by the Senator or Assemblyman introducing them. Such requests should be addressed to the member at the Capitol, Albany.

Assembly Bill, No. 1734. Introduced by Mr. Sanders. An Act for the protection of the public health by preventing contagious diseases from spreading through the use of old bottles.

Assembly Bill No. 678. Introduced by Mr. Lynn. An Act to amend the public health law in relation to the use of type in the publication of books, newspapers or serial literature.

Assembly Bill No. 1748. Introduced by Mr. Henry, read once and referred to the Committee on Public Health. An Act to secure proper sanitary conditions and proper ventilation in public buildings and schoolhouses.

Section 1. Every public building and every schoolhouse shall be kept in a cleanly state and free from effluvia arising from any drain, privy, or other nuisance, and shall be provided with a sufficient number of proper water-closets, earth-closets or privies for the reasonable use of persons admitted to such building or attending such schoolhouse.

Senate Bill No. 1031. Introduced by Mr. Hennessy. An Act to provide for the construction of a building for hospital purposes and acquiring land for the same in the borough of the Bronx in the City of New York.

Assembly Bill No. 1880. Introduced by Mr. Babcock. An Act to amend the public health law, relative to the practice of hypnotism, mesmerism, suggestive therapeutics and allied phenomena.

Section 1. No person shall practice hypnotism, mesmerism, suggestive therapeutics and allied phenomena after May 1, 1901, unless previously registered and legally authorized, or unless licensed by the Regents of the University of the State of New York, and registered, nor shall any person practice hypnotism, mesmerism, suggestive therapeutics and allied phenomena who has ever been convicted of a felony by any court, or whose authority to practice is suspended or revoked by the Regents on recommendation of a State board.

Assembly Bill No. 1630. Introduced by Mr. Henry. An Act to provide for a hospital for the special treatment of acute nervous and mental diseases within the City and county of New York.

Section 1. There shall be established within the City and county of New York a hospital, to be known as the Hospital for the Treatment of Acute Nervous and Mental Diseases.

Sec. 2. Such hospital shall be under the control and management of a board of twelve managers, six of whom shall be regularly licensed practicing physicians and six of whom shall be citizens of the City and county of New York. Such managers shall be appointed by the mayor of the City of New York.

The following amendment has been offered to Section 1, Assembly Bill No. 759 (new No. 1811), introduced by Mr. Seymour, and known as the Osteopathic Bill. (See March JOURNAL, page 51):

Provided that said person shall have passed a satisfactory examination at the hands of the State Board of Regents in academic subjects, and provided further that no person licensed to practice osteopathy under the provisions of this act shall be allowed to prescribe or use medicines or drugs in treatment of diseases, nor be allowed to use operative surgery or treat what are commonly known as contagious or infectious diseases.

OPPOSITION TO THE OSTEOPATHIC BILL.

Dr. E. Eliot Harris, chairman of the Committee on Legislation of the New York State Medical Association, in opening the discussion in opposition to the Osteopathic Bill, at the hearing before the Committee on Public Health of the Assembly, held at the Capitol, in Albany, recently, said:

Mr. Chairman and Gentlemen of the Committee on Public Health: I am here as chairman of the Committee on Legislation of the New York State Medical Association, a medical body chartered by the Legislature, and one of its objects is the maintenance of public health.

The Seymour Osteopathic Bill, No. 759, grants to certain persons permission to treat disease by the so-called osteopathic method, and exempts them from the educational qualifications demanded by the Act governing the right to practice medicine in the State of New York.

The tendency of modern times is to raise rather than to lower the standard of the educational qualifications of professional men. The public has so long suffered from poorly educated physicians that the legislatures of nearly every State in the Union have enacted laws raising the educational qualifications of candidates to be examined for a license to practise medicine. We claim osteopathy, so called, is an agent used in the treatment of disease, and as such has no more right or reason to be separated from the general practice of medicine than electricity, mechanical exercise, bathing, nursing, massage or any other valuable agent or method used in the treatment of disease. The eye, ear, nose, throat, electrotherapeutic and other specialists do not ask exemption from the intellectual and moral qualifications and the general knowledge of the science of medicine demanded by the Regents of the University of the State of New York of all candidates who apply for a license to practise medicine or any branch of medicine. If the so-called osteopaths desire to establish a special branch of medicine then they, too, should possess at least that minimum of the knowledge of the general science of medicine demanded by the present law governing the granting of a license to practise medicine in this State; and they should not try to escape the preliminary and final examinations for a license to treat disease by securing the enactment of the so-called Osteopathic Bill.

Every part of the human body is connected sympathetically with every other part; an affection of the eyes or stomach may be due to diseases of the kidneys; persistent cough or pain in the knee may be due to disease in the pelvic region; eye-strain may produce pains in distant parts of the body, and so on, indefinitely. The protection of public health demands that no one should be allowed to treat disease in this State unless he can make a diagnosis based on the study of the general science of medicine as taught in the incorporated medical colleges of the State, and that one should know at least that minimum of the science of medicine which is demanded of all candidates for a license to practise medicine in the State of New York.

The medical laws of the State of New York were enacted to protect the people of the State from charlatans, quacks and pretenders of all sorts. The time spent in the study of medicine prepares the mind and molds the character along the lines of truth and science and away from commercialism in medicine. A reaction from commercialism in medicine was a factor in causing the Legislature to enact the laws which prevent any person not presenting the intellectual and moral qualifications required by the Board of Regents from practising medicine in this State. The public is protected by discouraging commercialism in medicine and is benefited by fostering the science of medicine.

To summarize my objections to the Osteopathic Bill: First. Osteopathy, so called, is an agent or method used in the treatment of disease, and should not be separated from the general practise of medicine.

Second. If osteopathy is to be considered as a special branch of medicine by an Act of the Legislature, it should come under the present State laws which govern all the branches of the practise of medicine.

Third. The Legislature should protect the public by denying the endorsement of the State to any person as

being capable of treating the diseases of the human body, unless such person can make a diagnosis of the condition of the human body, to do which requires a full knowledge of the science of medicine.

Fourth. If the so-called Osteopathic Bill becomes a law, all candidates who fail to pass the Regents' examination to obtain a license to practise medicine in this State may, in this State, treat all diseases of the human body by holding a diploma from any regular osteopathic college in the United States, a privilege which a graduate from Harvard or Yale medical colleges, for instance, does not enjoy.

TAXATION OF BEQUESTS TO HOSPITALS.

Section 243, Chapter 392 of the laws of 1900, provides that the exemptions from general taxation mentioned in another section of the law does not apply to bequests to hospitals and other charitable institutions.

Had this section not been added, not only the real and personal property belonging to such institutions would have been exempt, but bequests as well, now such bequests must pay a tax.

Correspondence.

DESTRUCTION OF THE STATE BOARD OF HEALTH.

To the Editor of the NEW YORK STATE JOURNAL OF MEDICINE:

SIR: I noticed with much satisfaction the action of the New York County Association against the proposed change in the organization of the State Board of Charities, from a representative body to a single commissioner. I beg to inquire what action that association, or our committee on legislation, took to prevent a similar destruction of our State Board of Health. Perhaps I ought to inquire, Does our legislative committee know that a bill has been enacted destroying the Board? for I notice that at the hearing on the measure not a person appeared for or against it. To my mind this was one of the most flagrant instances of destructive legislation in the annals of the State.

Twenty years ago, after a struggle of fifteen years, the medical profession secured the enactment of a measure creating a State Board of Health. The projectors of that law were Dr. E. M. Moore, of Rochester; Dr. Elisha Harris, of New York; Dr. O. S. Vanderpool, of Albany; Dr. William C. Wey, of Elmira, and other veterans in the great campaign for sanitary reform, then in full progress. The original bill was drafted by a lawyer, who was an expert in sanitary legislation, the fundamental idea being to create a representative body, both as regards the sanitary interests of different sections of the State and as to the qualifications of its individual members. For two decades that board has, more or less, completely fulfilled its mission, though the appointing power has not always had due regard to the fitness of its members for their responsible duties.

By the recent act of the Legislature the law, designed to be administered by a competent board, has been retained, with its deliberative and administrative features unimpaired, but instead of nine members who constituted the board there has been substituted a single person, "who shall have all the powers conferred and perform all the duties imposed by law upon the State Board of Health, or any member, committee or officer thereof, including the secretary." It is not surprising that the framers of this bill concluded to change the name of the nondescript thing they were creating from a "Board of Health" to a "Department of Health." But to the ordinary lawmaker the greatest task would have been to provide a person of such capacity that he could, at the same moment, perform all of the duties of the nine select sanitarians of the old board, of all its committees, and even of its secretary; in fact, who could be a health department in himself. But when they drew the outlines of this extraordinary individual, he proved to be only an ordinary medical graduate, of ten years' experience in practice, of skill and experience in public-health duties and sanitary science, and who would serve for $3,500 a year, and expenses, while on duty! The lawmakers were very considerate to the remarkable personality they were to install as a Department of Health, for they allowed him to employ and fix the salaries of such clerical and other assistants as he may desire, and to designate an assistant to perform all *his own duties* while he is absent, thus enabling him to attend to his private practice according to its exigencies!

From the above sketch it appears that at a single stride out State has passed from the highest to the lowest grade of sanitary organization and service, without as much as a protest from a single member of the medical profession. In my opinion those who are placed as sentinels of the association against such fraudulent legislation should have rallied the profession to their support, to prevent such a calamity as has befallen our once honored State Board of Health.

"X."

THE WORD "DISEASE."

To the Editor of the NEW YORK STATE JOURNAL OF MEDICINE:

SIR: Allow me to add a few remarks to the paragraph under this heading, in your issue for March, 1901. Why *Iatros* finds fault with the harmless word "disease," a useful synonym of sickness, illness, infirmity, I cannot understand, but, since he calls himself *Iatros*, I wish to ask him to direct his attention to a number of Greek words which are not appreciated as they should be, to ugly hybrids which have no right to existence, to words which furnish conclusive evidence that the one who uses them is wanting in regard to general education, and, finally, to words which are entirely unscientific.

Here are a few words which a man who calls himself *Iatros* may well consider: "Nosology" and "pathology" are to be distinguished, and "pathology" should not be employed when in reality "nosology" is indicated. "Asthenia" in the oldest ancient Greek, and even until the present day in the Greek language means "sickness." It does not mean "weakness." The word "neurasthenia" will not be permissible when we shall have made a little more progress and do not need to resort to a word where conceptions are wanting. "Atonia" means relaxation, and nothing else. It is hardly necessary to tell *Iatros* that "adynamia" means "weakness." No language is strong enough to condemn the word "technique" as it is used by some in place of "technic," or as the incomprehensible English genius will have it, "technics." "Technique" means "technical." Let us drown the term "nervous dyspepsia" in the bottom of the sea, where it is deepest. Such a condition as nervous dyspepsia does not exist.

Then as to the word "terminology," in the concluding paragraph of the communication. *Kalos* in the oldest ancient Greek meant "beautiful," but since the Greeks understood that all that is beautiful is good, the word first was used as a synonym of good, and now it means good altogether. Hybrids are not beautiful, and, therefore, they are not good. A man who calls himself *Iatros* will agree with me that "terminology," therefore, is not a good word. Let us use one of the pure words, of which several exist, in its place.

"ALLOS IATROS."

New York, March 14, 1901.

THE ADJECTIVE MEDICAL.

To the Editor of the NEW YORK STATE JOURNAL OF MEDICINE:

SIR: I wish to express my satisfaction with the answer of *Medicus* to the query relating to the word "disease," as published in the March number of the JOURNAL, and to call attention to the fact that in his answer such expressions as "medical world," "medical nomenclature," "medical literature," "the science of physic," "the art of healing," "physicians," etc., are used. Doubtless these terms are proper, in the present state of our knowledge, but their definition, or, at least, their explanation, would be of interest to the reader. Will *Medicus* give his views thereon?

"IATROS."

New York, March 9, 1901.

To the Editor of the NEW YORK STATE JOURNAL OF MEDICINE:

SIR: In reply to the letter of *Iatros,* which you have courteously submitted to me, prior to its publication, I beg to express myself as follows:

"Define your terms" has long been one of the outcries of philosophers, but this is easier said than done. Our language is so full of arbitrary terms that only a few, comparatively, can be defined to the satisfaction of critics. In endeavoring to comply with the request of *Iatros,* some reasons will be offered for the present use of the terms in question, without, however, undertaking their definition.

"Medical world" may not be a strictly correct term, but the adjective gives it the merit of brevity, and it is used in the sense of a congregation of healers of human ailments. Medical nomenclature" is not defensible, for, properly, it should be applied to the names of healers, or to the names of medicinal agents, but not to the names of human ailments. Therefore, the "nomenclature of diseases" should have been used instead of "medical nomenclature." "Medical literature" is correct, since it relates to the writings of healers. Until the science of physic shall have taken many more of the longest strides in its advancement, the first and third terms in question will continue to be used. In those early times, when only wounds or other external ailments required special ministration, the minister was designated, probably, by some term equivalent to "healer," for he endeavored to make the sufferer hail, or whole. The Greeks styled him *Iatros,* "healer," the Latins, *Medicus,* also meaning "healer."

Medicine clearly implies the art of healing. The physician may, or may not, practise the art of healing. He may confine himself to the study of the laws of health and of the nature of human ailments, and teach the science of physic, but leave to others the practise of the art of healing.

"MEDICUS."

New York, March 15, 1901.

Book Reviews.

THE STUDENT'S MANUAL OF VENEREAL DISEASES. By F. R. Sturgis, M.D., some time Clinical Professor of Venereal Diseases in the Medical Department of the University of the City of New York, etc. Seventh Edition. Revised and in part rewritten by F. R. Sturgis, M.D., and Follen Cabbot, M.D., Instructor in Genito-Urinary and Venereal Diseases in the Cornell Medical College, etc. P. 216. $1.25 net. Philadelphia: P. Blakiston's Son & Co., 1901.

This manual, by Dr. F. R. Sturgis, the well-known authority on venereal diseases, has enjoyed wide popularity, not only because it is concise, but because it is eminently practical. Debatable subjects are left alone, and special emphasis is laid on the subjects of differential diagnosis and treatment. In the present, seventh, edition the book has been brought up to date and the chapter on Gonorrhea, especially, shows careful preparation. The newest as well as the older and firmly established methods of treatment are detailed at length.

The very frequent use of italics in the text is not a pleasing innovation. The reader is apt to soon tire of the unconscious effort to emphasize the statements thus made prominent. As an instance of this defect a sentence may be taken at random. In referring to the treatment of inflammation of the seminal vesicles, due to gonorrhea, page 196, the author says: "Having made our diagnosis, we should strip or *massage* the diseased sacs every *five days.* At first this may be *painful* and the *discharge* temporarily *increased,* but as improvement takes place there is *less* and less *discomfort* and the *discharge* finally *disappears.*"

In spite of this pronounced feature, the book is distinctly valuable, not only for the student, for whom it was designed, but for the general practitioner and venereal specialist as well.

SANITY OF MIND. A Study of Its Conditions and of the Means to Its Development and Preservation. By David F. Lincoln, M.D., Author of "School and Industrial Hygiene." Pp. 177. New York and London: G. P. Putnam's Sons, 1900.

The author of this work is well known as a writer on hygiene, and especially on its application to schools. In the present book he aims to point out the fundamental conditions of a healthy brain and the methods by which they may be secured. While heredity is a most important factor in determining the future mental development, "there are a hundred accidents and stresses in daily life which put the workmanship of the machinery to the test and often derange it."

The author lays stress, but not undue stress, on the importance of properly developing the young in order to secure sanity of mind in later life. He remarks: "Childhood offers possibilities in the way of education for sanity that are little appreciated."

The value of the book consists in the intelligent discussion of the principles governing healthy development of the child, and will serve a most useful purpose if introduced into colleges, as well as into families capable of enforcing its teachings.

CHARITIES DIRECTORY FOR 1901. The Charity Organization Society, 105 East Twenty-second street, New York.

This valuable book, which is issued annually by the Charity Organization Society of New York, differs but little from former editions, although the index is more complete than formerly. It gives a full description of the relief agencies, hospitals, homes, dispensaries, and other agencies for medical relief; asylums for the blind, deaf-mutes, insane, inebriates, and other classes of defective and afflicted persons; reformatories; churches, missions, religious orders, sisterhoods, provident and educational schemes, libraries, reading-rooms, museums, agencies for social, economical, and physical improvement, and all other preventive and philanthropic enterprises in the City of New York. The total number of agencies included is, for Manhattan and the Bronx, 2,-993; for Brooklyn and Queens, 1,082; and for Richmond, 74; or 3,449 in all.

Original Articles.

THE SURGICAL MANAGEMENT OF UMBILICAL HERNIA WITH LARGE RING.*

BY E. D. FERGUSON, M.D.
Troy, N. Y.

AN umbilical hernia in its early history, when the opening through the aponeurotic covering of the abdomen is small and the contents of the sac can readily be returned, offers an opportunity for a relatively simple, safe and satisfactory operation. In these early cases the simple denudation of the opposing surfaces of the small ring and the proper insertion of any form of coaptating suture usually secure a radical cure if done in an aseptic field. Even in these simple cases, however, it is probable that the operation will be best done by denuding the borders of the ring to the posterior level of the tendinous structures, after excision of the sac down to the ring, and then splitting vertically the edges of the ring so that the two layers of aponeurosis which enclose the rectus muscle may be separately closed by two layers of sutures. From the intimate adhesion of the peritoneum to the edges of the ring this expedient becomes a convenience, for in closing this posterior layer, if care in denudation has been taken it is manifest that the undenuded peritoneal surfaces can be approximated at the deeper layer of sutures by stitching through the denuded borders, while the upper layer will furnish opposing surfaces of pure fibrous tissue. The common difficulty found in dissecting the peritoneal sac free at the ring so as to preserve its integrity, renders the resort to denudation the easier method, and fully as satisfactory in cases with small rings. In closing the layers of the fascia in this way we have created as deep and strong a union in tendon tissue as can be made at that point, and if the healing of these tendinous layers proves to be aseptic we may confidently expect a permanent cure.

It seems hardly necessary at present to restate the arguments in favor of suturing the separate layers of tissue entering into the hernial field so that like tissues only shall be approximated by the sutures, or to insist that the coaptation of fibrous tissue in the form of tendon, fascia or aponeurosis is the only curative expedient in our operations for hernia. It is well known that "through and through" suturing of a ring imperfectly denuded of its peritoneal covering is too frequently the course pursued even at the present time. In such cases the healing process is represented largely by the gluing together of the peritoneal borders of the ring without a welding of fibrous tissue—a state of affairs quite likely to result in a recurrence of the hernia.

If failure to secure a permanent cure is the occasional result in cases of umbilical hernia with small rings, it is not surprising that in cases with large rings success should have proved the exception rather than the rule.

The mere fact that the hernia has a large ring implies the probable presence of certain conditions which add materially to the difficulties of the operation. In the first place it is probable that the hernia has existed for a long time and that more or less of the abdominal organs have formed adhesions to the inner surface of the pouch. In fleshy patients it is difficult, if not impossible, to feel sure of a complete return of the contents of the sac prior to operation. I have several times been surprised to find considerable masses of omentum, or even loops of bowel, fixed by adhesion well within the pouch where I had concluded from palpation of the ring, after the return of a large volume of hernial contents, that the sac was empty. This is readily accounted for by the broad or flat adhesion of omentum at the ring, or the collapsible state of the loop of bowel at that point, while the surrounding cushion of adipose tissue does not allow of the recognition of the omental mass of fat, or of the soft bowel which is free from the spring and resistance due to strangulation.

Then, further, the puzzling relations of several loops of bowel imprisoned in a tangle of fibrous bands, ropes or honeycomb of omentum, and adhesions to the sac offer problems which are often extremely embarrassing to the operator.

In cases in which the incarcerated content of the pouch is very large, not permitting a considerable reduction in the size of the hernia by rest in the dorsal position for several days, the patient is subjected to those risks which experience has shown to attend the sudden restoration of the contents of a large hernia to the abdominal cavity, a fatal result supervening in spite of careful and aseptic work. This class of cases is recognized for their operative difficulties and risks as well as for the tendency to relapse.

It is not my purpose, however, to dwell upon such elements of the procedure for the cure of umbilical hernia. My object is to exploit a method of closing large rings, and I shall only dwell upon the treatment of the sac and its contents in so far as it specially relates to that method. Neither will a strict definition of the size of a *large ring* be given, for in some instances a ring may be considered large when the distance is actually less than in one which cannot so be classed. The statement that the ring will admit two, three, or even four fingers, laterally placed, does not fully classify the cases, though giving a general idea of the actual size of the ring. *The essential feature of those rings which should be classed as surgically large is the inability to approximate the borders of the ring by a vertical line of suturing without placing the parts thus sutured in a considerable and constant state of strain on the sutures.*

We cannot too strongly insist that any suture

* Presidential Address delivered October 17 1900.

material at present available, when subjected to considerable strain, will either give way or so cut the tissues included in the sutures as to allow of a separation of the approximated borders before safe union has occurred. Who would expect an earring, with its small wire, to remain in the lobe of the ear if a constant weight of even a few ounces were suspended to the ring? And yet some of those large hernial rings are brought together by a force represented by several pounds, often breaking the silver wire in the process of coaptation, in the vain hope of securing a firm union. Separation of the opposed surfaces is practically inevitable in such cases, and the loop of wire, silkworm-gut or silk will be found on the side of the ring at which the individual stitch included a larger or stronger portion, as it would sooner cut through the opposite part. In this way I have found silver loops on opposite sides of the reopened ring, where the futile attempt had been made to hold forcibly, by non-absorbable material, parts which were subjected to strain.

It seems to me that all procedures which are intended to secure permanent apposition of parts by non-absorbable suture material are surgically wrong, for if union should not occur within the usual time, or if strain is to continue beyond the usual time of healing, or even to be considerable during that time, the sutures will so cut into the tissues as to defeat the attempt.

Any suture material that remains much longer than is sufficient to allow firm union of the parts apposed by the sutures becomes a foreign body, with a liability to become the focus of irritative changes. Even absorbable sutures, when overhardened by chromicising, may remain so long as to give trouble, but such a result is an incidental factor and not a constant condition, as with non-absorbable sutures.

Before detailing the special operative expedient which it is my purpose to set forth in this paper, it will be well to recall the anatomic relations of the parts.

By reference to the diagram, Fig. 1, taken from Gray's "Anatomy," showing a transverse section of the abdominal walls in the lumbar region, it is seen that the three muscles on the anterolateral aspects, namely the external oblique, the internal oblique, and the transverse have three aponeurotic tendons so disposed that the tendon of the internal oblique is split at the semilunar line, one half of the tendon uniting with that of the external oblique and passing in front of the rectus muscle and the other half uniting with the tendon of the transverse muscle and passing behind the rectus. Both divisions come together at the inner border of the rectus, and are there blended with each other as well as with the tendons of the opposite side so as to form the linea alba.

It is this division of the aponeurosis of the internal oblique and the blending of the divisions with the aponeuroses of the two remaining muscles in passing respectively in front and behind the rectus muscle that furnishes the condition which led me to devise the operation. This division is nearly constant and may usually be counted on in practice, but in one case I found the layer of aponeurosis behind the rectus quite defective, in fact scarcely stronger than the fascia transversalis, a structure which is of service as an aid in preventing hernia, but not in itself sufficient, for in fact it is usually included with the peritoneum in the first layer of suturing in abdominal operations, the operator not distinguishing or separating the fascia from the peritoneum. This disposition of the aponeurotic tendons of the abdominal muscles does not extend the whole length of the rectus, but only for the upper three-fourths of that muscle. At about midway between the umbilicus and the pubes the muscle penetrates the posterior layer

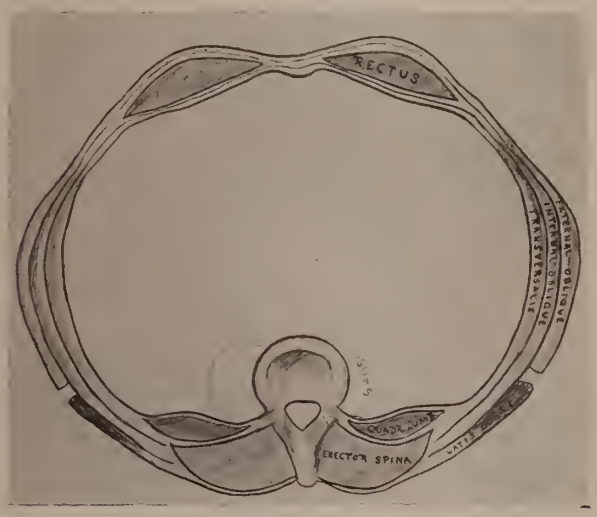

Fig. 1.

of its sheath, the aponeurotic margin bordering the upper and free fold being known as the semilunar fold of Douglas. This change in the relation of the aponeurosis is so generally found at the indicated level that we may regard it as practically constant, so that for the distance of three inches below the umbilicus we will find a strong lamella of aponeurosis behind the muscle, and one in front of it, an extent usually sufficient for the expedient that I adopted. Of course this arrangement of the lamellæ extends from the umbilicus upwards into the epigastric region, though the sheath becomes less in size and its parts more blended as the ensiform and the rib cartilages are approached.

Opposite the umbilicus, and at two points above, namely, just below the ensiform cartilage and midway between that point and the umbilicus, the rectus is partly divided by tendinous material, which penetrates the substance of the muscle to a greater or less extent, usually from the anterior lamellæ of the sheath. These lineæ

transversæ enable the muscle readily to act in sections, but they rarely penetrate the muscle so completely or firmly as to prevent the separation of the anterior lamella of the sheath from the muscle. In some cases, however, if we are to leave a continuous stretch of muscle it will be necessary to proceed carefully in the dissection through these transverse lines, otherwise we will either destroy the continuity of the muscle or will render thin or even penetrate the anterior lamella of the sheath. If in reconstructing a continuous protective covering in the abdominal walls the problem arises as to which is more important, the muscle or the aponeurosis, we should always proceed so as to preserve the aponeurosis intact rather than the muscle. Even if the separation through the lineæ transversæ goes so deeply as to endanger the local continuity of the rectus muscle, if we do not seriously weaken the posterior or anterior lamella of the sheath, we will have available material which will be efficient in the repair of a hernial opening.

As is well known, the lamellæ which constitute the sheath of the rectus muscle, as they pass to the median line, blend with each other and with those of the sheath of the opposite muscle in what is known as the linea alba. This union is narrower below the umbilicus than above, but throughout its extent furnishes an example of very firm blending of aponeurotic tissue.

In the development of the embryo a weak point in this line is left by the umbilical vessels there entering the abdominal cavity. At the point of entrance of these vessels we can usually count on a firm blending of the anterior and posterior layers of the sheath of the rectus on each side of the vessels, but blending of the borders of these sheaths after the atrophy of the umbilical vessels is rarely so perfect as to render that part of the abdominal wall as strong as either above or below that point; hence, when lateral strain becomes strong in lifting, pregnancy, childbirth, or other cause of strain or distention, this weak spot may yield and a hernia result.

The influence of pregnancy is manifest in the greater frequency of umbilical hernia among parous women.

In the development of an umbilical hernia the yielding is usually just at the point where the umbilical vessels entered the abdomen, consequently, and on this point I wish to place emphasis, the hernial ring will be bounded by the linea alba at a narrow space, at its upper and lower portions, and between these points on each side will be the blended borders of the two lamellæ of the sheath of each rectus. This lateral blending of the two elements of that muscle-sheath is the key to the situation. It is usually a union of great strength, and even in cases where the ring has been quite freely excised and the borders approximated with through-and-through suturing, or other methods of closing the opening, should a relapse of the hernia occur, we may expect to find a strong union re-established at the inner border of the rectus muscle between these two lamellæ.

I wish to make my meaning clear on this point, for it is the key to the situation. At the center of the upper and lower portions of the ring the tendinous structures are blended in the linea alba, and in a way recognized by all as furnishing a union of great strength. On the lateral portions of the ring where the tendon in front of the rectus becomes blended with the tendon behind that muscle, so as to make thus a tendinous border entirely around the ring, the strength of the union of the aponeurotic layers is not so generally recognized.

It is only necessary to open the sheath of the rectus opposite the ring of an umbilical hernia to recognize the strength of the union of the two layers at that point, at least in the great majority of cases. There is in addition a practical point of importance in our efforts to cure these cases. In some of them we will find that one or more attempts have been made to effect a cure by denudation and direct approximation, and in such cases the denudation or *excision* of the ring will have diminished or even removed portions of this line of union between the two layers of the sheath, but as the sutures are usually applied so as to include these two layers the new borders will be brought together anteroposteriorly, and as the strain in that direction will be small the two layers will probably remain together and result in a new and firm union, though the lateral strain prove too great to permit a firm union with those layers approximated from opposite sides of the ring.

With this exposition of anatomic and operative points as a basis, I will select the first case in which I applied the plan to be described. That case is selected as illustrative for the reason that it presented all the conditions in which any usual procedure would with nearly absolute certainty result in failure to cure, and the additional reason that the lapse of time as a test of cure is the longest I can offer, and still further an event in the progress of the case furnished some evidence of the efficiency of the plan, and a more recent event one of the sources of failure.

The patient, a woman, thirty-four years of age, was admitted to the hospital April 20, 1899. She had given birth to five children, three of whom are living. Nine years after the birth of her first child she discovered an umbilical hernia, also a right inguinal hernia. The inguinal hernia, I found, had been cured by an operation, but several operations had been executed on the umbilical hernia, each of which had promptly resulted in failure to cure. She reported seven operations on the umbilical hernia, and as five of them were ascertained to have been made, credit may be given to the statement that seven attempts to cure were made prior to the operation undertaken by me.

The patient having illness not associated with

the hernia, and attended with fever, operation was deferred until June 13, 1899.

On that day, when the patient was under the influence of an anesthetic, the hernia, which was about the bulk of a large-sized cocoanut, was found to have a ring somewhat larger than a silver dollar, readily receiving three fingers placed laterally.

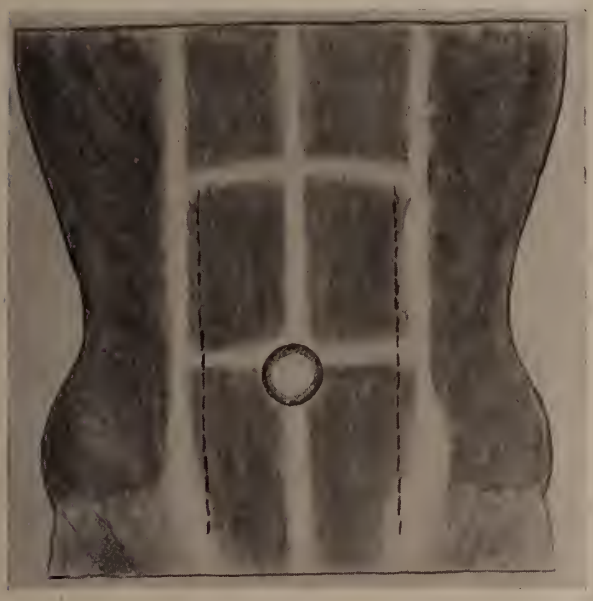

Fig. 2.

It was then, and for the first time, apparent that adhesions of viscera to the sac prevented complete reduction.

A vertical incision was made directly into the sac, when the adhesions of bowel and omentum to the sac were found extensive, intricate, and in many places very firm. These adhesions were separated so far as to release the bowel from any probable source of obstruction, and the sac was dissected free from structures outside of it well to the aponeurotic margins of the ring, and a portion of the pouch was then excised, leaving enough in extent and of proper shape so that what remained could be closed by a whip stitch along the median line without tension on the suture. No direct measure intended to approximate the borders of the ring was undertaken, nor could it have been accomplished without such tension as surely to defeat the attempt to cure.

In dissecting the sac free from the parts outside of it there was left a large surface of the sheaths of the recti muscles more or less uncovered. Attention was now given to a thorough uncovering of those sheaths from all overlying portions of fat or loose connective tissue for a space sufficient for the subsequent procedure. Having thus secured a surface of tendinous structure in a condition to allow securing easy coaptation and good union, a longitudinal incision was made in the sheath of each muscle, near the external border. (Fig. 2, from Sappey.) Each incision was probably slightly more than five inches in length, with the middle point opposite the center of the hernial ring. The anterior layer of the sheath was then separated mainly by blunt dissection from the underlying muscle well to the borders of the ring, and for sufficient distance vertically to allow turning the flaps thus formed inwards, so that coaptation could be secured without tension. The diagrams will illustrate this better than verbal description. But little trouble was encountered in this procedure in effecting a separation at the lineæ transversæ, though an occasional strand of fibrous tissue required the careful use of the blunt scissors or scalpel.

That part of the dissection, however, needs to be made with care, the fascia being held under proper tension and sufficiently freed from blood to allow of full use of sight and touch in determining just what to do in order to secure an uninjured sheet of tendon. Between the transverse lines the sheath is free to any manipulation which the operator wishes to make after the vertical incision along the outer border is made. It seemed probable that sufficient sources of nutrition would remain to prevent death of any portion of this tendinous flap, *if no cross-incision were made,* and if tension through suturing were avoided, hence the flaps were made as long and broad as was practicable.

Fig. 3.

When the flaps were free they were turned to the middle line and sutured by the cobbler's stitch, about one-fourth inch from their free borders, for a distance slightly in excess of the vertical extent of the ring, and then a loosely-placed whip-stitch was used to coaptate the free edges above the cobbler's stitch. (Fig. 3.) The *folded* and doubled portions of the flaps were

then secured by some rather loosely-placed interrupted sutures, placing a few of these stitches so as to fasten the flaps near the borders of the ring. These interrupted sutures were made to include as small portions of the tissues as possible, in order to reduce the interference with nutrition to as small a degree as was practicable. The surfaces thus held by the interrupted sutures would not be under great strain, and, being broad and flat, coaptation could be secured without the probability of notable tension on the sutures, even should vomiting occur. It seems probable that care in this part of the procedure will be necessary in order to avoid serious interference with the nutrition of the flaps; but the tissues involved being constituted of strong elements, the sutures need include only such small portions as the dexterity of the operator will permit him to take.

This being my first operation by this method I did not realize the importance of thorough work in coaptating the broad surfaces *below* the low border of the ring, and quite recently, in this case, there is a yielding at that point and there is a narrow canal leading upward under the reflected fascia and towards the ring.

If attended to promptly it can no doubt be made secure by a simple procedure.

In other cases, fearing this would prove a weak spot, I have been more careful to have there as broad a surface as possible and to secure as thorough coaptation as could be made without endangering the vitality of the flaps.

The hernial ring having been closed in this way, the overlying skin was trimmed to proper dimensions and proportions to allow closure without tension, when the skin and underlying tissues on the lateral portions of the wound were closed by running suture, to secure apposition and avoid "dead spaces" and the margins of the skin were closed by the use of a buried suture, kangaroo tendon being used in all the suturing. The wound was then sealed with collodion, and the waiting for the result was begun.

Nothing noteworthy occurred in the healing process, though the development of intercurrent illness three or four weeks after operation required that she remain in bed longer than would otherwise be deemed necessary.

After the wound was closed I had noticed that some of the running stitches used to coaptate the skin to the underlying parts had penetrated so near the surface of the skin as to lead me to fear that they might become the means of infection, for experience had led me to believe that such infection could arise in two ways. In the first place the suture might penetrate a follicle containing a pus-forming bacillus, or, secondly, it might come so near to the surface that in the exfoliative changes or through attrition or abrasion just above the strand of suture it might be so exposed as to allow infection through contamination of the thread by external agents. The suspicious points, however, were so near the lateral portions of the field that my anxiety was not great, and as week after week passed without any sign of inflammation all fear from that source subsided.

About the middle of August, however, signs of a mild inflammatory process were manifest at the seat of one of these offending stitches, but as it was evident that the bacillus was not of a virulent character, would tend to progress slowly, and sufficient time having elapsed to insure the thorough union of the tendinous structure, I allowed the process to continue for several days before interference, but on August 19, *i. e.*, two months and six days after the operation, I opened the abscess. The suppurative process had proceeded along the subcutaneous suturing so as to separate the skin from the fascia and to expose the line where the two tendinous flaps had been joined, and I was pleased to note that the welding had become so complete that it was only by careful observation that I could discover where the coaptation had been made, the tendinous structures having blended into a continuous aponeurosis extending entirely over the space included in the former hernial ring.

It was several weeks before the abscess finally healed, but at no time has there been any sign of yielding at the site of the umbilicus, but when I saw the fascia at the bottom of the abscess it occurred to me that I had not been sufficiently careful in coaptating the reflected and underlying fascia below the ring, where the strain would be the greatest.

In the description of the operation the fact that two silver sutures were found, one in each opposing margin of the ring, was omitted, but such was the case, and thus was added another instance in support of what seems to be a proper conclusion—that non-absorbable sutures, under strong tension, are useless in operation for the cure of hernia, for here the tension had caused one stitch to cut through one margin of the ring and the other through the opposite margin.

The operative procedure which I have endeavored to set forth is, so far as I know, a new one, for I have not been able to learn of its previous use, or description; but I have no pride in becoming the introducer of a novelty, and will feel no chagrin if I learn that I have overlooked in our massive literature a similar story of surgical expedient.

Nor do I desire to take refuge behind a classification as a presidential address from any criticism of means or methods, but will gladly welcome any evidence which will show fault of technic, for thereby is the progress of medicine served, an object which should be more dear to each of us than the desire to be a discoverer.

SPECIAL CORRESPONDENTS.—The Erie County Medical Association, at its last meeting, elected a member to act as special correspondent of the NEW YORK STATE JOURNAL OF MEDICINE. This example should be followed by every county association in the State.

ON THE ANALOGY BETWEEN NERVOUS CONDUCTIBILITY AND ELECTRIC CONDUCTIBILITY, AND THEIR RELATION TO THE FUNCTIONAL NEUROSES.

BY A. D. ROCKWELL, M.D.

New York.

THE reproach of Mr. Lecky, that the medical powers of electricity, which of all known agencies bears most resemblance to life, are unexplored, is no longer deserved. It is true that as a remedial agent it has by no means kept pace with its unexampled development as a commercial power, and yet from the immeasurable amount of chaff that has flooded and still floods medical periodical literature, both here and abroad, can be winnowed many scientific facts of value, especially in the domain of body nutritive exchanges and the relation of electric to nerve conductibility.

While the electric current and the nerve current are quite different in their essential characteristics, yet late researches have shown some very interesting and suggestive points of resemblance.

The nerve tracts, which were formerly thought to be continuous, are now known to be made up of independent neurons, along which in their normal condition the nerve waves are propagated, or are arrested if there is a defect of continuity.

When the healthy nerve cell receives the stimulus of the nerve wave, energy is liberated, animating and reinforcing the nerve current. In the sick nerve cell, on the contrary, energy is not excited, much less increased. Without this reinforcement, as developed in the healthy cell, the nerve wave can make no further progress. In other words, the neuron becomes impervious to it. Pathological conditions show that the conductibility of the neuron may be complete or incomplete, according to the degree of permeability of the nervous tract.

If the nerve current can pass, it is translated into sensation, movement, intelligence. If it cannot pass, and there are no gross structural changes, we get a variety of the functional neuroses, as hysteria and hysterical anesthesia and paraplegia, forms of neurasthenia, and mental defects, as shown more especially in confusion of ideas and impaired memory. In order to make clear the striking analogy between the nerve current and the electric current, it will be necessary to refer briefly to a novel and very interesting contrivance, called the coherer, an essential part of the outfit for wireless telegraphy.

This coherer is simply a tube of metallic filings. Now, although metal is the best of conductors, yet, when it is divided into separate and distinct particles, like the filings of iron, the coherer, which is made up of these filings, becomes non-conducting to a weak current. If, however, the tube containing the filings is placed in a solenoid through which course currents of high frequency, or in the range of influence of the cathodic ray, the tube immediately becomes a conductor, and the current passes; or, if it is placed in proximity to a static machine in operation, the electric waves set in motion by the electric sparks strike the coherer and render it immediately a conductor. Removed from these influences it gradually loses its conductibility, retaining it longer under the influence of cold than of heat. It becomes non-conducting again, however, if subjected to any shock, however slight. These invisible and silent waves of influence nothing can obstruct or deflect, and in the far distance, the limit of which no one can yet say, striking the tube of iron filings, are translated into signs of intelligence.

In order to study a phenomenon with advantage it is well to have a theory, and, although the theory be defective, it yet gives us a point of departure, leading, it may be, to a clearer conception of the principles involved.

This theory, as suggested by M. Branly, to whom we are indebted for this interesting discovery, supposes that each grain is surrounded by a sheath of condensed ether, but not in contact the one with the other.

The waves of an electric discharge expand these sheaths of ether, and it is their mutual penetration that changes the tube of filings from a non-conductor to a conductor. A shock retracts these sheaths and destroys the conductibility. On the other hand, when we study the nervous system on the basis of the neuron theory, we find analogies of the most striking character.

Neuro-motor energy may be developed primarily in the nerve centres or it may come from without, external physical energy being transformed into reflex nervous energy; in either case it overcomes the natural resistance of the independent neurons, making them conductors of energy, in the same way that the electric wave generated at a distance and striking the disconnected filings of the coherer, overcomes its natural resistance and makes it a conductor.

The neuron with its dendrites make up the central and active part of the nerve cell, the cylinder axis prolongations acting as conductors of the nervous current. Under the influence of external irritation the dendrites are increased and developed, and the greater the activity of the neuron the greater the tendency to produce new protoplasmic growths. Does not this harmonize very closely with the working theory in explanation of the action of electricity on the disconnected conductors of the coherer, the expansion and contraction of the ether surrounding each metal particle corresponding to the increase and development or the decrease and obliteration of the protoplasmic prolongations of the cell?

The points of contact are broken between the individual neurons, and the nervous wave is arrested in its course. This theory of the alternating conductibility and non-conductibility of the disconnected conductor, termed the coherer, and

the theory of the neuron, opens up to us the possibility of understanding more clearly, not only the gross changes of organic lesions of the brain and the invisible anomalies of structure that we term nutritional, but throws a new and bright light on the rationale of the well-established value of electricity in the cure of so many functional diseases of the nervous system, and the relief often afforded, even in diseases that are organic and structural.

Reasoning from analogy and the results of physical and physiological experiment, it is natural to conclude that conditions, such as hysteria and hysterical anesthesia and paraplegia, forms of neurasthenia and various mental conditions, are the derangements in which electricity in some one of its manifestations is specially indicated. But long before we possessed any knowledge of these interesting facts relative to nerve and electric conduction, the clinic had assured us positively and repeatedly of the efficiency of this method of treatment in the functional diseases of the nervous system.

One case bearing on this point I beg leave to offer, as illustrating not only the analogy between the nervous conductibility and the electric conductibility, but as practical evidence of the power of electricity to restore the conductibility of the neuron that had become resistant to the nerve current. Such a result as the one about to be related is sometimes spoken of as one of the brilliant ones of electrical treatment. It was a brilliant result only in so far as it was a quick result. Nature was simply reinforced, and was enabled to accomplish at once what she was slowly trying to do, and what she would in all probability have succeeded in doing if left to herself.

Miss ——, aged 24, whom I had treated many times some two years previously for a nervous derangement, and who had in great measure recovered, came under my care again, during the winter just passed, in a deplorable state of mind and body, the result of a nervous shock in escaping from a burning building. Up to this date she had been for some time in better health than ever before, but evidences of her hereditary and acquired nervousness, or nervelessness, were never altogether wanting. She suffered more or less at all times from morbid fears, and had formerly been able to take an unusually large quantity of stimulants without appreciable effect. During the worst periods of her combined hysterical and neurasthenic attacks, an ordinary claret glass of brandy would affect her seemingly no more than so much water.

As her condition improved this insusceptibility became less and less marked, until finally she was influenced by stimulants almost, if not quite, as readily as others. After the great shock of the fire this craving and remarkable capacity for intoxicants again returned, and was associated with confusion of ideas, impaired memory, partial paraplegia with anesthesia, and profound mental depression, relieved by violent paroxysms of weeping. Her amnesia was peculiar, in that it related to a few things only. Passing events were well remembered, and the ordinary occurrences of the day; but, for example, she claimed to be unable to remember ever having been to my office. I might have ascribed this to caprice, excepting that this mental failure was distinctly pronounced in other ways. Under nerve sedatives she was temporarily quieted, and during the next ten days improved a little in all her general and special symptoms sufficient to be brought to the office in a carriage. She was immediately placed in what may be termed an electro-static vibratory field. More specifically, she was placed on an insulated platform and connected with the positive pole of the apparatus. The negative pole was grounded and the spark gap regulated at two inches, giving to the patient vibratory waves, very distinct, but altogether agreeable. If she had simply been placed on the usual insulating platform and given the ordinary treatment of static electrification, the nerve tracts would not have been influenced by those currents of vibratory potential alternation that are so essential in restoring conductibility to the coherer in the operation of wireless telegraphy, to which allusion has been made.

I must not forget to say that her tactile sensibility was carefully interrogated, but the esthesiometer proved to be of little value, since the anesthesia of the tips of the fingers and of the body generally was so profound that the prick of a pin was not felt. Only at the top of the tongue was there any sensation. Here a prick was felt, but the two points of the esthesiometer were separately felt only when apart some 3 m.m. A single seance of fifteen minutes resulted in a very remarkable amelioration of several symptoms, notably of the anesthesia, and within a week, after three additional treatments, she was able to walk alone with considerable ease. She had quiet and restful nights for the first time since the accident, and arose refreshed and cheerful. Her amnesia quite passed away, the fingers were ordinarily sensitive to touch, and at the tip of the tongue she was able to discriminate the points of the esthesiometer when but little more than 1 m.m. apart. A most interesting evidence of improvement was the disappearance of the desire for, and the insusceptibility to, stimulants.

As a clinical fact the foregoing case by no means stands alone, and doubtless could be duplicated in its essential features by any neurologist who makes much use of electricity in practice. Not only have there been many quick recoveries in cases of profound functional nervous disorders by placing patients within the field of the influence of currents of high potential and high frequency, but it is even true that some violent neuro-motor excitation, such, for example, as a sudden fright, anger, and even joy, has restored power to the paralyzed limbs of hysterical patients, by overcoming the non-conductibility of

the resistant neuron. In order to explain the sudden change of the tube of iron filings from a non-conductor to a conductor, recourse was had to the theory of a sheath of ether surrounding each particle, whose alternate expansion and contraction under electric influence and shock changed entirely its power of conduction. In dealing, however, with the relation of electric energy and shock to the nervous system, we find in the physiology and minute anatomy of its structure a basis of knowledge rather than theory. We are told that the nervous system is composed of independent neurons, and that the connection between them is made by simple contact of the cylinder axis of one neuron with the protoplasmic prolongation of another. The readiness with which the nervous current flows, translating itself into sensation, movement and intelligence, depends upon the functional integrity of the neuron and the perfection of its collateral connections. The contact between the dendrites of one neuron with the protoplasmic prolongation of another must not only be constant, but must be constantly changing, in order to make a way for new ideas and new impressions. In the normal condition of mind and body there is no severance between the dendrites and the cylinder axis fibres, but in impairment of the psychic function, whether it registers itself in the domain of sensation, movement or intelligence, or in all these, as in the case just related, these ties or points of contact become impaired or altogether broken. Electricity and all energy is amenable to the law of the correlation and conservation of forces. As iron becomes magnetized or heated by the application of force and heat, so the electric energy applied to the human body is not lost, but in its transformation tends in a single direction, the stimulation of the living molecule and the nourishment of the nerve centres, the depository and dispensers of all vital energy.

It calms the irritable cell and increases its activity when sluggish. The modification that an organic compound undergoes when subjected to the action of a physical force, varies of course with its intensity, and especially with the nature of the body on which it acts.

When the compound is a metal, the passage of a current of sufficient power generates heat and dilates its constituent molecules.

When the electrolyte is a living body, the heat generated is not primary but secondary.

Caloric is not directly absorbed, as in the former case, but the elevation of temperature results from biological changes of a secondary nature, and this conservation is indicated by a quickened circulation and an increased activity of all the excretory and secretory processes of the body.

The increase in the elimination of urea and all toxic products, now so well established, through the influence of currents of high tension and high frequency, act in two ways—first, as a reflex of defense against the action upon the system of these toxic products suddenly set free; secondly, by hastening and increasing the nutritive exchanges throughout the body. Admitting, as has been claimed, that inherently electricity has neither curative nor destructive qualities, yet it is the bearer of energy, both mechanical and chemical. It has to do with molecules and atoms. shaking them apart or permitting new arrangements, and the benefit or injury that comes to the organism through this disturbing process depends upon the rôle played in the economy by these new atomic arrangements.

As to the underlying causative factor in the field of the functional neuroses we can arrive at but one conclusion—namely, an impairment or interuption of the potential energy of the cell life. We have seen how physical shock or the stress and strain put upon the nervous system by the dissipation and even the legitimate demands of our modern civilization interferes with the vital function of the neuron and renders it impervious to the nerve wave. We have seen also, on the other hand, how the subtle electric waves generated by currents of high tension and high frequency, so analagous in some respects, and yet so entirely different in nature from the nervous current, have power to restore the interrupted conductibility of the nerve tracts.

The inherent energy of the nerve cells is liberated, new paths of conduction form, resulting in modification of motor-sensory, secretory, excretory and vaso-motor processes.

It cannot therefore be too often repeated that the fundamental idea of the therapeutic value of electricity is its influence on the nerve cell and upon general and local nutrition.

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Committees; Dates.—In order that the list, published on the second page of the Journal, can be made complete, secretaries of county and district branch associations are requested to forward at once the names of all members of standing committees and dates of meetings.

MANAGEMENT OF NORMAL LABOR, INCLUDING THE USE OF FORCEPS.*

BY AUSTIN FLINT, JR., M.D.
New York.

NORMAL labor, understood in a somewhat wider sense than the strictly literal, includes the vast majority of obstetrical cases. Labor may be normal in the sense that all the conditions exist that conduce to greatest safety of both mother and child, and still may present wide variations as regards its duration, character of the labor-pains and various other conditions. Its proper management is perhaps more far reaching in its effects for good or for harm than mismanagement in the comparatively few abnormal cases.

Of late years advances in obstetrical practice have been made chiefly along the lines of improved methods of carrying out antiseptic and aseptic details and in obstetric surgery. Statistics as regards mortality have shown a gratifying improvement, and it is now the aim of obstetricians to show a corresponding improvement in morbidity. In hospital practice, the mortality has been reduced to about one-half of one per cent. Morbidity statistics vary between 4 or 5 per cent., and as much as 25 per cent.

In a general way, the fewer the examinations and the less interference of any kind that is allowed, the smaller becomes the percentage of temperature cases. If we remember that a large proportion of these cases are normal at the start, as regards presentation and position, and that the large percentage of morbidity is due to some fault in the management, the most important principle in the management would be non-interference. It is not enough to conduct a case with the result that "mother and child lived," but the result should be that the mother recovered perfect health, and the baby was strong and healthy also. To make this the rule in practice requires a close and serious study and the exhibition of a good deal of skill even in so-called normal cases. The general indication in treatment is to do everything that will limit the suffering to the smallest degree consistent with the best interests of mother and child.

In a paper which is to cover so wide a field and which must be limited in time, a comprehensive review of the management of normal cases is impossible. It is also difficult to pick out the important details of management and to omit other details, all of which have direct bearing on the ultimate results. Perhaps the most direct is to give a brief review of the technic in the conduct of a case, with reference more particularly to private practice.

While not wishing to go outside the scope of the title of this paper, I believe a careful physical examination at the end of the eighth month of pregnancy is necessary, and that it partly takes the place of a similar examination at the beginning of labor. If such an examination can be made, nearly all danger of infection and subsequent fever is avoided, and very valuable information is obtained. A diagnosis at this time usually will hold good at the time when labor actually begins; and especially in primiparæ, presentation and position rarely change during the last month of pregnancy.

The examination should, of course, include pelvic mensuration. The patient should be instructed to take daily walks during the last month of pregnancy and up to the very beginning of labor. The results of these daily walks are very satisfactory. They favor softening of the lower segment of the uterus and vagina, allow the head to sink through the pelvic brim, and lessen the liability to change in position. The softening also renders dilatation easier, and shortens the first stage of labor.

A consideration of the management of actual labor is conveniently divided into the management of the three stages.

The First Stage.—If it has been possible to make an examination at the eighth month, the examination during the first stage is very much simplified; this examination, when the patient's condition will admit, is preceded by a warm bath, the external genitals are cleansed with green soap and water, an enema is given and a sterilized gauze pad is placed over the vulva. After the usual sterilization of the hands, an external examination is made, and finally an internal examination. This is done to verify the diagnosis previously made, and to ascertain the progress since the beginning of labor. It is better to make a long and careful examination at this time than to make a series of short and incomplete examinations. If the case can be diagnosticated as normal, the management consists almost entirely in observation until nearly the end of this stage. The patient is allowed to assume any position that is most comfortable, the upright being preferred as long as possible. The nurse should be instructed to see that the patient's bladder is emptied at hourly intervals. Toward the end of this stage the patient should be put to bed, and in the majority of cases an anesthetic may be used. Ether used in small quantities during each pain seems gradually to be displacing chloroform for this purpose, and it can be used in exactly the same way.

I often aid manually in the dilatation of the cervix toward the end of the stage if progress

* Second paper read at the Seventeenth Annual Meeting of the New York State Medical Association in the Symposium on Obstetrics. The first paper, by Dr. E. P. Davis, of Philadelphia, on "Treatment of the Patient During the Weeks Previous to Expected Confinement," was published in the March number of the JOURNAL.

appears to be slow. The rule to preserve the bag of waters as long as possible, particularly in primiparæ, deserves mention. As the physician gains experience, the number of necessary examinations becomes less and less. The advantages of infrequent examination are too well known to require further discussion.

The Second Stage.—No special interference is required during this stage until the head reaches the pelvic floor. Time does not permit of even a brief outline of the various measures designed to preserve the perineum from rupture. The principle underlying all methods is to secure dilatation of the vulva before allowing the head to pass; and under normal conditions this takes place by a slow and regular advance of the head. An anesthetic is of great advantage in many cases, the quantity being determined not only by the degree of suffering, but by the slowness or rapidity with which the child's head advances. Those who are accustomed to a frequent use of anesthetics will undoubtedly be compelled, oftener than others, to use forceps; and so far as the integrity of the pelvic floor is concerned, undue delay in delivery is almost as dangerous as haste.

In my opinion, the use of forceps when the head is at the outlet of the pelvis is too infrequent. Their proper use is an art, but an art not more difficult to acquire than the proper delivery of the head and shoulders through the vulva without the use of forceps. The mistake of the beginner is haste. The principles governing methods of "preservation of the perineum" apply with equal force in a forceps delivery and in an uncomplicated delivery. Time, with a slow, gradual advance of the presenting part, will produce the dilatation of the vulvar orifice exactly as it does dilatation of the cervical canal. Under normal conditions, even a small orifice will dilate under the influences of repeated advances and recessions of the presenting part, until the time comes when delivery may be safely accomplished. If this takes place from the influence of the pains alone, any interference other than regulating the rapidity of these advances is unnecessary. If the pains are too feeble to cause the head to advance regularly, they may be stimulated. The withdrawal of an anesthetic, if one is used, or the substitution of ether for chloroform, is often all that is necessary. The uterine contractions can then be reinforced by voluntary efforts at expulsion. Occasionally a stimulant produces this effect. Ergot, of course, should never be used. As soon, however, as the presenting part ceases to advance and stimulation or withholding the anesthetic does not cause advance, low forceps are indicated. It is futile to wait any definite time in the hope that the propulsive qualities of the pains will reappear. Artificial extraction by means of forceps is safer, both for the mother and child, than a waiting policy. The forceps should be used in imitation of normal pains. Traction should be slow, gradually increasing in force until the soft parts in front of the head are put upon the stretch, then the head should be held for about a minute, followed by a slow and gradual relaxation of the traction force until the artificial pain is passed. A few minutes should then be allowed for a return of the circulation in the parts subjected to pressure, when the operation should be repeated.

Under the normal conditions that I am considering, delivery with an intact pelvic floor can be accomplished in a very large proportion of cases. In a general way, the same results can be accomplished by forceps when the head has partly descended. Such operations are called median forceps operations, and are divided into two classes: (1) When the head is still within the cervix; (2) when the head is outside the cervix. In the latter instance, the operation is the same as in the ordinary low-forceps operation except that the blades should be so applied that they aid the still incomplete rotation. This requires a little more skill in their application, but it is usually accomplished with ease. In the former instance, with the head still within the cervix, as in high operations, the danger is great, and the procedure becomes a major operation. This should never be undertaken unless there is some special indication; and the case is then outside the scope of this paper.

Immediately after the delivery of the head, the mouth and eyes should be wiped out. The advantage of clearing the fauces of mucus before the first effort at inspiration is very great. The child is prevented from drawing mucus into its lungs; and when the mouth is cleared, as a routine practice, partial asphyxiation is very much less frequent. While apparently only a minor point, this is well worthy a more general adoption.

The Third Stage.—Personal observation of the conduct of labor-cases by students has shown that the interval between the second and third stage, or the third stage itself, is the time when infection is very likely to occur. It is rarely necessary that any internal examination is required after the birth of the child.

Before any attempt to deliver the placenta is made the hands should be re-sterilized; clean towels are placed under the patient's hips, and the usual preparations for a possible hemorrhage are made.

During this time the nurse maintains pressure over the fundus; and after an interval of twenty or thirty minutes, the placenta is expressed. This interval may be made shorter if the uterus is firm and well contracted, or longer if the uterus is flabby. If the cord has been tied in two places, it is usual to cut the ligature or to cut off the placental end of the

cord behind the ligature, so that the two or three ounces of blood which the placenta contains can escape. This reduces the bulk of the placenta and makes its expression a little easier.

After the delivery of the placenta it is my custom to give a hot sterile douche. This stimulates the uterus to contract, cleanses the vagina of all clots and allows a thorough inspection of the vulva and vagina. Tears that are slight are then easily seen and can be immediately repaired. Nothing conduces to the comfort of a patient more than perfect cleanliness; and even slight tears in the vagina may be starting points of infection. The records of cases in private practice show that of patients who had a perfectly normal temperature during the puerperium, nearly all had no tear in the vagina or vulva. Should any laceration occur, an immediate repair should, of course, be made.

In this brief review of the management of normal cases nothing has been said that is absolutely new. I have endeavored merely to emphasize some of the more important points the management of which are likely to be carelessly performed by the general practitioner. The points briefly reviewed, are:

First, the importance of making a diagnosis and a complete physical examination about one month before the onset of labor. This not only will give a great deal of information which may be utilized during the labor, but it affords ample time in which premature labor may be induced if there is any abnormality.

Second, infrequent examinations during labor. If the delivery of women could be regarded as a surgical operation requiring as full and complete antiseptic details as other surgical procedures, we could confidently expect afebrile convalescence. The fact that sterilization of the external genitals, thighs and the lower portion of the abdomen is sufficient, deserves mention. An ante-partum douche is not only unnecessary but is actually harmful, as has been shown by Leopold and others. The use of gloves has not been satisfactory.

Third, the use of anesthetics should be more general in private practice. Ether possesses many advantages over chloroform and should be used, as a rule, when pains are of moderate intensity. We have not had enough experience with the new method of spinal anesthesia to justify its use in more than an experimental way; and if added experience should show freedom from complications, we shall have at our command a method that is nearly ideal.

Fourth, in the hands of the general practitioner, a low-forceps operation should be performed with greater frequency. It is easy of execution, devoid of danger, saves unnecessary suffering on the part of the patient, and often actually enables us to preserve the perineal floor intact. On the other hand, however, median operations, within the cervical canal and high operations should be done only for some special indication.

Fifth, afebrile convalescence and freedom from local discomfort in cases in which the parturient canal is intact. It is of the greatest importance in the management of normal cases to acquire skill in so guiding the passage of the head and shoulders over the perineum that the risk of even a slight laceration may be reduced to a minimum. In addition to the danger of a mild puerperal fever, lacerations have a tendency to interfere with the involution of the vagina and uterus, and they predispose to many conditions requiring treatment by a gynecologist. Too many obstetricians are careless in this respect, relying upon the usual good results of an immediate repair.

WHAT DETERMINES THE REAL VALUE OF MEDICAL PAPERS?*

BY LOUIS C. AGER, M.D.
Brooklyn, N. Y.

PERHAPS the title of my paper fails to give a true idea of what I desire to suggest this evening, but it is not easy to put the question in a few words. When I was asked to read a paper I decided to vary our usual program of clinical report and stereotyped discussion, and to present a few ideas that have been floating through my mind in a nebulous kind of way for the past two years. To tell the truth, I have written this paper for my own benefit and instruction, rather than with the object of offering suggestions to other members of the association.

When I began to practice medicine one of the first things to attract my attention was the mass of clinical reports; of marked or sample copies of journals, and, in fact, of medical literature of all kinds, that I was favored with. One mail would sometimes bring more interesting matter than I could read in days. Moreover, it was all so new, and the results were so brilliant, that I sometimes wondered how any physician dared lose a case of any kind, when there were so many sure cures for all diseases. There were "Cactus Pellets," that had saved so many terrible heart cases, and "Phytolia," that had relieved many a long-suffering mortal of his superfluous adipose tissue, and numerous other peculiarly efficacious preparations of some drug or other, that had long been known, but which, for some unknown reason, had been slighted by my respected college professors. And then, as I began to have a patient now and then, I was chagrined to find that I could not secure the same results as the young but brilliant and successful writers of papers.

Of course all this happened years ago, but perhaps there are one or two here this evening who can sympathize with my resulting papyriphobia.

*Read before the Kings County Medical Association, January 8, 1901.

To be perfectly honest, it is not so very long ago that I loaded up a nephritic patient with a certain hydrogogue preparation, and watched in vain for the flood of waters that was to be carried off by way of all his excretory organs from his enormously distended lower extremities. For some unknown reason—perhaps because he took it while lying down—the medicine went to his head instead of to his feet, and he was fully determined to murder his nurse. It took two days of heavy dosing with salts to relieve his mental condition.

Now, what does it mean? Although a certain proportion of advertising papers are manufactured out of whole cloth, a large majority of them are written in all sincerity, by men with more enthusiasm than judgment, and many of them are presented at medical meetings. This brings me back to my title, "What Determines the Real Value of a Medical Paper?" To my mind, it is, on the one hand, accuracy, and, on the other hand, novelty—that is, something new to the hearer. Few of us, I presume, care to come here after a hard day's work to listen for thirty, forty or fifty minutes to an exposition of the symptoms, treatment, prognosis, etc., etc., of pneumonia, which we could get quietly at home from any modern book on practice. If we want to get up a reading club, and take turns at reading aloud from some good encyclopedia or system of medicine, I have no doubt we could all learn something. Variety might be added by appointing a committee on disputed pronunciations, and criticising the reader, as is done in many women's clubs. But, aside from that, I think you will agree that novelty, in the literal meaning of the word, is an essential characteristic of papers to be presented at a society meeting. I do not mean that we are interested in great discoveries only. Truths presented in a new light are always interesting, and our personal failures, success and perplexities, if honestly reported, are always instructive.

Accuracy, the other requisite, is, of course, a relative term, but at times we must all have a strong feeling of sympathy for crusty old Diogenes. For my own edification, as I said before, I have been trying to analyse the sources of error in scientific papers, and I have classified them as follows, leaving out of consideration wilful misrepresentation: First, errors of observation; second, errors of description; third, errors of deduction.

Under the first heading, errors of observation, we meet with all degrees of error, from the personal equation of the trained astronomer to the extraordinary microscopical findings of some of the discoverers of cancer parasites. The inability of the average mind to make accurate observations of any kind is nowhere more clearly demonstrated than on the witness stand, where it is probably the most frequent cause of the miscarriage of justice. Among medical men, although the average of ability is much higher, we frequently meet with an incomprehensible lack of reliability in this respect. The power of accurate observation is largely a matter of training to even the keenest intellect. This fact should be given more consideration in our medical schools, where a certain amount of time should be devoted to practical instruction in clinical observation. Every medical school has, I know, ward instruction, but how many medical students have any systematic training in making observations for themselves? It is one thing to be taken into a ward to listen to heart murmurs, and quite another to make a detailed examination of a patient. Every student should be obliged to make detailed written reports of simple cases; not at first with the diagnosis as the prominent idea, but rather to teach them to systematize their observations, to know clearly in their own minds why they make the diagnosis. Many a medical man, partly from experience, and partly from instinct, acquires a certain ability in diagnosis without any clear idea of the modus operandi, but such a man is neither so sure of himself nor so reliable a practitioner as the physician who makes his observations one by one, groups them together in his mind, and finally draws a conclusion from the result. The careful observer may not at first make as favorable an impression on the lay mind as the man who jumps at conclusions, but "the first shall be last and last shall be first" is true to all time and in all things. If I appear to digress, it is because all these facts have a direct bearing on my subject. If we would keep our minds clear of errors, and receptive of the truth, we must determine the reliability of a witness before we accept his statements.

By the second class of errors, errors of description, I mean the failure to correctly describe what is seen. This is due to an improper or careless use of the English language, and is partly a matter of education and partly a matter of habit. Some men can say what they mean in a few words, while others fail to convey any meaning at all after twenty minutes' talking. Although a literary genius is born, and not made, any man can, by careful training, acquire sufficient ability in the use of English to state clearly and concisely what he has to say, and, to my mind, it is an insult to his hearers for a man to talk when he has nothing to say. In passing, let me suggest, to laboratory workers particularly, that, in the present profusion and confusion of new scientific terms, it is almost impossible for a busy practitioner to keep up with them. Even such monstrosities as cholecystenterorrhaphy, ureteroprotostomy, hyperthermoesthesia—unless the reader has to stop for breath long enough for us to pull the word to pieces—are apt to deaden our interest in a paper. Such things, however, are not nearly as discouraging as the array of unknown terms and theories that sometimes overwhelm us in papers on physiology, biochemistry or bacteriology. The reports of researches along special lines should be presented,

but they should be put in language comprehensible to the general practitioner.

The third class, errors of deduction, is, in some respects, the most hopeless. The man who has no logic in his soul is fully as dangerous an individual as the man without music. On the other hand, in listening to a paper we can draw our own conclusions, and are at liberty to disagree with the speaker. The most frequent fallacy is probably that of *post hoc non propter hoc,* and it is nowhere in medicine more clearly demonstrated than in the so-called drug provings of the homeopathic school. Until one has seen in print some of these wild vagaries he has no idea how insane a sane man can be. I have a medical journal in which a certain homeopathic physician of this city gravely relates the following fairy tale: He came to the conclusion some years ago that magnetism, being such a powerful force, ought to develop, if properly used, some remarkable medical properties. The difficulty was to get a sufficiently high potency, *i. e.,* sufficient dilution. He finally placed a vial of alcohol on each pole of a horse-shoe magnet and left it there for some time. He had not completed his investigations at the time of writing, but he had discovered that one dose of the tenth potency of the "south pole" would cure ingrowing toe-nail. And yet, I know some very intelligent people who look upon this man as a shining light in the medical profession, and who took, under his direction, a high potency of toad-skin to cure warts. This sounds very funny to us, gentlemen, but I sometimes wonder how our "expectant line of treatment" will appear to the physicians of one hundred years hence.

In closing, I desire to say a few words to the other side of the house, to those who are supposed to listen to the papers. And apropos of the subject, allow me to read a part of a recent editorial in the *New York Times:*

"Among the lost arts, none are to be regretted as sincerely as the art of good listening. Few men, and it may be still fewer women, have the capacity to listen attentively to a statement until they have heard, comprehended, and inwardly digested it. In the case of men, this inability to listen well is due to the fact that the demands of modern business are exigent, and the busy man is naturally, and perhaps justifiably, impatient of prolixity in the elaboration of unnecessary detail. If one need not listen at all to what is not worth listening to, and could cut the speaker off as 'Central' is in the habit of doing on what often appears to be insufficient provocation, much gray matter would be conserved for other and more useful purposes. To do this successfully, however, demands prevision. One cannot always, nor often, know what another will say until he has said it, and this happens so often in the case of things not worth saying, that the average man becomes impatient of all demands upon his attention, and, as a rule, refuses to concentrate, even when concentration is in the highest degree advantageous to him. As the result, most of us become slovenly listeners, and thereby miss much useful information which the attentive listener manages to pick up and assimilate by the simple process of mental receptivity. What the genial Burroughs has described as 'that steady aim of the eye,' which is essential to perception in an inquest of Nature, finds its parallel in the power which the good listener possesses of opening full bore, so to speak, the channel from his ear to his brain, and hearing exactly what is told him. Those who possess this ability, and know how to use it with judgment and discretion, are, as a rule, better informed than their fellows. Careless listening accounts for the breadth of misconception and comprehensiveness of misinformation which the average man inventories as wisdom."

This is true of all kinds of lectures and meetings where papers are read. What clergyman now-a-days would dare to address his congregation for two hours, as was frequently done two hundred years ago? Or, if he did, would there be found one hearer who could repeat and discuss his argument from first to twenty-first, as our Puritan ancestors loved to do? Is it not true that, even within the past fifteen years, evening lectures have grown shorter and shorter, until a public speaker's value is in inverse proportion to the length of his speech?

What the *Times* says is also true, to a certain degree, of our medical meetings. What an audible sigh of relief will go up when I finish this paper and you gentlemen can retreat to the other room. This failure or inability to follow the arguments of a paper is in no way more clearly displayed than in the discussion which follows in most cases. The so-called discussion is apt to be no discussion at all, but a few prearranged remarks on the same subject, tacked onto a point here and there of the original paper, which the discussor has picked out to suit his purpose. Does not the man who discusses a paper appear to have known all that before, and to be trying to show that he knows a lot more on the same subject? How frequently the after-speakers seem to have misunderstood the paper, or to have missed the point entirely. How many times we hear a man carefully proving that something the writer of a paper did not say at all cannot possibly be true.

Finally, let me state that, in spite of what I have said, I am an enthusiastic believer in medical meetings, and that I feel assured that the physician who does not take advantage of the stimulus and encouragement to be obtained by association and discussion with his fellow practitioners, fails to make use of one of his most valuable opportunities for the acquisition of true wisdom.

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THE CURRENT EDITION of the JOURNAL numbers 12,000 copies. In addition to regular subscribers and members of the State Association, a copy is sent to every practising physician in the State of New York.

Especial attention is called to the charter and by-laws, printed elsewhere, under which the recent reorganization of the New York State Medical Association took place, and which has proved such an unqualified success. The article by Dr. A. A. Hubbell, on "The Reason for the Existence of the New York State Medical Association," serves admirably to point out the advantages of membership. The State Association is the only affiliated branch of the American Medical Association in the State of New York, and it is only by joining the State organization that physicians residing in this State can become members of the national body. The State Association membership has more than trebled since the reorganization plan went into effect, less than one year ago.

Many of the members, and many would-be members, do not thoroughly understand the objects of the State Association, nor the advantages to be gained from membership therein. Study the charter and the by-laws, and realize what has been done, and is being done, to unite the medical profession along the lines of mutual improvement, advantage, and public welfare. Spread the gospel of unity among the unbelievers, the hesitating, the timid; explain to them the democratic form of fraternalism, the unselfishness, the sociologic features of our organization. Call attention to the fact that the State Association, as an entity, does not exist, but that it is made up of the membership of county and district branch associations, membership and payment of annual dues in one carrying with it membership in all.

Remember, too, that each and every member should work for the best interests of the association. A few devoted workers cannot do it all, no matter how earnest and willing they may be. Help to build up the membership; pay annual dues promptly; support the JOURNAL by sending reports, scientific papers and items of news for publication; do not sit quietly by and criticize what is being done, but do something *yourself*.

Do you know that the New York State Medical Association is now the largest and strongest State medical organization in all these United States? Do you realize that by standing shoulder to shoulder, with but one aim in view, we can exert an influence that will echo from one end of this broad land to the other? Do you know that individual effort and oneness of purpose will bowl down opposition and cavil, and bring us to the vantage ground that physicians, individually and collectively, have been denied during so many years, even, in fact, since the beginning? Think it over calmly, and without thought of personal prejudices. Work for the association, and you will work for the public, for a higher standard of medical practice, and, incidentally, for yourself.

* * *

AMERICAN MEDICAL ASSOCIATION DELEGATES.—Attention is called to the following section of the by-laws of the American Medical Association:

"No individual who shall be under sentence of expulsion or suspension from any State or local medical society of which he may have been a member, or whose name shall have been, for non-payment of dues, dropped from the rolls of the same, shall be received as a delegate to this association, or be allowed any of the privileges of a member, until he shall have been relieved from the said sentence or disability by such State

or local society, or shall have paid up all arrears of membership; nor shall any person not a member and supporter of a local medical society, where such a one exists, be eligible to membership in the American Medical Association."

The credentials of delegates from this State must be signed by the president and secretary of the New York State Medical Association, such delegates having been elected by the component county associations as Fellows and alternates of the association. Unless possessed of these credentials, delegates from this State will be refused recognition by the American Medical Association. The following associations, and these only, are entitled to representation: Chautauqua County Medical Association, Cortland County Medical Association, Dutchess County Medical Association, Erie County Medical Association, Genesee County Medical Association, Kings County Medical Association, New York County Medical Association, Oneida County Medical Association, Orange County Medical Association, Rensselaer County Medical Association, Saratoga County Medical Association, Sullivan County Medical Association, Warren County Medical Association, Westchester County Medical Association, Wyoming County Medical Association.

Any member of the association, not a Fellow, who desires to receive an appointment as delegate to the meeting at St. Paul will kindly communicate at once with the secretary of the State Association, as the president, under the by-laws, has the privilege to fill vacancies. Any member of the State Association who wishes to attend the meetings of medical organizations of other States as a delegate will also kindly send his name to the secretary.

* * *

New York County Medical Association, April Meeting.—The regular monthly meeting of the New York County Association was held at the Academy of Medicine on the evening of April 15, 1901, Dr. Parker Syms presiding. It being the annual meeting, reports of the executive committee, treasurer, secretary, and standing and special committees were presented. Dr. W. S. Gottheil presented two cases, one of sarcoma cutis in the early stages, the other of nevus uncus lateras. The polls for the election of officers for the ensuing year were then declared open. During the polling of the vote in an adjoining room Dr. A. H. Goelet read an interesting paper on "The Diagnosis and Surgical Treatment of Prolapsed Kidney, with a Demonstration of a Simple Method of Examination for Its Detection," and presented several patients for examination. The paper was discussed by Drs. George Tucker Harrison, Heinrich Stern, and J. Riddle Goffe.

A pleasant feature of the evening was the presentation by the association to James Taylor Lewis, Esquire, of a superb bronze figure typical of "Duty," in appreciation of his valuable legal services to the association. Dr. E. Eliot Harris, chairman of the committee having the presentation in charge, spoke, in part, as follows:

"As the chairman of the special committee empowered to select a token that would in some measure express the deep sense of obligation that the members of the New York County Medical Association feel for you, their adviser in matters of law, I can assure you that it is an agreeable privilege to present to you in behalf of our association this well deserved token of its confidence and esteem. When I look back to the time when you first became the legal adviser of our association, and remember that some of our members doubted the legal standing of our association as a body representing the medical profession in this county, I recall to mind your masterly work in securing an interpretation of the law governing the question, which finally resulted in the establishment of the legal standing of the association beyond all dispute, and to the entire satisfaction of all our members. As chairman of the committee on legislation of the State Association I am in a position to know and appreciate the value of your services, and can state that a great deal of the success that has attended the work of that committee has been due to the counsel you have so cheerfully given. And so it is with deep feeling that I ask you to accept this work of art as a token of our esteem. I am not unmindful of the fact that it does not represent the value of your services to our association; but please remember that it is now removed from the shop and placed in this hall amid these surroundings and in the presence of those who feel the sentiments which it is intended to represent and becomes the symbol of regard, gratitude and esteem. In this figure of enduring bronze is typified the courage, zeal and fidelity with which you have defended and protected the legal rights of our association. Bronze serves as the sign of the thawing out of the finer feelings of man from the cold age of stone. With the warmth of feeling suggested by this sentiment I wish you all the health, happiness and prosperity you deserve and desire."

The result of the vote for officers was announced as follows: President, Parker Syms; first vice-president, Alexander Lambert; second vice-president, Francis W. Murray; secretary, Ogden C. Ludlow; corresponding secretary, M. L. Maduro; treasurer, Charles E. Denison; member of executive committee, three years, Charles S. Benedict. J. W. S. Gouley was elected member of the nominating committee of the Fifth District Branch Association, and eighty-five delegates to the American Medical Association were also elected.

* * *

Fourth District Branch Association.—The annual meeting of the Fourth District Branch of the New York Medical Association will be held at the Buffalo Club, Buffalo, Friday, May 31, 1901. There will be a morning and afternoon session, Dr. William H. Thornton, of Buffalo, presiding.

Papers will be read by Dr. John A. Wyeth, president of the State Association; Dr. Parker Syms, president of the New York County Medical Association; Dr. Charles E. Quimby, of New York; and by several members of the Erie County and other near-by associations. As the meeting will be held during the progress of the Pan-American Exposition, it is expected that the attendance will be very large. Every preparation is being made for the entertainment and comfort of the visiting physicians, and it is hoped that this will be the most successful meeting in the history of the branch association. All communications regarding the meeting should be sent to Dr. Bernard Cohen, secretary, 497 Niagara street, Buffalo.

* * *

The New Medical Directory.—The Committee on Publication of the State Association has decided this year to make a new departure in compiling the list of physicians for Volume III. of the Medical Directory of New York, New Jersey and Connecticut, soon to be published. The list will include the names of all legally registered physicians of these States as far as they can be obtained, without regard to their school of practice. The reason for this action on the part of the committee is as follows: One of the objects for the existence of the association is to help to enforce the medical laws of the State, not the least part of which duty should consist in the prosecution of illegal practitioners; therefore it is important that the officers and members of the component county associations should have a list at hand which will give the necessary information as to who are and who are not legal practitioners, in order that the violators of the medical practice acts can be readily located for the purpose of prosecution. The recent decision of the Supreme Court of New York, sustained by the Appellate Division of the same court on appeal, determined the right of these associations to prosecute illegal practitioners and to receive the fines resulting from such prosecutions. Under ordinary circumstances these can be undertaken by the county associations with little or no expense. Officers of county associations should note this fact.

Officers and members of the county associations are requested to send in without delay any information regarding themselves, change of address, office hours, etc., for insertion in the new Directory.

* * *

Dutchess County Medical Association.—At a meeting of the members of the Fifth District Branch of the State Medical Association, residing in Dutchess County, held at the Vassar Brothers Hospital, Poughkeepsie, April 10, 1901, the Dutchess County Medical Association was organized, and the following officers elected: President, Irving D. LeRoy, of Pleasant Valley; vice-president, Edwin Barnes, of Pleasant Plains; secretary, John W. Atwood, of Fishkill-on-Hudson; treasurer, Monroe T. Pultz, of Stanfordville. George H. Coddington, of Amenia, was elected a Fellow of the State Association, and Charles L. Fletcher, of Wing Station, alternate. The next meeting of the association will be held at Poughkeepsie, January 8, 1902.

* * *

Fifth District Branch Association.—The annual meeting of the Fifth District Branch of the State Medical Association will be held at Mott Memorial Hall, 64 Madison avenue, New York, Tuesday, May 7, 1901. The morning session will be devoted to executive business, and that of the afternoon to the presentation of scientific papers. Among those who will read papers are Drs. Parker Syms, Alexander Lambert and J. H. Burtenshaw. Every effort is being put forth to make the meeting interesting, and every member of the branch association is urgently requested to attend.

* * *

Reports on the Sanitary Condition of Villages.—It has been suggested by a member of the Standing Committee on Public Health of the State Association that the Journal would be a good medium for the collection of facts in regard to the sanitary condition of the villages of the State. He says: "There are upward of 400 incorporated villages, the population of which varies from a few hundred to more than 12,000 each. In addition to these villages there are innumerable unincorporated hamlets having a population of one hundred to five hundred each. It is an interesting but most important fact that the sickness and death-rate of these small communities is often greatly in excess of that of the cities of the State. The causes of this difference are not difficult to discover. The excess of sickness is, with rare exceptions, due to the unobstructed spread of infectious and contagious diseases in rural districts, as compared with cities. If the sources of infection could be eliminated from these small settlements the death-rate might be reduced to those who die of old age and accident. Can they be eliminated? No fact is better established in sanitary science than the absolute power of man to protect himself from communicable diseases, and what one man can do one hundred men can do if they rigidly follow the methods essential to the protection of the single person.

"It is on the *enforcement of preventable* measures, then, that the solution of the question of the protection of a community from communicable diseases depends. But public laws and ordinances are most readily enforced which are most thoroughly endorsed by public sentiment, and a right public sentiment has its origin and development in an intelligent appreciation of the matter at issue. It is apparent, therefore, that the community which will most successfully protect itself against communicable diseases is that one whose individual members are most enlightened in regard to preventive measures. But who is to en-

lighten them? Evidently the local physician must be the instructor. It was the final instructions of Hippocrates to the graduates of the school at Cos that they should thoroughly study the sources of disease of the people in the locality where they practised, in order that they might most efficiently aid in the protection and promotion of the public health. Why should not the physicians of the State who are located in villages furnish the Committee on Public Health brief accounts of the sanitary conditions of their respective localities, with a view to having them collated and published in the JOURNAL for the information of the members of the association, and through them, of the people of the villages of the State? The facts thus accumulated would furnish the materials for a most instructive annual report by the committee, which could be widely circulated among the people."

The editor of the JOURNAL heartily approves of the above suggestions and will undertake to place in the hands of the Committee on Public Health any communications sent to his office of the character mentioned.

* * *

THIRD DISTRICT BRANCH ASSOCIATION.—The seventeenth annual meeting of the Third District Branch Association will be held at Ithaca, Thursday, June 13, 1901. Members of the State Association residing in counties not included in the branch association are cordially invited to be present and to take part in the discussions. Those willing to read scientific papers are requested to communicate at once with the secretary, Dr. Chauncey P. Biggs, Ithaca.

* * *

KINGS COUNTY ASSOCIATION, APRIL MEETING.—The regular monthly meeting of the Kings County Medical Association was held Tuesday evening, April 9, 1901, with the president, Dr. H. Arrowsmith, in the chair, and about forty-five members and guests present. The scientific session was opened by Dr. H. A. Alderton, who presented a patient showing the result of his operation on the mastoid process to relieve some doubtful symptoms, which could not be satisfactorily differentiated. The patient was rapidly improving, and the speaker exhibited the healing cavity, and demonstrated, by the use of a mirror, the extent to which the excision was made, by pointing out the pulsations, which were quite evident. Dr. H. H. Morton related the clinical history, and showed several specimens of urethral calculi from a patient, who afterward died from septic infection. He described in detail how a suprapubic operation had to be abandoned for a perineal one, which showed a very remarkable necrotic state of both the urethra and the bladder.

The paper of the evening was entitled "The Home Use of the Nauheim Bath," read by Dr. Herman C. Riggs. He described the Nauheim treatment of cardiac affections, both functional and organic, and stated how the benefits could be obtained by artificially duplicating in the household the principal ingredients of the water at Nauheim. His individual experience included twenty-five cases, covering about five years in time. He reported that he had had only two failures. These were absolute failures, but he concluded that they were largely due to some defects in the technic. The paper was discussed by Drs. Arrowsmith and J. F. O'Connell.

A short executive session followed, during which Dr. Jane H. Harris, of Avenue D and East Seventeenth street, Flatbush, and Dr. Lawrence P. A. Magilligan, of 226 Sixth avenue, were unanimously elected members. The postponed election of Fellows and alternates to represent the association in the State Association and the American Medical Association was concluded at this meeting, and a list of the number which this association was entitled to was offered and unanimously elected.

* * *

OBITUARY.—Dr. William Jay Youmans, for many years editor of the *Popular Science Monthly,* died April 10, 1901, at his home in Mt. Vernon, N. Y., from typhoid fever, after an illness lasting ten days. He was born in 1838, and was graduated from the New York University in 1865.

* * *

CHANGES IN THE MEDICAL DIRECTORY.—Dr. Arthur G. Bennett, of Buffalo, has removed from 191 Delaware avenue to 26 Allen street.—Dr. John W. S. Gouley, New York, from 11 East Forty-third street to 97 Central Park West.—Dr. Ogden C. Ludlow, New York, from 2309 Seventh avenue to 234 West 138th street.—Dr. Daniel F. Linehan, New York, from 166 West Fifty-fifth street to 127 West Fifty-eighth street.—Dr. William H. McIntyre, New York, from 320 West Eleventh street to 259 West Eleventh street.—Dr. T. D. Merrigan, New York, from 1987 Amsterdam avenue to 167th street and Kingsbridge Road.—Dr. I. L. Hoffman, New York, from Lebanon Hospital to 240 Madison street.—Dr. M. Davidoff, New York, from 214 East Broadway to 249 East Broadway.—Dr. H. S. Beers, New York, from 218 West 128th street to 231 West 128th street.—Dr. A. Monae Lesser, New York, from 1540 Madison avenue to 19 East 61st street.—Dr. Albert J. Wittson, New York, from 221 West 122d street to 318 West 126th street.—Dr. John Logue, New York, from 225 West 34th street to 359 West 30th street.—Dr. John Huestis Barry, New York, from 117 West 73d street to 116 West 73d street.—Dr. Ernest L. Hicks, New York, from 46 West 83d street to 2014 Fifth avenue.—Dr. James B. Drake, from Hancock, Delaware County, to Norwich, Chenango County.

WARREN COUNTY MEDICAL ASSOCIATION.—An adjourned meeting of the Warren County Association was held at the Rockwell House, Glens Falls, N. Y., April 24, 1901, at which a set of by-laws was adopted. An interesting paper, on "Recent Advances in Rectal Surgery," was read by Dr. Charles S. McLaughlin. Dr. W. J. Hunt was elected a Fellow and Dr. D. J. Fitzgerald an alternate to the State Association. Dr. F. G. Fielding was elected a member of the nominating committee of the Second District Branch Association. Regular meetings are to be held hereafter in January and July .

* * *

DELEGATES AND ALTERNATES.—The attention of members of the several county associations is called to Section 7, Article VIII., of the by-laws of the State Association: "Each county association shall hold an annual meeting during the month of January, February, March or April, at which shall be chosen Fellows of the State Association to the number of one for every ten of the county association membership, a corresponding number of alternates, and one member of the nominating committee of the district branch associaion"; and to Section 1, Article XII., "The Fellows and their alternates shall be respectively the delegates and alternates of the New York State Medical Association to the American Medical Association, and credentials shall be furnished by the secretary to said delegates and their alternates, signed by the president and secretary of the New York State Medical Association, etc."

In one or two instances, recently, county associations, in addition to appointing Fellows and alternates to the State Association, have elected delegates and alternates to the American Medical Association, in direct violation of the by-laws. Such appointments, of course, are void.

* * *

DISTRICT BRANCH ASSOCIATION MEETINGS.—Section 10, Article VII., of the by-laws of the State Association reads as follows: "Each district branch association shall hold an annual meeting during the month of May, June or July, at which shall be chosen, by ballot, two Fellows to serve as members of the committee on nominations of the State Association." If possible, the annual meeting of each district branch association should be held during the present month, as, in counties in which there are no county associations, the Fellows so elected are, by right of office, also delegates to the American Medical Association meeting at St. Paul, in June.

* * *

ORANGE COUNTY MEDICAL ASSOCIATION.—The regular monthly meeting of the Orange County Association was held at Middletown, N. Y., Wednesday, April 17, 1901, Dr. M. C. Conner, of Middletown, in the chair. The proceedings were largely devoted to scientific work. Dr. Reginald H. Sayre, of New York, was a guest of the association, and delivered an interesting lecture on hip-joint disease, illustrated by many photographs. Dr. Conner presented a patient upon whom he had operated in 1898 for hip disease with excellent result. The members and guests present took part in the discussion which followed. In addition to the regular members, Drs. H. E. Wise, of Turners; J. H. Thompson, of Goshen, and D. B. Hardenberg, of Middletown, were present as guests of the association. A vote of thanks was tendered Dr. Sayre for his valuable paper. The next meting of the association will be held at Middletown, Wednesday, May 15, 1901.

* * *

ADVERTISEMENTS IN THE JOURNAL AND DIRECTORY.—Members of the State Association are earnestly requested to make an effort to obtain advertisements for the JOURNAL and Medical Directory. Experience has shown that it is not difficult to obtain such advertisements from those with whom one has personal dealings. Advertising rates and other information will be furnished at any time by the secretary.

The attention of readers of the JOURNAL is called to the importance of dealing, whenever possible, with manufacturers and jobbers who advertise in the publications of the association, and also of calling the attention of advertisers to the fact that their advertisements in the JOURNAL or Directory were the means of making the sale. It would also result in benefit to the association if members would impress on non-advertisers with whom they have dealings the superior advantages, as advertising media, which these publications enjoy throughout the State. The sales of the 1900 Directory were five times greater than those of Volume I., published the previous year. The monthly edition of the JOURNAL numbers more than 2,200 copies.

* * *

GENESEE COUNTY MEDICAL ASSOCIATION.—The next meeting of the Genesee County Association will be held at Batavia, N. Y., May 8, 1901. The president, Dr. M. W. Townsend, of Bergen, has extended a cordial invitation to the members to be his guests at dinner, at 1:30 P.M. on that day, at the Hotel Richmond. If the officers of local associations would realize the importance of developing the social as well as the scientific side of their meetings, it certainly would result in greatly increased interest in the work of the association.

* * *

REORGANIZATION OF STATE MEDICAL ASSOCIATIONS.—From letters recently received, asking for copies of the constitution and by-laws, and other information, it is evident that the reorganization plan of the New York State Medical Association is exciting considerable interest throughout the country, and it is probable that the medical associations of several other States will soon reorganize on the same plan.

* * *

SULLIVAN COUNTY MEDICAL ASSOCIATION.—A regular meeting of the Sullivan County Med-

ical Association was held at Liberty on Wednesday, April 24, 1901, the president, Dr. C. S. Payne, of Liberty, in the chair. In spite of the very stormy weather, every member of the association was present at the meeting, many being accompanied by their wives. After a social dinner at the New Liberty Hotel, in which the ladies participated, the meeting was called to order, and after the adoption of by-laws the following officers were elected for the ensuing year: President, C. S. Payne, of Liberty; first vice-president, Frank P. Howser, of Centerville Station; second vice-president, S. W. Wells, of Liberty; secretary, J. L. C. Whitcomb, of Liberty; treasurer, C. W. Piper, of Wurtsboro. C. S. Payne was elected Fellow of the State Association, and Benjamin W. Stearns, of Long Eddy, alternate. R. C. Paine, of Bethel, was elected member of the nominating committee of the Fifth District Branch Association. Five new members were also elected.

Dr. B. W. Stearns presented a very interesting case. The patient had met with a gunshot accident which shattered the metacarpal bones of the thumb. When seen by Dr. Stearns the end of the thumb was attached to the hand only by shreds of tissue, but, fortunately, the principal artery was not lacerated. Instead of amputating the member, he removed the pieces of bone and sewed what remained of the thumb to the hand at the carpal joint. The patient now has a movable joint at the point of attachment, and the thumb is very serviceable.

Dr. F. H. Wiggin, of New York, was present at the meeting, and spoke in detail of the objects of the reorganization plan of the State Association.

During the progress of the meeting the wives of the members, in response to an invitation extended by Mrs. C. S. Payne, the wife of the president, met at her home and formed a social club, which will meet regularly hereafter on the days set apart for the meetings of the Sullivan County Association. The invitations sent out by Mrs. Payne were unique, each card being decorated with drawings of a thimble and threaded needle. A miniature cardboard bottle, upon which was written a number and the subject for discussion at the meeting, was handed to each lady present. Officers were then elected and a committee of two appointed by the president to prepare a program for the next meeting. After several piano selections, all engaged in a "button-hole contest," a prize being given to the lady succeeding in making the greatest number in fifteen minutes. Refreshments were then served, and the meeting adjourned, it having been greatly enjoyed by all.

Much praise is due Mrs. Payne for the success which crowned her efforts in organizing the club. The social side of the county association meetings heretofore has been too much neglected. The example which has been set by Mrs. Payne should be followed by the wives of our members throughout the entire State.

IMPORTANT MEDICAL BILLS IN THE LEGISLATURE.

THE SO-CALLED ANTI-CHRISTIAN SCIENCE OR BELL BILL.

This bill, No. 167, was originally introduced in the Assembly Jan. 14, 1901, by Hon. Hal Bell, of New York City, representing the Twenty-ninth Assembly District. It was read once and referred to the Committee on Public Health. In committee it was amended, again reported to the Assembly, and recommitted. Twice again it was amended and recommitted, and finally, after proceeding to a second reading, was sent back to committee, where it was allowed to die.

In its original form, and as amended, the bill was so detrimental to the best interests of the public, allowing as it did so many loopholes for the escape of illegal practitioners of medicine, that the Council of the New York State Medical Association, at a meeting held March 22, 1901, instructed its committee on legislation to oppose its passage, and to offer as a substitute a bill drawn by the attorney of the Association. The amended bill (No. 1799), and the Substitute Bill are here reproduced. The amendments are printed in *italics*.

THE BELL BILL.

An Act to amend section one hundred and fifty-two of chapter six hundred and sixty-one of the laws of eighteen hundred and ninety-three, entitled "An Act in relation to the public health, constituting chapter twenty-five of the general laws," is hereby amended to read as follows:

Section 152. Construction of this article.—*Any person shall be regarded as practising medicine within the meaning of this act who shall, for remuneration, charge, fee, gift, bonus or reward, directly or indirectly, profess to heal or who shall give treatment to any other person, by the use of any means or method whatsoever, whether with or without the use of any medicine, drug, instrument or other appliance, for the relief or cure of any wound, fracture or bodily injury, infirmity, physical or mental or other defects or disease.* This article shall not be construed *as prohibiting any person in giving treatment to another under the direction or upon the prescription of a physician duly licensed by the laws of this State, or as prohibiting the manufacture, sale or use of any proprietary or patent medicine where no diagnosis is made by the maker or seller thereof; or the giving of temporary relief in an emergency by a registered pharmacist or any person, or the domestic administration of family remedies; or any person in charge of or employed in any gymnasium from giving suggestions or advice as to form or methods of exercise; nor shall it be construed* to affect commissioned officers serving in the United States army, navy or marine hospital service, while so commissioned; or any one while actually serving on the resident medical staff of any legally incorporated hospital; or any legally registered dentist exclusively engaged in practising dentistry; *or any optician engaged in adapting glasses to the sight, or any rights of chiropodists under existing laws;* or any manufacturer of artificial eyes, limbs, or optical or orthopedic instruments or trusses, *or manufacturer or constructor of optical instruments*, in fitting such instruments on persons in need thereof; or any lawfully qualified physician in other States or countries meeting legally registered physicians in this State in consultation; or any physician residing on a border of a neighboring State and duly authorized under the laws thereof to practice medicine therein, whose practise extends into this State, and who does not open an office or appoint a place to meet patients or receive calls within this State; or any physician duly registered in one county to attend isolated cases in another county, but not residing or habitually

practising therein. This article shall be construed to repeal all acts or parts of acts authorizing conferment of any degree in medicine causa honoris or ad eundum or otherwise than on students duly graduated after satisfactory completion of a preliminary and medical course of not less than that required by this article, as a condition of license.

Sec. 2. This act shall take effect immediately.

SUBSTITUTE BILL.

AN Act to amend chapter six hundred and sixty-one of the laws of eighteen hundred and ninety-three, entitled "An Act in relation to the public health, constituting chapter twenty-five of the general laws."

THE PEOPLE OF THE STATE OF NEW YORK, REPRESENTED IN SENATE AND ASSEMBLY, DO ENACT AS FOLLOWS:

Section 1. Section One Hundred and Fifty-three of Chapter Three Hundred and Ninety-eight of the Laws of Eighteen Hundred and Ninety-five, entitled "An Act to amend Chapter Six Hundred and Sixty-one of the Laws of Eighteen Hundred and Ninety-three, entitled "An Act in relation to the public health, constituting Chapter Twenty-five of the General Laws" is amended so as to read as follows:

Section 153. PENALTIES AND THEIR COLLECTION. Any person who, not being then lawfully authorized to practice medicine within this State and so registered according to law, shall practice medicine within this State without lawful registration or in violation of any provision of this article; and any person who shall buy, sell, or fraudulently obtain any medical diploma, license, record or registration, or who shall aid or abet such buying, selling or fraudulently obtaining, or who shall practice medicine under cover of any medical diploma, license, record or registration illegally obtained, or signed, or issued unlawfully or under fraudulent representations or mistake of fact in a material regard, or who, after conviction of a felony, shall attempt to practice medicine, or shall so practice, and any person who shall append the letters M.D. to his or her name, or shall assume or advertise the title of doctor (or any title which shall show or tend to show that the person assuming or advertising the same is a practitioner of any of the branches of medicine), in such a manner as to convey the impression that he or she is a legal practitioner of medicine, or of any of its branches, without having legally received the medical degree, or without having received a license which constituted at the time an authority to practice medicine under the laws of this State then in force, *and any person not then being lawfully authorized to practice medicine within this State and so registered according to law, who shall advertise or in any manner hold himself or herself out to the public as a healer of disease or able to abolish disease or symptoms of disease, or as competent to do surgery, or who shall in any manner examine and treat the sick or injured,* shall be guilty of a misdemeanor, and on conviction thereof shall be punished by a fine of not more than two hundred and fifty dollars, or imprisonment for six months for the first offense, and on conviction of any subsequent offense, by a fine of not more than five hundred dollars or imprisonment for not less than one year, or by both fine and imprisonment. Any person who shall practice medicine under a false or assumed name, or who shall falsely personate another practitioner of a like or different name, shall be guilty of a felony. When any prosecution under this article is made on the complaint of any incorporated medical society of the State, or any county medical society of such county entitled to representation in a State society, the fines when collected shall be paid to the society making the complaint, and any excess of the amount of fines so paid over the expense incurred by the said society in enforcing the medical laws of this State, shall be paid at the end of the year to the county treasurer.

Sec. 2. This act shall take effect immediately.

Correspondence.

THE DEFENSE OF MALPRACTICE SUITS.

To the Editor of the NEW YORK STATE JOURNAL OF MEDICINE:

SIR: As the annual meeting of the State Association approaches, at which the report of the council will undoubtedly call for some action on the question of the defense of malpractice suits, and may even make it expedient for the association to adopt some definite policy in the matter, it seems wise to consider just where we stand and what our rights and mights may be. The subject presents very plainly three associated questions: Could we, should we, would we enter upon this undertaking? The discussion of methods and means may properly be left until these questions are answered. The question "could we" do this thing if we would is dual and comprises, Have we the right and have we the might? The answer to the first of these is purely legal and lies in the interpretation of the provisions of the charter granted to the State Association. The only statement therein from which the requisite authority can be derived is that clause of Section 1 which declares one of the purposes of the association to be "the maintenance of the honor and character of the medical profession."

It would be easy to argue that, because another object, "the establishment of a death-benefit fund," is given specific expression and definition in another section, such a broad interpretation of the clause quoted as to authorize the undertaking of legal action in the defense of individuals in personal suits, is not justified. But such argument would be entirely useless, for no man can foretell what interpretation a court would place upon this provision. It is the opinion, however, of one of the foremost legal authorities, that the association would be upheld in the proposed course under the cited clause of the charter and quite certainly would be if not opposed by a large minority of the members. The right of the State Association to make the defense of its members in malpractise suits one of its corporate functions may, therefore, be accepted as established. The suggested action of certain county associations, however, in reference to this same project, makes it pertinent to point out the radical difference between the State and county associations from a legal standpoint. It should be remembered that the State Association alone is a corporate body, and that the county associations possess only such legal powers as may be delegated to them by the State Association. Any county association, therefore, which should undertake the defense of its members in suits at law would do so simply as a voluntary co-partnership, in which each individual becomes personally liable for all and any indebtedness or obligation incurred by reason of such action, unless the action is taken under specifically delegated authority of the State Association.

These facts would seem to render further discussion of the subject by the county associations as a question of separate action uninteresting.

The second part of our first question, Have we the might or ability to do this thing? also requires the consideration of two things: cash, and courage; but, as the courage depends largely on the amount of cash involved, both may be measured by the one standard. While it is, of course, impossible to fix the cost of such an undertaking exactly, sufficient investigation has been made to warrant the statement that $5 per year for each member represents the possible maximum expenditure, while the probable cost would be much less. The "courage" part of the question thus boils down to about this: Do we care five dollars' worth a year for the honor of the medical profession, the sympathetic supporting and succoring of a brother practitioner in his time of distress, and for personal insurance against the expense of defending a suit for malpractice? If these three things are

worth five dollars a year, we shall have no trouble in finding both the courage and the cash.

Our second question, Should we undertake this project? is likewise dual and must be separated into Ought this thing to be done? and Is it wise to do it now? While the answers to these questions must be based largely on personal feeling, something may be said by way of argument. If the New York State Medical Association stands for any one thing before the profession at large that thing is unity; a unity in which every member, whenever he finds himself in the minority on the decision of any question, immediately becomes a supporter of the majority and does his utmost to make successful that which has been approved by the association as a whole. Such unity is obviously based on a community of interests, and the theory that the honor of each is the honor of all. Surely, there can be no more natural or perfect concrete expression of this theory than the united assumption of the defense of individual members from unjust attacks, and their support in misfortune. And certainly nothing could exert a more powerful influence to maintain that unity of which such action is the ideal fruit. The desirability of this undertaking thus seems reasonably established. Its wisdom at this time is less certain, for no action which is intended to demonstrate, justify, and reward unity should be undertaken without the fullest unanimity in approval of such action. The proposed course is not wise, therefore, until at least a very large majority agree as to its wisdom. When that time arrives it will be found that our third question has answered itself, and we not only would but shall again make the New York State Medical Association the standard for other State associations as the first to undertake the defense and support of its members and to distinguish between "the defense of honor" and "the compromise of blackmail."

CHARLES E. QUIMBY.

44 West 36th street, New York, April 15, 1901.

TPE CAUSE OF CANCER.

To the Editor of the NEW YORK STATE JOURNAL OF MEDICINE:

SIR: Situated in the City of Buffalo is the State Laboratory for the investigation of the cause of carcinoma. For three years or more this work has been carried on under the direction of Dr. Harvey R. Gaylord, and from time to time he has informed the medical profession that the cause of cancer would be stated positively and definitely in a short space of time. The profession waited patiently for the day when a demonstration and proof of the true cause was to be made. Eagerly did we accept the invitation sent out to the effect that we were to be told the cause of the dread disease. The profession assembled in the Alumni Hall of the Medical Department of the University of Buffalo and listened with great joy and pride to what Dr. Gaylord told them. He stated that he was now in a position to positively prove, by correlating the observations of other investigators, that the cause of cancer is a parasite. Congratulations were extended on all sides for being so fortunate as to live in such a wonderful age, and, more so, to be among the men to whom this great discovery was first announced.

As yet, many have not seen a culture of this organism, many have not seen it clearly demonstrated under the microscope, and many have not seen it injected into healthy animals, and the animals later succumb. As a result, very many physicians are quite skeptical with regard to his announcement, while others say they knew or thought years ago that the cause was of parasitic origin.

About a week after Dr. Gaylord made his announcement, Dr. C. H. Woodard of this city stated in a morning paper that he fully demonstrated three years ago and gave to the medical profession his results in the *Medical News* what Dr. Gaylord announced to the profession as a new discovery. He says that Dr. Gaylord states obsolete facts, and arrogates to himself now the honor and glory that was his three years ago. Dr. Woodard shows as a result of his discovery he has been able to treat cancer very successfully. This statement is believed and corroborated not only by the laity but also by reputable physicians. If this is so, is it the wish of the State Board of Health to simply substantiate the observations of all the other investigators, or does it wish to have all the credit redound to itself on account of its authoritative position?

FRANCIS M. O'GORMAN.

Buffalo, N. Y., April 16, 1901.

"PRACTITIONER."

To the Editor of the NEW YORK STATE JOURNAL OF MEDICINE:

SIR: Allow me to call attention to the words "practiser" and "practician," which, instead of "practitioner," *Medicus* used in his replies to my queries published in the March and April numbers of the JOURNAL, and to ask if the introduction of such words is warranted, in view of the fact that "practitioner" has been so long in general speech, in the essays of able men, in the textbooks, and in the titles of medical societies and magazines? If, however, *Medicus* should give satisfactory reasons for these innovations, I, for one, would gladly accept the proposed terms. "IATROS."

New York, April 15, 1901.

To the Editor of the NEW YORK STATE JOURNAL OF MEDICINE:

SIR: In answer to the above letter of *Iatros*, referred to me by you, I have the honor to say that it is delightful to be engaged in argument with an antagonist like *Iatros*, who is so temperate, so considerate, and so keenly appreciative of the amenities of disputation, and whose well-known erudition entitles him to traverse any expression that, at first sight, may seem unwarranted or untimely. However, as will be shown below, "practiser" is not an innovation; on the contrary, the real innovation is "practitioner," whose construction does not appear to be in accord with the canons of word-building. Could "practitioner" have been legitimately coined, the "practitioner" would have been said to practition medicine, law, or something else; but there being no such infinitive as to practition, the introduction of the substantive was not happy.

"Practitioner" occurs in Captain John Smith's works, which appeared during the first quarter of the seventeenth century, and also in Minsheu's *Guide Into the Tongues*, 1627. No less a writer than Jonathan Swift afterward used the word. It is not very clear how it crept into the language, but it is well known that those men who kept drugs and performed minor operations in a place which they named "the surgery," styled themselves "general practitioners." The term seems to have been accepted by the profession in England without question and without remembering that the good word "practician" had been in use long before, and that the redundant *er* had been suffixed and at length rejected. It is, however, possible that the expression arose from the wrong enunciation of "practicianer" into "practitioner." "Physician" was then commonly spelled "physitian," or even "physition." The advocates of "practicianer" or of "practitioner," to be consistent, should countenance "physicianer," "physitioner," "diagnosticianer," "diagnostitioner," "obstetricianer," "obstetritioner," "electricianer," "electritioner," "statisticianer," "statistitioner," etc.

"Practiser," designating one who practises something, requires qualification—as a medical, a legal practiser, or a practiser of medicine or of law. However, good writers often regard the substantive as sufficient by itself, the context suggesting the right qualification. The following references may serve as evidence that "practiser" is not an innovation, since it was used more than two centuries before "practitioner" was invented. The verb "to practise" appears in the writings of John Wyclif, during the second half of the fourteenth century.

"Practiser," in the form of the times, is set down in Piers Plowman:

"Till he was parfit practisoure if any peril felle."

Chaucer's "Prologue to the Canterbury Tales" contains the word with *k* instead of *c*, and without the final *e*:

"He was a parfit praktisour."

"Practiser" occurs in Raleigh's "History of the World." Ben Jonson has "Detractors and practicers against them," using the *c*.

In Shakespeare's "All's Well That Ends Well," 2. 1., the *King* says to *Helena*, who offers to cure his infirmity:

"Sweet practiser, thy physic I will try." In his "Othello," 1. 2., the noun is repeated:

"A practiser of arts inhibited and out of warrant." In the first part of "Henry VI.," 3. 2., the word "practisants" is used for accomplices in a plot:

"Here entered Pucelle and her practisants."

That great master of language used the verb in many differing significations, as, "Sirs, I will practise on this drunken man," meaning I will play a trick upon him. "My uncle practises more harm to me"; that is, meditates more harm. "You have practised upon the easy-yielding spirit of this woman," etc., etc. In the noun, sometimes he substitutes *c* for the *s*.

Beaumont and Fletcher and other writers of their time used "practise," "practiser," "practice," practicer." In the King James Bible the *s* is invariably used in "practise."

Space permitting, many more examples could be taken from other sources to show that "practiser" is no innovation, that it is rightly coined, and that of the two forms of spelling the *s* is the preferred both in the noun and the verb.

Although "practiser" is now so much used by eminent authors, some writers may prefer "practician," as others do "physician," since "practician" is more euphonious and shorter than "practitioner." "MEDICUS."

New York, April 19, 1901.

Book Reviews.

DIRECTORY OF TRAINED NURSES OF GREATER NEW YORK AND PHILADELPHIA. Price, $1.00. New York: Cornell & Shober, 1133 Broadway, 1901.

This is an attractive little book, which will be of value to those for whose use it is intended. The Greater New York list of nurses is arranged alphabetically, and then according to streets, and the same plan is followed with regard to Philadelphia. Place and date of graduation follow the names and other useful information is included in the book. The publishers draw attention to the fact that the lists have been brought carefully up to date.

TUBERCULOSIS AS A DISEASE OF THE MASSES, AND HOW TO COMBAT IT. By S. A. Knopf, M.D.

This pamphlet of 86 pages is a prize essay by Dr. S. A. Knopf, of New York, a member of the New York State Medical Association. The prize was awarded by the International Congress to Combat Tuberculosis as a Disease of the Masses, which was held at Berlin, Germany, May 24 to 27, 1899. This very instructive and useful essay has already been translated into French, Dutch, Italian, and Russian, and now into English. How creditable the essay is to the author appears in the statement of the committee of award, *viz.:* eighty-one essays were received; of these fifty-five were rejected and twenty-six were reserved for the judges; of the latter, three were selected for closer examination, the result of which was the selection of Dr. Knopf's essay as the one to receive the prize.

The entire subject of tuberculosis is discussed in these pages in a familiar and very practical way, with ample illustrations of every phase of the question of protection against the spread of the germs of the disease. We can only make this brief announcement of the essay, and recommend every general practitioner to familiarize himself with its teachings.

INTERNATIONAL CLINICS. A Quarterly of Clinical Lectures and Especially Prepared Articles of Interest to Students and Practitioners. By leading members of the medical profession throughout the world. Edited by Henry W. Cattell, A.M., M.D. Vol. 1, Eleventh series. $2.00. Philadelphia: J. B. Lippincott Company, 1901.

The Lippincott series of International Clinics is so well and favorably known that it is merely necessary to announce to the medical profession the appearance of a new volume in order to insure it a welcome. The present one, the first of the eleventh series, is fully equal to its predecessors. Clinics, held by such teachers as Delafield, Hallopeau, Doléris, H. Batty Shaw, S. Solis-Cohen, Rodnan, Deaver, Kynoch, and others, to the number of eighteen, are reported. The subjects included are medicine, surgery, neurology, obstetrics and gynecology, and diseases of the eye. In addition, there is a profusely illustrated article on "Some Practical Methods in Photomicrography," by W. H. Walmsley, Fellow of the Royal Microscopical Society, and a very concise review of the progress of medicine during the year, by N. J. Blackwood, M.D.

In the limited space granted the reviewer it is impossible to note even the principal points of interest in the several articles contained in the book, but a good deal more than passing mention is due the admirable and timely paper by Doléris, Accoucheur to the Boucicaut Maternity, Paris, on "Obstetrical Analgesis Obtained by Cocaine Injections into the Lumbar Arachnoid." In these days, when the subject of spinal cocainization is exciting so much interest, addition to our knowledge on these lines is most welcome. Doléris reports results in twenty-five cases. He uses a 1 per cent. sterilized solution of cocaine, contained in hermetically sealed glass bulbs, which are opened at the time of using. The amount injected is equal to 1 centigram of the drug. The injection is made into the third, fourth, or fifth lumbar space. Analgesia is obtained in from three to ten minutes, generally in five minutes, with loss of sensation to the waist or ribs. He says: "The analgesis of the uterus is complete: not only does the woman not feel the contractions, but she is entirely unconscious of the process of labor. . . The contractions increase in intensity, length, and frequency. . . They become very energetic, last from two to four minutes, and follow each other very rapidly. . . Placental delivery takes place rapidly, some ten minutes after birth." In summing up his experience, he says: "Cocaine has the following advantages: absolute freedom from pain from the time the lumbar injection is made, increase in the uterine contractions, quicker labor, increase in the power of retraction of the uterus, and great decrease in loss of blood during delivery."

The present volume of International Clinics is similar in binding and make-up to the previous series, and is a credit to the publishers in every way.

SELF-EXAMINATION FOR MEDICAL STUDENTS. 3,500 Questions on Medical Subjects arranged for Self-Examination, with Questions of the State Examining Boards of New York, Pennsylvania and Illinois. Third Edition, enlarged. Pp. 230. Price, 10 cents. Philadelphia: P. Blakiston's Son & Company, 1901.

This book will be found of value to the student who wishes to test his memory on any medical subject. Unlike an ordinary quiz compend, answers to questions are not given, but reference to such compends follow each question. This arrangement presupposes that the student possesses the books referred to. Anatomy, physiology, materia medica, chemistry, practice of medicine, surgery, obstetrics, in fact, the entire range of general medicine is dissected. The questions of the different State examining boards give a good idea of what a candidate for a license may expect when he goes up for examination.

Original Articles.

THE REASON FOR THE EXISTENCE OF THE NEW YORK STATE MEDICAL ASSOCIATION.*

BY ALVIN A. HUBBELL, M.D.,

Clinical Professor of Ophthalmology in the University of Buffalo; Vice-President of the New York State Medical Association, Buffalo, N. Y.

THE question is often asked, Why are there two State and two county medical organizations in the State of New York? Now, that a new activity has set in and a new impetus has been given to one of these State organizations and its affiliated county organizations, it seems appropriate that a reply should be made and the situation explained. I have been invited to do this, and I trust that I will have the gracious indulgence of the older physicians who are familiar with this matter, for the sake of those who have joined us during the last twenty years, the majority of whom are wondering why the profession is thus divided.

One of the oldest medical societies in the United States is the Medical Society of the State of New York. From the time of its organization, in 1806, till 1882, the regular physicians of the State were united in this one body, with common ideals and purposes. These were essentially the maintenance of the honor and dignity of the profession, its scientific advancement, and the protection of the community from ill-qualified practitioners and charlatans. There were differences of views, and various methods were tried, from time to time, to secure these ends, but during that long period there was never disunion. Until 1882, no State society could claim a more harmonious or a more distinguished membership. It had always struggled unitedly against incompetency, against pretenders, and against "systems" which excluded the corroborated experience of the past, and swept aside that knowledge of anatomy, physiology, and pathology which lie at the foundation of scientific and progressive medicine. The society was not always successful in its struggles in behalf of scientific and non-sectarian medicine, for the "schools" of medicine finally gained legislative recognition; but it succeeded in requiring such recognition to include the essentials of a sound medical training.

In 1846, this society was foremost in the movement to organize the American Medical Association, which to-day has a dignity, an eminence and an influence, in the realm of medicine, co-equal with that of our republic in the realm of government. On its invitation, the first meeting for organization was held in New York City, and its members were among those most active and influential. At a meeting, held in Philadelphia, in 1847, a constitution was adopted, together with certain by-laws and a code of ethics. A majority of the committee on permanent organization was composed of delegates from the New York State Society, and the same society was represented by Dr. Alonzo Clark, one of its most eminent members, on the committee to report a code of ethics. Its membership was to be made up of delegates from State societies and other bodies which were put in affiliation with it, this affiliation being based on the indorsement of its constitution and by-laws, including its code of ethics. For thirty-five years the New York State Medical Society worked hand in hand with the societies of other States, for the laudable purpose for which the American Medical Association had been established.

In 1881 a spirit of dissatisfaction developed in the New York State Medical Society, and a committee was appointed to prepare a revision of the code of ethics, and to report at the next meeting. In 1882 the report was duly made, and the revised code of the committee came up for action. It had omitted many of the "duties" and "obligations" contained in the national code, but had retained, in substance, many of the sentiments regarding that which is "derogatory to the dignity and interests of the profession," and that which pertains to the "relations of physicians to each other." and many of the "rules governing consultations," with one important and vital exception. Section 1, Article IV., of the national code, defining who are to be met in consultation, says: "Nevertheless, as in consultations the good of the patient is the sole object in view, and this is often dependent on personal confidence, no intelligent regular practitioner, who has a license to practice from some medical board of acknowledged respectability, recognized by the association, and who is of good moral character and professional standing in the place where he resides, should be fastidiously excluded from fellowship, or his aid refused in consultation, when it is requested by the patient. But no one can be considered as a regular or fit associate in consultation, whose practice is based on exclusive dogma, to the rejection of the accumulated experience of the profession, and the aids actually furnished by anatomy, physiology, pathology and organic chemistry." For this the new code substituted the following: "Members of the Medical Society of the State of New York, and of the medical societies in affiliation therewith, may meet in consultation legally qualified practitioners of medicine." This substitution aroused a most fervid and lengthy discussion, both for and against it. To adopt a "revised code," with this incorporated in it was to drop the bars which divided non-sectarian from sectarian or exclusive medicine, and was to repudiate the national code, and thus to cut the society off from the American Medical Association. The leaders in the movement to "revise" the code were men of power and influence, and they marshalled a strong following. They pushed ahead with great vigor, and were either reckless or blind to the consequences. They felt that a re-

*Read before the Erie County Medical Association, March 11, 1901.

form of the national code should be made, and set themselves to work to effect such reform, without at any time appealing to the American Medical Association itself. Instead of working within the association, they chose to "reform from the outside. The opposing party was also led by strong men, but men not so much given to "marshalling forces," and who relied upon the justice and reasonableness of the national code, and believed that members would rally to its support when the situation was duly presented.

The battle waged fierce and strong, and yet, on February 7, 1882, when a final vote was taken, the new code was adopted, receiving fifty-two ayes to eighteen nays—seventy votes in all. The society, according to good authority, had at that time a voting membership of 386, of which, as ascertained by a careful canvass, only 143 favored the new code or no code. A canvass of sentiment was also made of the physicians throughout the State, and 5,002 were catalogued. Of these, 1,142 did not express a preference, thus leaving 3,860 who declared themselves either for the national code, new code, or no code, and of these 2,547, or nearly two-thirds, favored the national code. I mention these figures which I believe to be trustworthy, simply to show the actual sentiment of the profession at that time.

The struggle did not cease in 1882, but was renewed at the meeting of 1883, and the "new-code" faction again won. The New York State Medical Society, by thus adopting a code of ethics which was essentially at variance with the national code, defied the constitution and by-laws of the American Medical Association, and was therefore denied further official representation in that body. New York was no longer a member of that confederacy of State societies which it had so long honored and sustained, and which it had so faithfully labored to establish.

A most uncomfortable situation confronted those who did not believe that all "legally qualified practitioners" may be met in consultation, and who felt that a majority of the physicians of the State should not be shut out of the American Medical Association. The only way of resolving the difficulty was to organize another medical society, in compliance with the constitution and by-laws of that body. An invitation was accordingly sent out, in January, 1883, to a number of members of the medical profession to meet at the Delavan House, Albany, on February 4, 1884, to consider what course should be pursued. Seventy-six gentlemen presented themselves at this meeting. Dr. J. W. S. Gouley, of New York City, called the meeting to order and stated its object. Dr. H. D. Didama, of Syracuse, was made chairman, and Dr. Charles S. Ward, of New York City, secretary. Besides these gentlemen, Drs. Austin Flint, Sr., Austin Flint, Jr., Thomas F. Rochester, E. M. Moore, Frederick Hyde, Ely Van de Waker, M. W. Townsend, Joseph C. Greene, and other prominent physicians in different parts of the State, were present and took part in the discussion.

Dr. Austin Flint stated that the action of the State Society had been received with "no less disapprobation than surprise;" that a large majority of the medical profession of the State was in favor of upholding the code of ethics for which the new code had been substituted; that the new code removed the barrier dividing the regular profession from irregular practitioners, and that its adoption would prove greatly detrimental to the honor, interests, and usefulness of the profession, and would disfranchise the profession from affiliation with the American Medical Association and other associations at home and abroad. In view of these facts, he said a distinct State association was demanded, in order that a large majority of the members of the medical profession in the State of New York should not be placed in the false light of being disloyal to the national code of ethics, and by their sense of respect for legitimate medicine, by a due regard for the public good, as dependent on the character of the medical profession, by the justice of the representation of a majority of the physicians of the State in the national and other associations, and as being the only mode by which the majority of the members of the medical profession of the State could secure the advantages of an association composed of members united by a community of sentiment in matters relating to the honor, the interests and the usefulness of the profession. "Guided, therefore," he said, "by our convictions of duty, deploring the dissension which has been most unwisely and needlessly brought about in this State, appreciating fully the importance of the step to be taken, and regretting its necessity, be it

"Resolved, That the members of the medical profession of the State of New York, here convened, do now unite in forming an organization to be known as the New York State Medical Association."

After deliberate consideration, the resolution of Dr. Flint was adopted.

Dr. Gouley then offered a plan of organization, which he had prepared some weeks before in anticipation of the action at that meeting, and which had been submitted to a large number of physicians, and had received their approval. It was unanimously adopted.

On February 6, 1884, the association met in adjourned session, adopted a constitution and by-laws and elected officers, with Dr. H. D. Didama, of Syracuse, president, and Dr. E. D. Ferguson, of Troy, secretary. The association was afterward duly incorporated under the general laws of the State. Its first meeting after organization was held in New York City, November 18, 19 and 20, 1884.

Thus was inaugurated the New York State Medical Association, and this brief historical review will, I trust, sufficiently explain why it was done.

Although originally incorporated under the general laws of the State, it has been thought that its usefulness could be enhanced by a State

charter, which would give to it further rights and privileges having important bearings upon the welfare of the profession. Such a charter was applied for and was granted by the Legislature, in 1900. Pursuant to this charter, the association was reorganized at its annual meeting in New York City, in October, 1900. As now constituted, it not only enjoys the distinction of a State charter and State recognition, but it provides features of beneficence and protection to its members which have not heretofore been embodied in the purposes of other medical bodies. More than this, its system of membership and government is unique, and promises to be fruitful of a much more numerous, fraternal and efficient membership, and to wield a more powerful influence for the good of the community and the profession. Already, at the expiration of but six months since the reorganization, its membership has become one of the largest of any State society in the Union. Furthermore, it has established a monthly JOURNAL, in which to record the proceedings of its meetings, and publish the papers contributed, and through which its members may voice their sentiments, and the affiliated organizations may keep in touch with each other.

From the time of its inception till the present, it has steadfastly adhered to the purposes for which it was founded. It has, in every direction, sought to elevate professional standards, to inculcate sound principles of medical science and practice, to promote public sanitation, to protect the community from illegal practitioners and fraudulent pretenders, and to cultivate fraternal sentiments. From the first it eliminated the delegate system of membership previously in vogue, and at once opened its doors to all accredited physicians who complied with its rules. For sixteen years it has been the rallying center of the most distinguished and high-minded physicians of the State. Not unmindful of the excellent work projected and carried forward by the old State Society in behalf of higher medical education and measures to promote the public health, it has countenanced such efforts and furthered their accomplishment. Abstaining from all interference with the legitimate workings of that society, it has sought alone to protect its own interests and those of the public and profession at large, whenever it appeared that these could best be subserved. It has fostered the scientific spirit of its members, and the result has been a body of literature which is an honor to the organization from which it emanated. It has also founded a large and valuable library.

Thus, with a largely increased and harmonious membership, with a JOURNAL devoted to its interests and the dissemination of its literature, with an efficient system of administration, with a large and excellent library of its own, free and accessible at all times to its members, and with an enthusiasm which is guaranteed by a high sense of duty and justice, it seems to me that the New York State Medical Association has before it a future of great lustre and power.

Not only has it a mission in the State of New York, but its work will reach far beyond. Through it the profession of the Empire State will continue to coöperate with the American Medical Association, and uphold it in the maintenance of the lofty ideals which that body has held before the profession for more than half a century in matters pertaining to medical education, to the cultivation and advancement of medical knowledge, to the interests of the medical profession, to the intercourse of physicians, and to the enlightenment and direction of public opinion. It cheerfully endorses the national code of ethics, believing that it unequivocally expresses the consensus of opinion of the profession of the United States, and also of Canada, Great Britain and other countries, and that such a formulation of obligations and suggestions furthers the best and truest fraternal interests of physicians. Human nature is not so perfect, not so holy even in the medical profession, as to be beyond the need of moral teachings and appeals. Our Christian religion, as voiced through the various churches, is an ever-present witness of the immense benefits accruing from the incessant inculcation of principles and precepts. By it morals are uplifted and conduct is adjusted to a higher liberty. The medical profession may commend the golden rule as the supreme guide to the physician, but this is a general statement, and is subject to various interpretations. The medical profession may also insist that the conduct of a physician should be that of a gentleman, but this is more or less vague, and is open to conflicting constructions. The code is nothing less than a partial, specific elaboration of the golden rule itself, as applied to medical practice. To follow it is to do as one would wish to be done by—is to be in the highest sense a professional gentleman.

It is a mistake to feel that the code of ethics is a body of laws or regulations, the violation of which exposes one to some severe or humiliating penalty. Nothing, either in the code itself or in the constitution or by-laws of the American Medical Association, even suggests such a thing. It is exactly what its name indicates, a code of ethics, a code of conduct, a code of morals. In other words, it is a guide, and as such is helpful beyond measure to the young practitioner, and will keep many a one, both young and old, in paths of honor and uprightness who will make it his ethical creed, who would otherwise go astray. It voices the highest conscience of the profession, and the best of men cannot be harmed by harkening to it. One of its essential principles is that the good of the patient is the first consideration, and that he is entitled to the free use of any and every remedial agency, and to the application of the best results of untrammelled medical observation and knowledge, and it very properly specifies some things which are in opposition to this as derogatory to professional honor and dignity. But if the physician sacrifices his dignity or loses his honor, his punishment is in-

flicted by his own conscience and by a moral law pervading the ethics of society at large, whose retributions are absolutely certain and unmerciful. The code of ethics defines who are not fit associates in consultation, but it recognizes that there are situations where the good of the patient demands that one should meet an unfit associate, and the largest liberty of conscience is permitted in this respect, and without penalty. It is Christian in its principles, it is American in its spirit, and while it divests the practice of medicine of that commercialism which debases it to the level of a trade, the observance of its injunctions and precepts is also the surest guide to genuine professional success. The code simply points out the proper way, and the American Medical Association takes cognizance only of the acts of the charlatan and the criminal.

Of the two State medical organizations, one repudiates the organic law of the American Medical Association, and is isolated from it. The other indorses it, is affiliated with it, and is a part of it. Each stands for scientific medicine, and each is working for the advancement of medical knowledge and for the public good. But one stands alone; *not one other State Society, during the entire twenty years has imitated its experiment,* while the other joins hands at all points with the great profession of the world. Let us press on in our own legitimate fields, and not quarrel with the isolated older sister, hoping that the day is not far distant when she may abandon the unseemly position she has taken and embrace the higher ideals of her palmier days.

In conclusion, let us ever hold in most grateful remembrance the invaluable services of John W. S. Gouley, of New York City, who, with his alertness of mind, his penetrating foresight, his unbounded resources and his undaunted courage, must, I think, be recognized as the leader in this movement; the self-sacrificing and never-ending labors of his companion in the field, the indefatigable and clear-headed E. D. Ferguson, of Troy; the powerful championship of the cause by that staunch and stalwart defender of professional honor and justice, Henry D. Didama, of Syracuse; and the wise counsels and unflinching support of the late Austin Flint, of New York City; of Edward M. Moore, of Rochester; of Austin Flint, Jr., of New York City; of the late Thomas F. Rochester, of Buffalo, and of others, in founding an association that has saved the Empire State from national exile, and enables us to-day to become an integral part of a medical organization whose membership is second largest in the world, and in whose ranks are to be found some of the most distinguished physicians, surgeons, and specialists on the face of the globe.

ULCER OF THE PLACENTA; UMBILICAL CORD SEVERED BEFORE BIRTH.*

BY EDEN V. DELPHEY, M.D.,
New York.

THE specimen which I present this evening is from Mrs. E. D., aged thirty-two years, V-para, seven and one-half months pregnant. Personal and family history negative. The first child was still-born, at eight months, traumatic; the second and fourth are living, and in good health; the third died at two years of age, of meningitis.

As is customary among her class she did her own washing, and at 11 A. M., while hanging up clothes on the roof, she felt, as she expressed it to me, "a great commotion in her abdomen." This was succeeded by pains, which gradually

A.—Ulcer having its counterpart in the uterine wall.
B.B.—Gummata—incised.
C.—Stump of cord attached to child.

increased during the day, and she sent for me at 5 P. M. On my arrival, at 6 P. M., I found her in the first stage of labor, the os admitting the finger-tip. At 7 o'clock it was dilated a little more; at 9 it was about as large as a silver half-dollar; at 10.30 they sent for me in great haste, saying her pain was unbearable. I found the uterus in tetanic contraction and the os dilated about 2¼ inches. I ruptured the membranes, and bloody amniotic fluid gushed forth. My associate administering chloroform, I dilated with the hand, and delivered with forceps. The head lay in the occipito-posterior position, but the delivery was easy; the child weighed only about 6 pounds.

*Read before the New York County Medical Association, February 18, 1901.

In delivering the shoulders and chest, I found the cord to be already severed, at a distance of three-quarters of an inch from the infant's body, although there had been no traction upon it. I hurriedly took the child into the next room, and auscultated its chest; there was no heart-beat. On returning to the patient's bedside I found the placenta had been delivered spontaneously, and on examination I found its surface covered with old, dark adherent clots. These I washed off, and then discovered an ulcer about an inch in diameter on the maternal surface of the placenta. This you will see, both in the specimen and in the photograph, although the preserving fluid has contracted the whole placenta somewhat.

The patient recovered quickly from the anesthetic, and the uterus contracted nicely, there being but a slight amount of hemorrhage. When I left her, at midnight, she was resting quietly, and was in good condition. At 1 A. M. I was hurriedly summoned, and found her in collapse, and in spite of stimulation by hypodermic injections of strychnin nitrate, atropin sulphate and whiskey, and coffee and whiskey by rectum, she died at 5.30 A. M. During this time she had all the symptoms of shock, with hemorrhage: pinched features, hurried breathing, restlessness and anxiety, cold extremities, and absence of radial pulsation, but without any external evidence of hemorrhage. The uterus was well contracted. During the last hour she complained bitterly of the binder being too tight, and it was loosened. On examination I thought I detected the presence of fluid in the abdominal cavity. Unfortunately, a *post-mortem* examination was impossible.

I append the report of the pathologist: "Careful histological studies of the specimen of placenta, which you brought me, show that the lesion is syphilitic in character. Numerous gummata are present, and the ulceration appears to be one of these structures broken down. Moreover, the blood-vessel changes are quite marked. As for the cord, I may say that the ends of the pieces show no evidence of ulceration; the tissue changes are rather those of diffuse productive inflammation. I am at a loss to explain the severed cord, unless one assumes traumatism." The cord was fourteen inches long.

The only specific history is paternal, fourteen years previously.

There are several questions which present themselves: (1) How did the cord become severed? Not from traction on the cord during delivery, for there was none. (2) Was it possible for the infant to grasp the cord with its hand during the convulsion produced by the detachment of the placenta, thus causing the "great commotion" the patient complained of? (3) This ulcer must have had a counterpart in the maternal structures. Did it extend clear through the uterine wall, and did the patient die from hemorrhage through this opening into the abdominal cavity? There was no external evidence of hemorrhage.

PROBLEMS IN THE ETIOLOGY, DIAGNOSIS AND TREATMENT OF TUBERCULAR DISEASE OF THE UPPER AIR PASSAGES. *

BY JONATHAN WRIGHT, M.D.

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FROM the earliest times to the present the idea has always existed, and it has occasionally been the accepted doctrine, that consumption is infectious. The historian from whom I quote† adds the remark, "Undoubtedly a susceptibility is always associated with it." This perhaps is as good a synopsis of a modern thesis on the etiology of tuberculosis as can be given in a few words. It is with the details of the question we are at present concerned. The question of the etiology of tuberculosis in general does not enter the province assigned to me in this discussion. I have many times protested against the tendency to consider the tubercle bacillus as the sole agent in the production of tuberculosis. This tendency has arisen from the fact that it has been convenient to classify diseases, in the last few decades, on the basis of etiology rather than on that of pathology or on the still earlier basis of symptomatology, but after all the etiology and pathology of one generation is apt to become the pathology and symptomatology of the next. This tendency is still more due to the fact that the tubercle bacillus is the tangible factor, while the others, although quite as important, are as yet imperfectly apprehended.

The problem which now confronts us in the study of the causes of tuberculosis is the necessity for finding a method, perhaps in organic chemistry, by which we may investigate those factors which render the morbific influence of the tubercle bacillus an efficient one in the production of disease in the animal economy of its host. The discussion of this also lies beyond the limits assigned to me, though these factors enter quite as largely into the real etiology of the local disease as does its bacillus.

It is unnecessary for me to remind you how frequently the presence of the tubercle bacillus has been demonstrated, not only on the surface of mucous membranes, especially of the upper air tract, but in the internal organs and the lymphatic system of man, without the production of that congery of lesions and symptoms which we indicate by the term tuberculosis.

In examining microscopically more than a hundred specimens I have failed to find either the tubercle or the tubercle bacillus in ordinary hypertrophy of the lymphoid material of

* Second paper read at the Seventeenth Annual Meeting of the New York State Medical Association in the Symposium on Tuberculosis The first paper, by Dr. Victor C. Vaughan, of Ann Arbor, Mich., on "The Etiology and General Prophylaxis of Tuberculosis," was published in the March number of the JOURNAL.

† Baas' "History of Medicine."

the throat. While I unhesitatingly deny that the tubercle bacilli are ever the cause of large tonsils and adenoids, it is not alone on account of this failure to find them on my part that I am disposed to doubt that this overgrowth of tissue is the *chief* pathway by which the tubercle bacillus enters the organism. Others have found them. From a total sum of nearly a thousand specimens of tonsils and adenoids examined the ratio of 5 per cent. has been deduced* as the proportion of latent tuberculosis of them. I have elsewhere† entered fully into the reasons why I am disposed to doubt the reliability of these statistics, and the repetition of them here is unnecessary. However, in the face of all this conscientious work by many observers, it is impossible to deny that hypertrophied lymphoid tissue may absorb from its surface the tubercle bacillus deposited there by the passing air current and the food. Although the experiments of Hodenpyl‡ led to a contrary inference, the more recent investigations of Goodale† and Hendelsohn‖ I think, have set at rest the question as to the power of the lymphoid tissue to take within itself inorganic particles placed on its surface. It does not seem any possible violation of close scientific reasoning to venture the belief that they may act in the same way toward the tubercle bacillus. While I believe the ratio of 5 per cent. too high for the occurrence of the so-called latent tuberculosis, I am not at all disposed to doubt the occurrence of latent tuberculosis of the tonsils in a smaller and as yet undetermined ratio. But if we have many researches upon which to form an opinion as to the part played by the abnormal hypertrophy of the surface lymphoid tissue, singular to say we have nothing to base our opinion upon as to the part played by the surrounding normal mucous membranes of the nose and throat. Since their chief function is absorption and transmission, we would suppose that the healthy lymphatics would act more promptly and thoroughly than the diseased structures upon which these observations have been made. Or are we to suppose that tonsils and adenoids have a greater absorbing power than do the normal elements in the mucosa from which they spring?

I think we have good reason for the belief that the tubercle bacillus usually enters the tissues of man before it reaches the stomach by the esophagus, or the lungs by the trachea. Many, no doubt, reach the stomach, but the destructive power of the gastric secretions on the germs in the food is apparently very marked for pathogenic bacteria. We must assume at present that the tubercle bacillus passes into the lymphatics through the mucous membranes of the naso- and oropharynx in a very large proportion of the cases of pulmonary infection. To deny other ports of entry would be dogmatic and unnecessary. We have no means of venturing an accurate assertion as to the relative frequency of travel along the various possible pathways of primary infection. I think there can be no doubt that the bacillus can pass directly, either by intra- or intercellular channels, through the surface epithelium of the mucous membranes, and without a solution of continuity in the stockade of columnar epithelial cells. In at least one case of tubercular laryngitis I have had an opportunity of observing this, as a plate in a former contribution* clearly shows.

I do not believe that a previous infection by pyogenic cocci is a necessary step in the process, as Lake has intimated.†

Galen in his time pointed out very clearly‡ that the nose and upper air passages have for their function not only the warming of the inspired air on its way to the lungs, but that of filtering out dust particles. It has since been demonstrated§ that they acted in like manner toward bacteria. Indeed, a priori, the waving cilia of the epithelium and the residual pulmonary air are anatomical phenomena which constrain us to believe that the bacillus of pulmonary tubercle and the dust of pulmonary anthracosis do not reach the periphery of the respiratory system of the lungs by the air channels themselves. They must be carried thither by other agencies. We know of none except the blood current and the lymph stream. We find them in the lymph channels and we have many reasons for believing that they are thus carried, but the difficulty of submitting the blood current and its channels to microscopic examination in this respect, the absence of any such blood filters as the lymph has in its nodes preclude us from denying or asserting that the blood vessels also carry the germs from the surface. But perhaps this is not a very important point in the consideration of the subject. The lymph channels do carry material absorbed from the surface, whether the blood vessels are also carriers or not. The interesting, and I venture to predict a significant, phenomenon connected with the subject of infection is that apparently the mucous membranes absorb, the lymphoid material harbors, and the lymph channels carry the tubercle bacillus and yet are themselves relatively immune to its morbific influences as compared to the walls of the bronchioles and air vesicles. We must re-

* Lewin, Archiv f. Laryng., Bd. ix., Heft 3.
† New York Medical Journal, April 7, 1900.
‡ Hodenpyl, Am. Journ. Med. Sciences, March, 1891.
§ Goodale, Archiv f. Laryngologie, Bd. vii., p. 90.
‖ Hendelsohn, Archiv f. Larngologie, Bd. viii. p. 764

* "Tuberculous Infection of the Lymphoid Tissue in the Pharynx with Some Remarks on Laryngeal Infection," New York Medical Journal, September 26, 1896.
† Lake, Amer. Journ. of the Med. Sciences, April, 1895.
‡ De Usu Partium, xi–xii.
§ "Nasal Bacteria in Health," New York Medical Journal, July 27, 1889.

member, however, that this is not so much the case with the cervical and bronchial glands, though many observers believe that they are, as a rule, only secondary points of development, the primary nidus being in the lungs; but the mucous membranes of the upper air passages not only receive the primary deposit of the infecting agent, but they are subsequently, in case of the establishment of a pulmonary nidus, washed by the virulent cultures thrown off from the distant point of development, without themselves, as I have just said, in the majority of cases, presenting evidences of morbid action.*

Now if in the air tract we try to arrange the anatomical localities in the order of the frequency of development of tubercular disease, it proceeds pretty regularly from the walls of the bronchioles and air vesicles to the nose, the larynx perhaps being more frequently involved than the trachea or larger bronchi, on account of its greater mobility and the complexity of its gross anatomy.†

The lungs, the larynx, the oro- and naso-pharynx, the nose—this being the order of frequency of the site of tubercular disease, and in all but an insignificant number, the lungs being the primary seat of the efflorescence of the disease and the other localities merely incidents in the total history, when it occurs to us that this is the inverse order of frequency in the primary contact of the tubercle bacillus in the air current—there seems no escaping the conclusion that the tissues themselves possess powers of resistance in certain localities which they do not have in others. Now what does this possibly mean? We must keep in mind what the bacteriologists teach us as to the enormous variations in the virulence of the bacillus itself. We must remember the individual as well as the generic variation of both bacteria and their hosts in the general scheme of the bacterial etiology of disease. I am not here concerned with the bacillus nor with its relation to general systemic processes in disease, but with the phenomena of its relation to the nose and throat. It adds nothing to our actual knowledge to theorize, but it adds greatly to the efficiency of our intelligence to do so, and it is an immense help to us in subsequent investigations and experiments. Shall we say that the tubercle bacillus only acquires virulence as to its host in its passage from the throat along the pathways of infection to its point of development? This seems fantastic. Shall we imagine that its greater frequency upon or adjacent to the mucous surfaces of the nose and throat has induced a sort of local inoculative immunity? Or shall we say that this greater exposure has in the process of evolution of the animal organism produced a graded *local* immunity which is inherited? Then comes the familiar but uncomfortable thought: Does not evolution mean the weeding out of susceptible strains generally by exposing them to the ravager, and if our hygienists really succeed in decreasing the number of exposures by their onslaughts on the bacillus, will not the susceptible strain in the human race increase and the net result be the same, unless the bacillus is totally annihilated? It is thus easily seen how quickly and necessarily we drift out of special channels into broader, if we but follows our argument to its inevitable conclusion of interrogation.

I am very anxious that the etiological problem with which I have been concerned should be stated not in its usual form, What is the cause of laryngeal tuberculosis? but rather, What is the cause of the comparative immunity of the upper air passages? We should always be reminded of this when the fact is brought to our attention that primary disease of the upper air passages is so rare that its very occurrence has been doubted. So far as the bacillus is concerned, it seems to be powerless until it has been baptized in the lungs and born again, or until it has there on its vantage ground sapped the forces of general systemic resistance. I hope I have been able to present this phenomenon in its proper vivid light, as a puzzling problem of vital importance.

I see upon referring to the program that I am expected to say something of the pathology, but it seems to me I may safely neglect this, at least so far as concerns its histology. The pathology of tubercle in its microscopic features is the same everywhere, and it has often been said that Virchow many years ago selected the larynx as the place where the common type of the lesion can best be studied. Although Trousseau and Belloc failed to note tubercle in the larynx in their cases of ulcera-

* In the early statistics of Louis (Recherches Anatamo-Pathologique sur la Phthisie, 1825) out of 102 cases in which the air-tube was examined post mortem, in deaths from phthisis, the epiglottis was involved 18, the larynx 22, the trachea 31 times, but he does not state distinctly the relation of the involvement of any or all parts of the tube to the whole number of pulmonary cases. His statistics are moreover vitiated for use to-day by the non-exclusion of syphilitic and other ulcers of the air-tube, and the same may be said of Trousseau and Belloc's treatise on laryngeal phthisis in 1837. Heinze is the only author of modern date who goes as high as 51 per cent. It must be remembered that all these and many other statistics are from the autopsy-table in cases of pulmonary phthisis, and include the ravages of the last stage of the disease, in which not infrequently the whole air-tube suddenly breaks down into ulceration. At an earlier period, the proportion is much less. Out of 25 patients I examined in the second and third stages of pulmonary phthisis, I found involvement of the upper air-passages in only 4, or about 16 per cent., which corresponds fairly well with the laryngoscopic examinations of other observers.

† I wish to explain that I am not now considering latent tuberculosis of the tonsils and lymph nodes which, if it is to be called a disease at all, is to be considered a disease thoroughly repressed by the resisting forces of Nature, and therefore as contributing to the striking phenomena to which I am alluding. Clinical tuberculosis is one revealed by the symptoms and not exclusively by the microscopic study of the tissues. I should also say that Trousseau and Belloc long ago said that the trachea was more frequently affected than the larynx, but Andral, about the same time, made a contrary observation (Clinique Medicale, 1834, t. 4, p. 182), and I do not now recall any observations, in late years, which throw any more light on this particular point, for the advent of laryngoscopy by revealing the laryngeal lesion clearly and the tracheal lesion badly, or not at all, has obscured rather than elucidated this point, especially open to error from a clinical standpoint, because the symptoms in tracheal ulceration are comparatively mild and apt to escape notice in the presence of other lesions.

tion with pulmonary phthisis, considering the ulceration of a simple inflammatory nature, Broussais as early as 1806 had observed it.* Since the development of laryngoscopy the gross pathology is better considered under the heading of diagnosis.

In the consideration of the remaining part of my subject which I shall have time to touch upon, I shall confine myself exclusively to that lesion which is at once the most common in occurrence, the most distressing to witness, and the most difficult to treat—laryngeal tuberculosis.

In speaking of the diagnosis there are three points upon which I wish to dwell with especial emphasis:

1st. The diagnosis of incipient laryngeal tuberculosis.

2d. The differential diagnosis of tubercular laryngitis from syphilitic, and these include the third salient point, the microscopic examination of the sputum.

When the laryngologist is aware that his patient is suffering from pulmonary phthisis and has come to him for hoarseness, he is naturally on the alert for the detection of the involvement of the larynx in the disease. He is still more so if the patient also complains of pain. Upon looking into the larynx and finding it much reddened, but without any local hyperplasia or infiltration, he may be pretty confident that the laryngeal symptoms and appearances are dependent upon the cough and perhaps the general systemic debility. This frequently even post-mortem deceived the early observers. The phthisical patient may come with much less marked symptoms than in this secondary catarrhal laryngitis, and yet have in his larynx the unmistakable evidence of tubercular disease in its incipiency. Inspection reveals in addition to the pale larynx and velum palati, so suggestive of pulmonary phthisis, one which is congested only in spots. There is a heaping up of proliferation epithelium on the posterior wall, the pachydermia laryngis. But these are appearances which are merely suggestive, not confirmatory of tubercular laryngitis. We must have some local infiltration or ulceration to render this suggestiveness a probability—a certainty it can not become until we have excluded syphilis and found the bacillus of tubercle.

The description of the laryngoscopic appearances of tubercular infiltration and ulceration of the larynx can best be left to the text-books and the routine descriptions, though I often question the utility of surrendering space even there to them. I doubt if any one ever made a diagnosis of a tubercular or syphilitic ulcer from his experience with didactic descriptions alone. Neither shall I say anything of the symptomatology.

I have been supposing that the laryngoscopist was informed from the symptoms or history or physical examination as to the condition of the lungs. The case is very different when there is no suspicion of pulmonary involvement. I am familiar with the eloquent and impressive phrases with which many writers delineate the accuracy of diagnostic acumen possible in laryngoscopy which recognizes at a glance without collateral evidence the existence of pulmonary phthisis. I have no hesitation in disclaiming any personal skill of this kind. The cough, the emaciation, the pallor, the patient's apprehensions, his history, put me on my guard. Laryngoscopy strengthens or weakens my suspicions, but I confess I have to go farther for a diagnosis. Physical evidences of pulmonary involvement with the laryngoscopic evidence will form a probable diagnosis, but the presence of the tubercle bacillus must confirm it. Before proceeding farther in the question of differential diagnosis we must consider the second point of interest.

Syphilis of the larynx is not a common occurrence in my experience, syphilis of the lungs is not unknown to it. When the two are combined they present a clinical picture which is sure to deceive the unwary diagnostician who lays too great a stress upon the element in differential diagnosis of most frequent occurrence. What makes this mistake more distressing to the conscientious practitioner is the fact that laryngeal syphilis is usually an easily curable disease, but with the same treatment as that used in laryngeal tuberculosis it is almost as fatal as the latter. The observers who first studied these laryngeal affections in the early part of the century were continually confounding them, and they were both called laryngeal phthisis. In no other affection does such great importance attach to the diagnosis. It is usually a matter of life or death to the syphilitic patient. The comparative futility of treatment makes it of less importance to the tubercular patient.

With a history of syphilis and scar tissue in the pharynx or on the epiglottis, with the peculiar sharp cut serpiginous ulceration characteristic of syphilis of the mucous membranes, the diagnosis is easily made, but local appearances in syphilitic disease, while frequently different from other forms of ulceration, and we thus speak of characteristic conditions, may so exactly resemble those of a tubercular nature that they are indistinguishable from it. The promptness and suddenness with which laryngeal stenosis may supervene in syphilis is a differential diagnostic point which is frequently neglected. Tubercular laryngitis is usually not accompanied by dangerous dyspnea. Syphilitic laryngitis ordinarily is.

Fortunately there is usually no difficulty in clearing up the diagnosis, if the observer is on his guard. "Always think of syphilis and keep

* Histoire des Phlegmasies, tome 1, p. 370.

on thinking of it," irrespective of long personal acquaintance with the patient and his family, disregarding any church-going proclivities and notwithstanding his solemn asseveration. All the patients whom I have seen die from this mistake on the part of their medical attendants, and one whom I saved by my previous experiences, were innocent women, so far as could be learned from the history, and who had apparently unknowingly acquired the disease.

3rd. The greatest practical benefit which it is at present clearly demonstrable we have derived from the discovery of Koch is the diagnostic value of the tubercle bacillus. In incipient cases of pulmonary involvement the bacillus is frequently absent from the sputum, or there is no sputum, as we all know; but where there is a laryngeal lesion resembling syphilis the primary pulmonary lesion has usually advanced so far that it is very exceptional indeed to be unable, on careful and repeated examination, to find the tubercle bacillus.

Therefore in these cases of laryngeal disease it is of the utmost importance, both in the incipient stage and in the ulcerative stage, when there is danger of confounding it with syphilis, that the sputum analysis should not be neglected. If the bacillus is not found the iodide of potash and mercury should be given until the case is cured or the diagnosis is clear. I have many times urged caution in this regard and I do not hesitate here to reiterate a warning which may occasionally save a life.

Treatment of tuberculosis of the larynx, still more even than treatment of pulmonary tuberculosis, is a most vivid reminder of the impotency of man in the face of the destructive forces of nature. Our helplessness lays us open to the bitter satire of that gifted ancient charlatan Æsclepiades, who pronounced the therapeutics of Hippocrates to be the contemplation of death. It is doubtless true that occasionally a patient recovers under various methods of treatment. They also recover in exceptional instances without local treatment. There is a retrogression of the tubercular infiltration and a cicatrization of its ulcers. This occurs under the local application of many medicinal agents, lactic acid and creosote being the most frequently employed in the last decade, iodoform and various balsams being perhaps as frequently used during the preceding ten years. Quite as extravagant and enthusiastic claims have been urged for one drug as another. So far as the impartial observer may judge the results have been approximately the same. I am under the impression that in laryngeal as in pulmonary tuberculosis climatic change is the most effective agent in the cure of the disease. Unfortunately such a very large proportion of these cases are inevitably doomed that it is cruelty to send them away from home to die, while in quite as large a number of cases climatic change for financial reasons is impracticable. It is not a part of the subject allotted to me to enter into the discussion of climate in the treatment of phthisis. Suffice it to say that the ideal treatment of laryngeal phthisis would be one in which the local measures could be judiciously and skilfully carried out during the continuance of climatic treatment.

A few words must be said as to the surgical treatment of tubercular infiltrations of the larynx, a procedure so popular with our German confrères. Again when we come to consider the results as to cure it is only a repetition of what has been said as to the application of drugs. A certain very small number recover under treatment. Whether more recover under this plan than under other methods or without treatment is a question which has never been satisfactorily answered, though frequently asked. Even the most enthusiastic advocates of the method admit that the large majority of the cases seen are unsuitable for operative treatment. From what I have said it will be clear that I am of the opinion that after an exhaustive search of the statistics, after an impartial weighing of the statements of numerous writers, after an extended clinical experience, the unbiased observer will come to the conclusion from the evidence thus studied, and not from that of a few selected cases, that the permanent radical cure of the local lesion of tubercular laryngitis is not materially hastened by the various methods of treatment in any but an insignificant number of cases.

Now I have been speaking of that part of the treatment of tubercular laryngitis which is expected to end in its cure, and by that I mean the permanent cicatrization of the ulcers and the complete disappearance of infiltration from the larynx. When we discuss the palliation of the dreadful symptoms, we are dealing with another matter. Indeed, it not infrequently happens in tubercular disease, and is characteristic of lupus, for partial cicatrization of the ulcers or partial absorption of the infiltration to occur at one place and more extensive involvement to begin at another point and possibly in a locality where it can not be seen, as in the ventricles, or where it ceases to produce pain, as below the chords or deep in the tissues. We, therefore, very much more frequently witness partial or temporary healing and even apparent cure than complete and convincing eradication of the disease. With this incomplete cure is a marked cessation of the distressing symptoms and a consequent increase in the euphemistic and hopeful mood of the patient. This brings me at once to one of the most important elements in the palliative treatment of the disease, the psychical one. It has always been recognized as a peculiarity,

indeed we may say as a symptom of phthisis, that the patient is possessed, to the point almost of obsession, of belief in his continued improvement and ultimate recovery. No intelligence is too profound, no physical condition is too desperate for the entertainment of this delusion, or of this assurance—a striking refutation of the influence of mind over disease and a striking illustration of a less mysterious phenomenon, the influence of disease on the mind. Now it is the height of folly and it is the depth of cruelty to declare to this patient that nothing can be done for the cure of his laryngeal condition. It will produce a depression, temporary it is true, but productive of a marked injurious influence upon his general condition. In most cases we may evade technical falsehood by virtual deception, telling the patient much can be done in the way of treatment which may relieve his sufferings. Often he will not press his physician for more, for he, as Petrarch said in one of his Latin letters, "clings to every glimmer of hope and soothing the anguish of his soul with treacherous supports, he forgets the most familiar of his own experiences." Any active local treatment, if it does not really aggravate the patients' suffering, is pretty sure to produce grateful expressions of a belief in its efficacy and a lively hope of a successful issue. It is a fact that lactic acid and probably some other drugs will stimulate torpid granulations to a more florid and healthy appearance, frequently cause a marked diminution in the amount of secretion, more rarely bring about a decrease in the inflammatory swelling of the tissues, and even occasionally produce an evident cicatrization at the edge of the ulcers. I can testify from my own experience that even complete healing of a tubercular ulcer may thus occur. More than ten years ago such a laryngeal condition healed in this way for several months. while the patient was pregnant, but subsequently, I think after more than a year, the laryngeal trouble recurred with stenosis and, in spite of an intubation which relieved the latter symptom, she rapidly succumbed to her pulmonary lesion. This, however, is with me an almost unique experience, and I regarded the case at the time as cured. I cannot doubt as I look back on it now that for some reason, perhaps from the curetting which was also done, or possibly for systemic reasons, the tubercular disease subsided and was held in abeyance. Less striking results than this are not infrequently attained, and any diminution in the intensity of the morbid process causes marked amelioration of the distressing symptoms when aided by the psychic element just alluded to. Even where no apparent change in the lesion can be noted the assurances of the patient are for a time often very gratifying if not, to the experienced observer, encouraging. The local application of iodoform, and especially of orthoform in the elegant prescription employed by Freudenthal, produces frequently a more marked influence by its continuous use upon the pain, but it has seemed to me that it has not so frequently produced a better local condition of the laryngeal ulceration. The intralaryngeal or intratracheal injection of oils impregnated with various volatile substances, especially menthol, frequently for the time at least, ameliorate the pain and the cough. As for the opiates internally, their employment is often justifiable and indicated. The local application of cocain is rarely of any value, as it does not exert much influence on inflamed tissue. Detergent sprays wash away the secretions and give relief until the latter gather again.

Finally, in a patient without much fever, with considerable vital force yet remaining, with proper fortitude of mind, but especially with the docility which seems more common in the Teuton than in the American, the removal by cutting forceps and curette of granulations and infiltrated tissue, especially the surface vegetations covering ulcers and the infiltrated substance of the epiglottis, is often followed by the most happy results as to the relief from the tormenting dysphagia and less frequently by cicatrization of the wound. The submucous injection of various medicaments, especially creasote and lactic acid does not appeal to my understanding of pathological processes, but it has its advocates in the larynx as well as in the joints, who are just as positive and enthusiastic and as honest as the partisans of other procedures. Indeed, as to the cure of laryngeal tuberculosis by agencies at our disposal in the present state of our knowledge, honest belief as to that seems to be largely a matter of individual temperament, but being a debatable field it affords an opportunity for much dishonest expression of sentiment which deserves only our contempt. Even the perfectly honest but unduly exaggerated expression of opinion as to the results to be attained by any means of treatment and the uncritical narration of the histories only of favorable cases has been very misleading. This temperamental optimism, together with the barefaced charlatanry which suppresses what the reporter knows to be the whole truth has unfortunately been a great detriment to the conscientious study of the treatment of this terrible disease. We cannot expect that human nature will allow men to be constantly exhibiting to the world their own dismal failures as an offset to the reported brilliant successes of others, but it is only by the unflinching and conscientious adherence to what we believe to be the whole truth that we will stimulate that activity which may in the future find that cure for tuberculosis in man which we do not now possess.

HEART DISEASE.

BY JAMES J. WALSH, M.D., PH.D.,
New York.

SOME points in the discussion on heart diseases at the last International Medical Congress were of such practical interest that it seems worth while to note them for discussion before this association. It is, of course, generally agreed that most heart disease comes from rheumatism. It is not, however, agreed what rheumatism is. The tendency of late has been to regard it as an infectious disease. A number of micro-organisms have been described as occurring in the lesions and secretions of affected parts and sometimes also in the blood of rheumatic patients. Micro-organisms have been found, especially in the rheumatic vegetations on heart valves. Most of the micro-organisms described so far seem rather to have been present as the result of secondary infection than because they were specific pathogenic causes of rheumatism. Professor Widal has tried very carefully in some fifteen cases of rheumatic polyarthritis to secure cultures from the arthritic fluid of affected joints. Though he has used every culture medium known to modern bacteriology, he has failed to obtain growths. As his work is carried on in connection with the Pasteur Institute of Paris, it can be seen that this would seem to exclude the possibility of rheumatism being due to a form of micro-organism that resembles any of the microbic types now known.

While Professor Widal has been absolutely unable to obtain cultures from rheumatic secretions, examination of the arthritic fluid of rheumatic joints makes it clear beyond all doubt that rheumatism is an infectious disease. The cellular contents of the synovial fluid are very different in traumatic and rheumatic arthritis. In rheumatic arthritis a large number of polynuclear leuco cytes are present. These cells are always found in increased numbers when there exists an infectious process, against which the cells of a part are endeavoring to protect themselves. Rheumatism seems particularly to predispose to secondary infection. It is for this reason that so many other micro-organisms, under such various forms, have been found in rheumatic subjects. It is probable that these secondary infections play an active part in certain of the chronic conditions which sometimes develop as the result of acute rheumatism, and that they especially are actively propagated on the heart valves wherever rheumatic heart lesions already exist. It was shown at von Leyden's clinic in Berlin, some time ago, that ordinary bacteria in the circulation of animals only affect the heart valves when these are already injured. It is regarded as of great importance, then, in the treatment of rheumatic cases, that all possible antisepsis of the digestive tract should be secured during the course of rheumatism, for it is from here that secondary infections get into the circulation.

CURE OF VALVULAR HEART LESIONS.

A very interesting bit of discussion showed that heart lesions are not so absolutely incurable as is often thought. Petrovitch, of Paris, gave the details of seven cases, all of them affected by chronic endocarditis, that had lasted at least six months, in which the valvular condition was cured by treatment. All of the cases gave not only the physical signs of a valvular lesion, but had already occasioned certain functional symptoms of the existence of a heart affection. All the symptoms and the physical signs disappeared in from ten months to three years. The treatment used was potassium iodide in small doses, exhibited over long periods. The iodide was interrupted occasionally for some weeks, and its absorptive effects were increased by the occasional application of the actual cautery over the precordial region. Professor Potain, who is the greatest living French authority on heart disease, said that he has seen a number of such cures, especially in young people. He believes that the cure of a heart lesion should never be set down as hopeless until the effect of this treatment has been very thoroughly tried.

HEART PALPITATION AND CERTAIN PATHOLOGIC CONDITIONS.

It is evident that the question of some pathologic conditions of the heart as the basis for palpitation in certain cases is occupying many minds. Professor Huchard, of Paris, called attention to the fact that it is not unusual to have certain cases of palpitation go on for ten or fifteen years, as if they were the ordinary functional disturbance of the heart rhythm, due to some cause external to that organ. Then suddenly or gradually symptoms are developed which point to the existence of a progressive pathic condition in the heart muscle, or in the nervous mechanism of the heart. The morbid findings in these cases have so far been rather unsatisfactory. Professor Huchard called attention to the fact that he had recently found in certain of these cases a sclerosis of the left auricle. Sclerotic conditions of the ventricle are usually carefully looked for, but in the auricle they might easily be missed. He had found that clinically many of these cases with irregular heart action, especially where pain was felt, were not only not benefited by digitalis, but seemed to be made worse. Digitalis was only given on general principles in these cases, there being no special indication for it, and it seems to be time to call attention to the fact that it may do harm rather than good.

Professor Merklen called attention to the fact that where painful arythmia existed digitalis always failed to do any good. Where asystoly exists—that is, where the heart beat is regular, but an occasional beat is missed—digitalis nearly always does good. As a general rule, however, in painful affections of the heart strophanthus is

the drug indicated. Professor Potain confirmed this opinion with regard to the use of strophanthus in painful cardiac affections. In painful arythmia, especially, while it may produce no modification of the heart rhythm, its action is extremely soothing to the heart discomfort.

CARDIOPTOSIS.

Visceral ptoses are very interesting subjects for investigation. So far, however, the prolapsed organs have always been situated below the diaphragm. A contribution to the present congress, however, described a relaxation of the elastic tissue of the large vessels which allowed the heart to prolapse; that is, hang much lower in the thorax than normal. This prolapse causes the apex beat to appear beyond the nipple line, and makes the lower part of the area of relative and absolute heart dulness much wider than normal. The pathognomonic sign of the existence of this anomalous condition is the absence of heart dulness at the ordinary upper limit of the organ. As the result of the cardioptosis such symptoms as respiratory anguish, painful dyspnea and precordial discomfort develop. Some of the cases of angina pectoris are said to be due to this condition. The cause is always an hereditary tendency to relaxation of tissues and seems to be a family trait.

TOBACCO AND HEART LESIONS.

It was very interesting to note how many medical men are of the opinion that tobacco sometimes gives rise to heart lesions. The impression has been growing for a good while that individuals who are susceptible to the influence of tobacco, and yet continue its use despite the development of unfavorable symptoms, often develop not only the physical signs, but the functional symptoms of a heart lesion. Von Leyden, of Berlin, stated as his positive opinion, several years ago, that tobacco alone is sufficient in certain cases to cause the development of a valvular defect of the heart. Professor Mendel, of Berlin, also stated that, in those who have an idiosyncrasy for it, the use of tobacco produces an arterio-sclerotic condition, and this sometimes spreads to the valves of the heart.

A well-known medical man from Constantinople reported three cases in which aortic heart lesions developed, without his being able to find any of the ordinary causes of heart lesions in the patient's history. All three of his patients were very heavy smokers. Two of them continually smoked cigarettes. Dr. Kid considered that he was justified in assuming, then, that the heart lesions in these cases were due to the excessive use of tobacco. Three French doctors reported similar cases. I was so much struck by this unexpected condemnation of what is usually considered the harmless, necessary weed, that I asked several prominent French clinicians, who had not been present at the session, what their opinion in the matter was. I was assured that the idea that tobacco did have an injurious influence on the circulatory apparatus, and sometimes even produced arterio-sclerotic conditions, which affected the aortic valves, was shared by a great many medical men in France. I was told, also, that in recent years the habit of smoking had become very much less frequent among French physicians.

HEART DISEASE AND HEREDITY.

A number of cases of heart disease were reported, in which corresponding lesions existed in successive generations in the same family. This was not regarded as a sign of direct heredity. · There are very few physicians who believe that acquired characteristics may be transmitted to the next generation. The frequency, however, with which heart lesions of the same type occur in successive generations of certain families, shows that there may be an hereditary diminution of vital resistance in this important organ, that leaves it more liable to be affected by any infectious agency that may chance to find its way into the circulation. Where heart disease has been known to exist for several generations in a family, it is important then that children should be protected, as far as possible, from even the minor infectious diseases. So mild an infection as mumps has been known to cause a serious heart lesion in such susceptible individuals.

UNITY OF ACTION IN THE STATE ASSOCIATION

BY PARKER SYMS, M.D.,
President of the New York County Medical Association,
New York.

DURING the last year the New York State Medical Association passed through the most trying period of its history; but it is with great pride that its members can congratulate themselves on the fact that it has gone through this period with entire success, and is to-day more prosperous and more potent than it ever was before. When the reorganization of the association was contemplated, which should put it on its present basis, there were many skeptical or overcautious friends who feared that this change would result in disaster. Probably none doubted the desirability of the changes made, but some certainly feared that these changes would be difficult, if not impossible, to make.

The New York State Medical Association, as at present organized, is without doubt the best form of a medical fraternity that has ever been conceived. Its plan of government is most fair and democratic, rendering it impossible for control to become vested in the hands of a few, and insuring complete rule by the majority. It most clearly resembles the grandest government of the world, that of our United States, being comprised

of a confederation of all the county associations of New York State, so arranged that each member of every county association is thereby a member of the State Association; and so it is with the members of the district branch associations from counties in which there are no local associations. The State Association has no members at large. This method of making up membership of the State Association is most wise, for it insures the fact that men should be elected to membership by their confrères who best know them, for they must first be elected to membership in their county association. The fact that the county associations make and enforce their own by-laws (which must be in conformity with the charter and by-laws of the State Association) secures for the local organizations the fullest possible amount of home rule. Each member has his individual vote and voice in the affairs of the organization. Of course, he has the usual vote and voice in the affairs of his local association, and the local associations are entitled to elect a Fellow for each ten of their members. These Fellows, together with the Council, form the governing body of the State Association. Certainly this insures the best possible form of representation, and can only result in rule by the majority. This is an association that never can be controlled by a clique as long as its members exercise their privileges and take an active part in its affairs.

The fact that the New York State Association is a legally incorporated and chartered body gives it an important status; it is capable of suing and being sued, and it thus becomes the legal representative of the medical profession, and thereby the legal and logical guardian of the public in affairs medical. The fact that the New York State Medical Association is the legal representative and the only affiliated branch of the American Medical Association in this State gives it a national status and importance.

The new powers and position which the incorporation and reorganization have given to the State Association have also put upon it new responsibilities; its powers have been greatly increased and its scope of usefulness greatly enlarged. As a result, much has been added to the duty which the Association owes to itself, to its members, and to the public. Let us consider what its duties are: First, the advancement and promotion of the science of medicine; second, the protection and fostering of public health; third, the guiding and the aiding of legislators in the enactment of medical laws; fourth, the protection of the public, by prosecuting and enforcing medical laws; fifth, the promotion of unity and friendly intercourse among the members of the association; sixth, the advancement and protection of the mutual interests of its members.

No profession has given to the world so much in the way of personal sacrifice and public benefit as has that of medicine. In the great march of progress, which has been a characteristic of the nineteenth century, the science of medicine has been one of the leaders. The wonderful discoveries in physiology, histology, pathology, biology, etiology and the nature of disease, in surgery and in therapeutics, are second to none that have been made in any other branch of science. These discoveries have been the result of the most arduous labor, of the keenest intelligence, and of untold personal sacrifice, and they have placed the science of medicine in the foremost ranks, but the medical profession does not, to-day, occupy the position of dignity and importance before the public which it should. There are two reasons for this: One, that medical matters are an entire mystery to the majority of laymen; that, to the public, medicine is less comprehensible than any other science, and, concerning it, people are more ignorant than they are concerning any other branch of knowledge. The other reason is that medical men have lacked unity of purpose and of action. They are self-sacrificing rather than self-seeking; they have held aloof from public life, and they have allowed their zeal for scientific and charitable work to subordinate commercial prudence and business principles, but the greatest lack of all on the part of medical men has been their lack of unison and union. It is too often the case when members of the medical profession appear before the public that they are divided among themselves, with apparently no order of thought and no single-mindedness of purpose. This is a great misfortune for the public, much more so than for the doctors, for in nearly all these instances the latter are acting, or trying to act, not in their own interests, but in that of the community at large, and their efforts, however strenuous, lacking in unity, instead of being an aid and a guide to those whom they hope to advise and influence, become only a means of confusion. If the medical profession of this State were represented at Albany by a delegation as a united whole it would render the greatest aid to the legislators and service to the public. All difference of opinion should be discussed in our medical associations, definitely and finally, and no such discussions should take place before a legislative body or an uninformed public. Imagine the New York Bar Association sending one committee or delegation to Albany to forward certain legislation and another delegation to oppose it! What the medical profession needs is such a dignified and powerful organization as the lawyers have in the same Bar Association. Such an organization is possible by properly increased membership in the New York State Medical Association. Each county and each district branch association has its committees on public health and charities, on legislation, and on ethics and discipline, working in unison with the corresponding committees of the State Association, to which the former are subordinate. As time goes on, their work in their own respective departments will be found to be more potent than any

such work heretofore, and in time the public will be brought to realize this on account of benefits accruing.

It is the duty of every member of the State Association to realize that he must work for its interests, and not leave it to be done by the officers and a chosen few, who devote themselves to its affairs. In every county there should be active meetings, promoting and advancing the science of medicine among the members, promoting, as they will, a spirit of fraternity and union, which always results when men are brought harmoniously together; and the members of each county association should, and must, take an active interest in the public medical affairs of the day. They must appoint to their standing committees such men as are best qualified to serve upon them, and who will be active in their work therein. Each member of the State Association must remember that he has a full and equal voice in all of its affairs, and that the association can only continue its healthy growth by having its members active and interested.

CHARTER OF THE NEW YORK STATE MEDICAL ASSOCIATION.

(Granted April 14, 1900.)

AN ACT

to charter The New York State Medical Association for the purpose of the cultivation and advancement of the science of medicine, the promotion of public health, and the establishment of a death-benefit fund for the dependents of its members.

(Chapter 452 of the Laws of 1900.)

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Organization.

SECTION 1. There shall be established by the physicians and surgeons named in Section 6 of this Act, an organization styled The New York State Medical Association, in one corporate body, for the purpose of the cultivation and advancement of the science of medicine, the promotion of public health, the establishment of a death-benefit fund for the dependents of its members, the maintenance of the honor and character of the medical profession and the establishment and furtherance of cordial professional relations and fellowship between the medical profession of the State of New York and the medical profession of other States of the United States and of foreign countries, through the medical associations and societies of such States and countries.

Legal Rights.

SEC. 2. The New York State Medical Association may and shall have perpetual succession, shall be capable of suing and being sued, of pleading and being impleaded, answering and being answered unto, defending and being defended, in all courts and in all causes whatsoever, and shall and may have a common seal which may be altered or renewed at the pleasure of the said Association.

SEC. 3. The New York State Medical Association may purchase, receive, hold and convey personal or real property and receive bequests and devises of personal or real property by will for an amount not exceeding one hundred thousand dollars.

Death-Benefit Fund.

SEC. 4. The New York State Medical Association, reconstituted by virtue of this Act, may, in its discretion, establish for its members a death-benefit fund, and may include in its by-laws an article governing the establishment and distribution of the said death-benefit fund, and may form district branches and subordinate county associations in the State of New York.

Governing Body.

SEC. 5. The superintendence and management of The New York State Medical Association, reconstituted by virtue of this Act, shall be vested in a body known and styled the Council and Fellows of The New York State Medical Association, which body shall have power to make and prescribe by-laws that shall govern its officers, Council, Fellows and members; to establish the conditions of admission, dismission and expulsion of its members; to determine the amount of the annual dues and also to impose assessments from time to time on its members; to collect such dues and assessments by suit or otherwise; and to receive, hold, invest, or otherwise dispose of all moneys or other properties belonging to the said The New York State Medical Association, and in general to make such by-laws, rules and regulations for the proper government of the Association and of its branches and subordinate county associations as are not repugnant to the laws of the United States or of the State of New York.

Charter Members.

SEC. 6. The charter members of The New York State Medical Association, reconstituted by virtue of this Act, shall be the following-named physicians and surgeons residing in the State of New York: D. Ayres, J. C. Bierwirth, L. J. Brooks, J. D. Bryant, H. D. Didama, C. E. Denison, E. D. Ferguson, J. M. Farrington, C. E. Fritts, C. H. Glidden, G. W. Goler, J. W. S. Gouley, E. E. Harris, N. H. Henry, J. G. Hunt, F. W. Higgins, W. E. Johnson, E. M. Lyon, E. M. Moore, D. C. Moriarta, M. C. O'Brien, De Lancey Rochester, B. T. Smelzer, E. H. Squibb, W. H. Thornton, M. W. Townsend, T. A. Wales, F. H. Wiggin, and their associates, consisting of all members in good standing in The New York State Medical Association founded in eighteen hundred and eighty-four and reconstituted by virtue of this Act.

Primary Organization.

SEC. 7. The Council of The New York State Medical Association founded in eighteen hundred and eighty-four shall select the officers, Council, Committees, and Fellows of The New York State Medical Association, reconstituted by virtue of this Act, from its charter members, who shall serve until the close of the annual meeting to be held in the Borough of Manhattan, in the City and County of New York, in the month of October, nineteen hundred. All subsequent annual meetings shall be held in the City of New York.

Qualifications of Members.

SEC. 8. No physician or surgeon shall be qualified as a member of The New York State Medical Association until he hall have signed its by-laws and paid his first annual dues.

Assessments and Dues.

SEC. 9. The several District Branch and subordinate County Associations shall pay to the Treasurer of The New York State Medical Association all such dues and assessments as from time to time shall be laid by the Council and Fellows of The New York State Medical Association.

SEC. 10. This act shall take effect immediately.

BY-LAWS.

(Adopted October, 1900.)

ARTICLE I.

ORGANIZATION.

Composition.

SECTION 1. The New York State Medical Association shall be composed of resident, non-resident, corresponding, and honorary members.

Organization.

SEC. 2. The resident members shall constitute the active membership, and shall be organized into five (5) district branches and sixty-one (61) county associations.

Council.

SEC. 3. The Council shall consist of the officers of the Association.

Fellows.

SEC. 4. The Fellows shall be members specially chosen by the several county associations, to the number of one for every ten of their membership, to hold office for one year from the date of their election.

Officers.

SEC. 5. The officers shall be a President, a Vice-President, five (5) Vice-Presidents *ex-officiis*, a Secretary, a Treasurer and the Chairmen of the Standing Committees.

Committees.

SEC. 6. There shall be six (6) Standing Committees —namely, a Committee on Arrangements, a Committee on Legislation, a Committee on the Library, a Committee on Public Health and Medical Charities, a Committee on Nominations, and a Committee on Publication.

Term of Office.

SEC. 7. All officers, Fellows and members of Standing Committees shall hold office for one year from the date of their election or appointment or until their successors have qualified.

ARTICLE II.

DUTIES OF THE COUNCIL.

Executive Board.

SECTION 1. The Council shall be the Executive Board of the New York State Medical Association.

Meetings.

SEC. 2. The Council shall meet annually in the City of New York, on the third Monday in October, and immediately after the adjournment of each annual meeting of the Association, and at such other times and places as the President may direct; and the President shall call special meetings at the written request of five (5) members.

Quorum.

SEC. 3. Seven (7) members shall constitute a quorum.

Delegates.

SEC. 4. The Council shall appoint all Delegates to the societies of other States, and of foreign countries.

Attorney.

SEC. 5. It shall be the duty of the Council, when necessary, to employ an attorney or counsellor at law who shall appear in all legal matters for and on behalf of the New York State Medical Association.

Defense and Prosecution.

SEC. 6. Whenever it shall seem that it would probably be wise to institute associated defense in suits for malpractice, the Council and Fellows shall formulate a plan therefor and submit it at an annual meeting of the Association, said plan, on adoption by the Association, to form and become a part of these by-laws; but notice of such plan must be given in the programme of the meeting at which it is to be considered. The Council shall have authority to take action in all matters in violation of the laws of medical practice and of public health, and may prosecute such alleged violators.

Board of Appeals.

SEC. 7. All appeals from decisions of District Branch Associations on questions of ethics and discipline shall be referred to and be adjudicated by the Council.

Death-Benefit Fund.

SEC. 8. It shall be the duty of the Council and Fellows to formulate a plan for a death-benefit fund when conditions seem favorable for action thereon and to submit the plan to an annual session of the Association.

Report.

SEC. 9. The Council, through its Secretary, shall present at the annual meeting of the Council and Fellows an annual report which shall include a statement of the investments, the condition of the funds of the Association, the disbursements for the current year and a record of all changes in membership.

ARTICLE III.

DUTIES OF THE COUNCIL AND FELLOWS.

Meetings.

SECTION 1. There shall be an annual meeting of the Council and Fellows in the City of New York, on the third Monday in October, following the meeting of the Council; and special meetings at such other times and places as may be determined by the Council and Fellows.

Quorum.

SEC. 2. Thirty-five (35) members shall constitute a quorum.

Rules of Procedure.

SEC. 3. All questions of order shall be determined in accordance with the rules of order and procedure laid down in Cushing's "Manual of Parliamentary Practices."

Order of Business.

SEC. 4. The order of business at the annual meeting of the Council and Fellows shall be as follows:

1. Calling the meeting to order.
2. Roll-call by the Secretary.
3. President's report on the needs of the Association.
4. Annual report of the Council.
5. Report of the Treasurer.
6. Reports of Standing Committees.
7. Reports of Special Committees.
8. Unfinished business.
9. New business.
10. Report of Nominating Committee.
11. Election of officers.
12. Reading of the minutes of the meeting and action thereon.

ARTICLE IV.

DUTIES OF OFFICERS.

President.

SECTION 1. The President shall preside at all meetings of the Council and of the Council and Fellows and of the Association. He shall appoint all committees or members of committees not otherwise provided for. At the annual meeting of the Council and Fellows he shall report the condition and needs of the Association, and shall deliver before the Association at its annual

meeting an address upon some scientific subject at such time as may be determined by the Committee on Arrangements.

Vice-President.

SEC. 2. The Vice-President, at the request or in the absence of the President, shall temporarily perform the duties of President. In case of resignation, disability or death of the President, the Vice-President shall act as President until the next annual election of officers.

Vice-Presidents Ex-officiis.

SEC. 3. In the absence or disability of the Vice-President, the Vice-Presidents *ex-officiis* shall take office in the numerical order of their district branch associations.

Secretary.

SEC. 4. The Secretary shall make and preserve accurate minutes of the meetings of the Council and Fellows, and of the general and special meetings of the Association. He shall conduct the official correspondence of the Association, shall preserve all such correspondence, including copies of official letters written by him. The Secretary may nominate to the Council, for its action, an Assistant Secretary who shall be a stenographer and shall be under his direction and perform such secretarial and recording duties as may be prescribed by the Secretary. The Council shall decide upon the compensation of the Assistant Secretary, who may be required to be present at the meetings of the Council.

Treasurer.

SEC. 5. The Treasurer shall receive and disburse all funds of the Association under the direction of the Council and Fellows. He shall make an annual report to the Council and Fellows on the finances of the Association and on the names of delinquent members. He shall collect the dues of non-resident members.

Bond.

SEC. 6. The Treasurer shall be under bond to an amount fixed by the Council and Fellows.

ARTICLE V.

COMPOSITION AND DUTIES OF COMMITTEES.

Chairmen.

SECTION 1. The Chairmen of all Standing Committees shall be elective officers, and the other members, with the exception of the Committee on Nominations, shall be appointed by the Council.

SEC. 2. The Chairmen of Standing Committees shall make full reports at the annual meeting of the Council and Fellows of the work done by their respective committees during the year.

Meetings.

SEC. 3. Each committee shall hold at least one meeting annually, at which a majority of its members shall constitute a quorum, and shall make and preserve accurate minutes of all its proceedings.

Committee on Arrangements.

SEC. 4. The Committee on Arrangements shall consist of thirteen (13) members, including the Chairman and the President, Vice-President and Secretary, who shall be members *ex-officiis.*

SEC. 5. It shall be the duty of this committee to take entire charge of and to make all necessary arrangements for each annual meeting of the Association.

Committee on Legislation.

SEC. 6. The Committee on Legislation shall consist of five (5) members exclusive of the Chairman, one from each of the District Branches. It shall be the duty of this committee to inform itself of all proposed legislation in the Legislature of the State bearing on medical subjects, and to organize and carry into effect, subject to the approval of the Council, such plans intended to influence legislative enactment as it may deem for the best interests of the public.

Committee on the Library.

SEC. 7. The Committee on the Library shall consist of three (3) members including the Chairman, who shall be designated as the "Director of the Library." This committee shall have charge of the Library and of the contained property. The Chairman of this committee may appoint, as required, a Librarian, subject to the approval of the Council, at such salary as may be determined by the Council and Fellows.

Committee on Public Health and Medical Charities.

SEC. 8. The Committee on Public Health and Medical Charites shall consist of five (5) members exclusive of the Chairman, one from each District Branch. This committee shall be charged with the duty of investigating all matters relating to public health and of presenting to the Council and Fellows suggestions as to action to be taken by the Council in these matters.

Committee on Nominations.

SEC. 9. The Committee on Nominations shall consist of a Chairman and two (2) Fellows elected by each District Branch. It shall be the duty of this committee to present nominees for all elective offices at the annual meeting of the Council and Fellows until such offices shall be filled, and to present, as occasion requires, nominees for appointment by the President, to serve for the unexpired term for any office made vacant by resignation or death.

Committee on Publication.

SEC. 10. The Committee on Publication shall consist of a Chairman and four (4) members to be appointed by the Council. This committee shall have full charge of all publications of the Association, with power to determine what papers shall appear in the printed *Transactions* of the Association. No paper that has appeared in print or that has been read before any medical society previous to its presentation before the Association shall be published in the *Transactions.*

ARTICLE VI.

MEETINGS OF THE ASSOCIATION.

Annual.

SECTION 1. The Association shall hold an annual meeting in the City of New York, beginning on the Tuesday following the third Monday of October, and special meetings at such times and places as may be determined by the Council and Fellows.

Special.

SEC. 2. Special meetings shall be called by the President on the written request of twenty-five (25) Fellows.

Order of Business.

SEC. 3. The order of business at the annual meeting of the Association shall be as follows:

1. Calling the Association to order.
2. Address of welcome by the Chairman of the Committee of Arrangements.
3. Special reports from the Council and Fellows.
4. Reports of Special Committees.
5. Special addresses.
6. President's address.
7. Reading and discussion of papers.
8. Installation of officers.
9. Adjournment.

ARTICLE VII.

DISTRICT BRANCHES.

SECTION 1. The sixty-one (61) counties of the State shall be grouped in five (5) districts, to be constituted and designated as follows:

Territorial Divisions.

The First or Northern District shall embrace the counties of Franklin, Fulton, Hamilton, Herkimer, Jefferson, Lewis, Montgomery, Oneida, Oswego and St. Lawrence.

The Second or Eastern District shall embrace the counties of Albany, Clinton, Columbia, Essex, Greene, Rensselaer, Saratoga, Schenectady, Schoharie, Warren and Washington.

The Third or Central District shall embrace the counties of Broome, Cayuga, Chemung, Chenango, Cortland, Delaware, Madison, Onondaga, Otsego, Schuyler, Seneca, Tioga and Tompkins.

The Fourth or Western District shall embrace the counties of Allegheny, Cattaraugus, Chautauqua, Erie, Genesee, Livingston, Monroe, Niagara, Ontario, Orleans, Steuben, Wayne, Wyoming and Yates.

The Fifth or Southern District shall embrace the counties of Dutchess, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Sullivan, Ulster and Westchester.

Organization.

Sec. 2. In each of these districts there shall be organized a District Branch Association of the New York State Medical Association, to be composed of the several County Associations and members residing in counties temporarily having no County Association.

Officers.

Sec. 3. The officers of each District Branch Association shall be a President, who shall be *ex-officio* a Vice-President of the State Association.

Committees.

Sec. 4. There shall be an Executive Committee in each District Branch Association composed of its officers and of the several Presidents of the component County Associations, and a Nominating Committee, composed of one member chosen from each of the component County Associations.

Duties of Officers.

President.

Sec. 5. The duties of the President and Vice-President shall be such as commonly pertain to those offices, and the President shall be required to make himself familiar with the character and quantity of work performed by the County Associations in his jurisdiction, and to report on their condition at the annual meeting of the District Branch Association.

Secretary.

Sec. 6. The Secretary shall perform the usual duties pertaining to that office and shall present an annual report of the proceedings of the District Branch Association, and shall give therein the names of Fellows and their Alternates and the members of the Nominating Committee of the State Association for his District Branch Association.

Treasurer.

Sec. 7. The Treasurer shall receive and disburse the funds of the Association (as hereinafter prescribed) under the laws regulating the distribution of fees and dues.

Duties of Committees.

Sec. 8. The Executive Committee shall be charged with the general management of the affairs of the District Branch Association, and shall hold at least one meeting annually, at which five (5) members shall constitute a quorum.

Sec. 9. The Nominating Committee shall present at the annual meeting a list of nominees for the several elective offices.

Annual Meeting.

Sec. 10. Each District Branch Association shall hold an annual meeting during the month of May, June or July, at which shall be chosen by ballot two Fellows to serve as members of the Committee on Nominations of the State Association.

By-Laws.

Sec. 11. Each District Branch Association shall make its own by-laws in conformity with the charter and by-laws of the New York State Medical Association, and subject to the approval of the Council.

ARTICLE VIII.

COUNTY MEDICAL ASSOCIATIONS.

Charter Associations.

Section 1. All such County Medical Associations as shall have accepted the invitation of the New York State Medical Association to become its subordinate associations at the time these by-laws are ratified by the Council and Fellows of the State Association shall thereafter be the County Medical Associations contemplated in the charter for their respective counties.

Formation.

Sec. 2. When the members of any District Branch Association, residing in any county, are ten in number, they shall forthwith organize as the County Association of the New York State Medical Association for that county.

Officers.

Sec. 3. The officers of each County Association shall be a President, Vice-President, Secretary, and Treasurer, and any Association may have a Second Vice-President and a Corresponding Secretary.

Committees on Legislation, Public Health and Medical Charities.

Sec. 4. All Committees on Legislation or Public Health and Medical Charities of County Associations shall be associate committees of the corresponding committee of the New York State Medical Association.

Secretary.

Sec. 5. The Secretary of each County Association shall make an annual report to the Secretary of his District Branch Association, which shall contain the names of the Fellows and their Alternates and the member of the Nominating Committee of such Branch Association for his County Association.

Treasurer.

Sec. 6. The Treasurer shall receive and disburse the funds of the Association as hereinafter prescribed under the laws regulating the distribution of fees and dues.

Annual Meeting.

Sec. 7. Each County Association shall hold an annual meeting during the month of January, February, March or April, at which shall be chosen Fellows of the State Association to the number of one for every ten of the County Association membership, a corresponding number of Alternates, and one member of the Nominating Committee of the District Branch Association.

By-Laws.

Sec. 8. Each County Association shall make its own by-laws, which shall be in conformity with the charter and by-laws of the New York State Medical Association and subject to the approval of the Council.

ARTICLE IX.

MEMBERSHIP.

Eligibility.

Section 1. Physicians in good standing and resident in the State of New York shall be eligible for active resident membership in the New York State Medical

Association. Physicians in good standing, resident in other States, shall be eligible for non-resident membership. Physicians of eminence residing in other States shall be eligible for corresponding membership, and in other countries, for honorary membership.

Application and Election.

SEC. 2. Application for resident active membership shall be made in a prescribed form to the County Association in the county in which the applicant resides, or, when no such County Association exists, to the District Branch Association. The Council may elect members at the annual session when the application is approved by three (3) members of the Executive Committee of his District Branch Association, provided there is no County Association in the county in which the applicant resides.

Non-Resident, Corresponding, and Honorary Members.

SEC. 3. Upon nomination by two Fellows, non-resident members may be appointed by the Council after six months' notification. Corresponding and honorary members, not to exceed two each during any one year, may be appointed by the Council at its annual meeting after the nomination by three Fellows in writing at the preceding annual meeting.

Privileges of Members.

SEC. 4. Resident members shall have all the rights and privileges conferred by their respective County Associations and District Branch Associations. They shall be eligible to any office in the gift of the Association; shall be entitled to attend all meetings of the Council and Fellows, and shall receive all the protection, benefits and support conferred by the Association.

SEC. 5. Non-resident, honorary and corresponding members shall be privileged only to take part in the scientific meetings, programs of which shall be sent to them, and they shall receive the *Transactions* of the Association.

Removal.

SEC. 6. When a member in good standing of a County Association removes to another county his name shall be transferred to the roll of members of the Association in the county of his new residence.

SEC. 7. When a member removes from the State of New York permanently he shall cease to be a member of the New York State Medical Association, and shall forfeit all right and title to any share in the privileges and property of the Association. If he shall send a written notice of his removal to the Secretary of his County Association (or District Branch Association) within thirty (30) days of such removal he may make application to the Council for non-resident membership.

Resignation of Members.

SEC. 8. When a member shall resign his membership he shall thereby forfeit all right and title to any share in the privileges and property of the New York State Medical Association or its subordinate divisions.

SEC. 9. No member shall be permitted to resign while owing dues or assessments or while he is under charges which may lead to his expulsion.

Expulsion of Members.

SEC. 10. When a member is expelled he shall thereby be deprived of all right and title to any share in the privileges and property of the New York State Medical Association.

Reinstatement of Members.

SEC. 11. When a former member applies for reinstatement he may be admitted to membership, provided that, if expelled for non-payment of dues, he makes good his indebtedness before he makes application for reinstatement.

ARTICLE X.

INITIATION FEES AND DUES.

Initiation Fees.

SECTION 1. On and after January 1, 1901, the initiation fee shall be five (5) dollars.

Dues.

SEC. 2. The annual dues of resident members of the State Association and of non-resident members shall be five (5) dollars. Corresponding and honorary members shall be exempt from the payment of initiation fees or dues.

Fines.

SEC. 3. All dues shall be payable on the first day of January of each year to the Treasurer of the County Association or of the District Branch Association when no County Association exists. If a member's dues remaiin unpaid three months he sall be fined one (1) dollar.

Collection of Dues.

SEC. 4. If, six months after the expiration of the time specified in Section 3, Article X., for the payment of dues, the dues, assessments and fines still remain unpaid without satisfactory excuse, the delinquent shall be dropped from the list of members of the State and subordinate Associations.

SEC. 5. On every bill for dues or assessments sent to members the Treasurer shall cause to be printed Sections 2, 3 and 4 of this Article.

Distribution of Dues.

SEC. 6. On or before the first day of October in each year the Treasurer of each County Association or District Branch Association shall pay to the Treasurer of the State Association the sum of five (5) dollars for each and every member who has paid his dues for that year, together with the fines and assessments due and paid.

ARTICLE XI.

ETHICS AND DISCIPLINE.

Ethics.

SECTION 1. The Code of Ethics of the American Medical Association shall be the Code of Ethics of the New York State Medical Association and of its subordinate divisions, and shall form an integral part of the by-laws.

Discipline.

SEC. 2. The adjudication of all questions of ethics and the administration of discipline shall be vested in the County Associations and District Branch Associations, but any member under sentence of expulsion for any cause other than non-payment of dues shall have the right to appeal to the Council.

ARTICLE XII.

DELEGATES.

Appointment.

SECTION 1. The Fellows and their Alternates shall be respectively the Delegates and Alternates of the New York State Medical Association to the American Medical Association and credentials shall be furnished by the Secretary to said Delegates and their Alternates, signed by the President and Secretary of the New York State Medical Association. In case a Delegate and his Alternate cannot serve, the President of the New York State Medical Association may fill the vacancy thus created in the list of delegates to the American Medical Association.

Reception of Delegates.

SEC. 2. At any annual meeting of the New York State Medical Association, duly authenticated delegates from societies of other States or from foreign societies

shall be received, and such delegates may be invited to read papers and participate in the scientific proceedings of such annual meeting.

Guests.

SEC. 3. Invited guests, members of the medical and other professions, may be accorded the same privileges as delegates from other States and foreign medical societies.

ARTICLE XIII.

SEALS.

District Branch Associations.

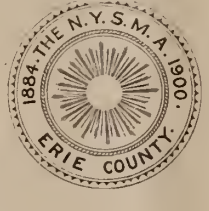
SECTION 1. The Seal of the New York State Medical Association shall be of the same size and design as that of the New York State Medical Association founded in 1884, but the marginal inscription shall be in the upper segment, The New York State Medical Association, and in the lower segment, 1884-1900.

District Branch Associations.

SEC. 2. The seal of each District Branch Association shall be identical in size and design with the Seal of the State Association, but the marginal inscription shall be, in the upper segment, 1884—The N. Y. S. M. A.—1900, and, in the lower segment, the number of the District Branch.

County Associations.

SEC. 3. The seal of all County Associations shall be identical in size and design with that of the State Association, but the marginal inscription shall be, in the upper segment, 1884—The N. Y. S. M. A.—1900, and, in the lower segment, the name of the county.



ARTICLE XIV.

TRANSFER OF PROPERTY.

Transfer of Property.

SECTION 1. At the expiration of his term of service, each and every officer of the New York State Medical Association and of its District Branch Associations and County Associations shall transfer to the new incumbent such of the Association's property as may be in his charge, and the new incumbent shall give him a receipt therefor in which the nature of the property shall be specified.

ARTICLE XV.

AMENDMENTS

Amendments.

SECTION 1. Amendments to these by-laws may be made by a three-fourths affirmative vote of the Council and Fellows present and voting at any regular meeting; provided that notice of such amendments shall have been presented in writing at the previous annual meeting.

Suspension of By-Laws.

SEC. 2. Any article or any section of any article of these by-laws, except Section 1 of this Article, by unanimous vote, may be suspended at any session of any meeting of the Council and Fellows during such session only.

CHINESE DOCTORS.

It must be conceded that many of the Chinese doctors have gained a good deal of practical knowledge. They are experts at taking the pulse, and feeling the pulse constitutes the chief examination to which a patient is subjected, and a solemn occasion it is, both for the patient and the doctor. Imagine the patient seated on one side of a small table and the doctor on the other side. On the table is put a small, round pillow, or a book, upon which the patient rests his hand. The doctor takes hold of the patient's left hand, placing the first three fingers of his right hand over the radial pulse. With the finger nearest to the patient's thumb he feels the condition of the heart, with the next finger he feels the condition of the liver, and with the third finger he feels the condition of the kidneys. Meanwhile everything in the room is solemnly quiet. Taking the right hand in the same manner, he feels, respectively, the condition of the stomach, spleen and lungs. After a few questions, he makes his diagnosis, and writes a "divine prescription." Receiving the "golden thanks" he departs, not to return till he is called. The prescription is taken to the drug store, and filled in much the same way as here.—*Northwestern Lancet.*

NEURALGIA.

℞ Menthol ..... gr. xxiiss
Cocaini muriat ..... gr. viiss
Chloral hydrat. ..... gr. ivss
Vaselini 3iiss
M. Sig.: Apply to the painful part and cover with court plaster.

GONORRHEA.

℞ Plumbi acetatis ..... ℥ ss.
Zinci sulphatis ..... gr. xvj.
Ext. krameriæ ..... ℥ ij.
Tinct. opii ..... ℥ ss.
Aq. dest., q. s. ad ..... ℥ vj.
M. Sig. Use as an injection, two or three times a day.

The New York State Journal of Medicine.

Published Monthly by The New York State Medical Association.

THE NEW YORK STATE JOURNAL OF MEDICINE is published on the first day of each month by The New York State Medical Association. It supersedes the annual volume of *Transactions* formerly issued by the Association. It aims to be a direct medium of communication between the members of the Association, and to widely disseminate Association news. Scientific Articles, Clinical Memoranda, and News Items of interest are solicited for publication. Communications should be typewritten. Reprints of Original Articles will be furnished at cost price, provided a request therefor accompanies the manuscript. Price-list on application. The Committee on Publication does not hold itself responsible for individual views of correspondents.

Every member of The New York State Medical Association in good standing receives the JOURNAL monthly and the Medical Directory of New York, New Jersey, and Connecticut, issued annually, free of expense other than the payment of the annual dues of the Association.

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EDITORIAL OFFICE, 64 MADISON AVENUE, NEW YORK, N. Y.

VOL. I. JUNE, 1901. NO. 6.

GROWTH OF THE ASSOCIATION AND MAY NUMBER OF THE JOURNAL.—Letters have been received from physicians residing in various counties of the State in which there are at present no local branches of the State Association commenting favorably on the JOURNAL and requesting information as to how to form such associations. In connection with this subject, the following extract from one of the letters received may be of interest:

"I received a copy of the NEW YORK STATE JOURNAL OF MEDICINE which gave a history of the New York State Medical Association, together with the new constitution and by-laws of the association. It impresses me very favorably as being a good thing. If it goes on with the plan given it will without doubt be a leading spirit in the profession. With such a journal one can keep in touch with the association and the latest news, at the same time thereby creating a better fraternal spirit."

Another result of the May issue of the JOURNAL has been the formation during May of the Broome and Herkimer County Associations.

* * *.

BROOME COUNTY MEDICAL ASSOCIATION ORGANIZATION.—A meeting for the purpose of organizing the Broome County Medical Association was held at Binghamton, N. Y., May 17, 1901. The following were present: Drs. J. M. Farrington, C. W. Greene, W. H. Knapp, J. H. Martin, J. G. Orton, W. A. White, F. P. Hough, L. H. Quackenbush and Hooke. Dr. Farrington was elected chairman and Dr. White secretary of the meeting. Dr. F. H. Wiggin, of New York, delivered an address, explaining the organization of the county, State and national associations and their relations to each other. Dr. Orton reviewed the history of the association and highly commended its plan of organization and the organization of a local branch in Broome County. Dr. Wiggin then answered many questions with reference to the organization of the association and read extracts from the preliminary report of the American Medical Association, and from Dr. Hubbell's paper, published in the May number of the NEW YORK STATE JOURNAL OF MEDICINE, entitled, "The Reason for the Existence of the New York State Medical Association."

Dr. Farrington then read his correspondence with Dr. Wyeth, president of the State Association, showing how the present meeting came about. Dr. Knapp offered a motion that the meeting proceed to the election of officers. It was seconded by Dr. Hough, and carried. The following were elected: President, Dr. L. D. Farnham; vice-president, Dr. W. A. White; secretary, Dr. C. W. Greene; treasurer, Dr. W. H. Knapp. Dr. John G. Orton was elected a Fellow of the State Association and Dr. W. A. White alternate. Dr. Farrington was elected a member of the nominating committee of the Third District Branch Association. Dr. L. H. Quackenbush was elected to membership. The officers of the association were appointed a committee to prepare by-laws.

* * *

ELECTION TO MEMBERSHIP.—Dr. William O. Congdon, of Cuba, Allegheny County, has been recently elected to membership in the Fourth District Branch Association, and Drs. B. S. Moore and A. J. Campbell, of Syracuse, in the Third District Branch.

* * *

CERTIFICATES OF MEMBERSHIP.—Members of the State Association who have paid their dues for 1901 and have not as yet received one of the new certificates of membership will confer a favor by at once informing the secretary to that effect.

Orange County Medical Association, May Meeting.—The regular monthly meeting of the Orange County Association was held at the office of Dr. M. C. Conner, Middletown, N. Y., May 15, 1901. There was a large attendance of members and guests. The committee on by-laws, of which Dr. W. E. Douglas is chairman, was instructed to arrange for the printing and distribution of copies of the by-laws. After the transaction of routine business, a very interesting stereopticon exhibition of pathological conditions of the Fallopian tubes, by Dr. Philander A. Harris, of Paterson, N. J., was given. The illustrations of the various diseased conditions were very clearly depicted. By an ingenious system of squares the exact size of each specimen shown could be determined at a glance. The stereopticon and lighting apparatus were in charge of Mr. George Otis, manager of the Orange County Telephone Company. A discussion followed the exhibition, especial attention being paid to the diagnosis of ectopic gestation. A hearty vote of thanks was tendered to Dr. Harris for his demonstration. Dr. H. E. Wise, of Turner, was elected to membership. Drs. Purdy, Burke, Wise and Lent were present by invitation. The next meeting of the association will be held June 19, 1901.

* * *

Kings County Medical Association, May Meeting.—The regular monthly meeting of the Kings County Association was held Tuesday evening, May 14, 1901, the president, Dr. H. Arrowsmith, in the chair. About forty-five members and guests were present. The scientific session was opened by the reading of a paper by Dr. H. B. Bayles on "The Bacteriology of Typhoid Fever, with a Demonstration of the Widal Reaction," which was accompanied by ocular demonstration of cultures and examinations under the microscope. In the discussion which followed Drs. H. A. Higley and Victor A. Robertson emphasized the points brought out by the reader of the paper.

The second paper, on "Exercise as an Aid to Medicine," was read by Dr. Henry S. Pettit. He laid particular stress on the fact that too little attention is paid by the medical practitioner to this important factor, as he neglects to prescribe a definite form and amount of exercise. Dr. Burr B. Mosher discussed the subject in relation to exercise in orthopedic practice. The usual collation followed adjournment.

* * *

Scarlet Fever at Norwich, N. Y.—From a correspondent we learn that the published reports of the recent epidemic of scarlet fever at Norwich, N. Y., have been greatly exaggerated. About one hundred and fifty cases occurred in the township, the disease being of a very mild form. But three deaths have been reported, the victims being poorly nourished and neglected children. The epidemic was traced to a vender of milk, whose children were found milking the cows during the period of desquamation. All customers supplied with milk by this vender contracted the disease.

* * *

Medical Directory of New York, New Jersey and Connecticut.—The committee will be obliged to any physician, whether a member of the State Association or not, who has not yet sent his professional data for publication in the book for this year, if he will do so at once, directing his letter to the secretary. It is also requested that those noting errors in the book of last year will kindly inform the secretary of the fact, and also furnish the names of any newcomers in their locality, together with information regarding deaths, removals, etc. The large increase in the advance sales of the book over last year has been very gratifying, and indicates that the sales to non-members will be more than double those of the previous issue. It will be wise if those members having friends who desire copies of the book will advise them to send their orders in without delay, as the edition is limited.

* * *

Fifth District Branch Association, Annual Meeting.—The seventeenth annual meeting of the Fifth District Branch Association was held at Mott Memorial Hall, 64 Madison avenue, New York City, May 7, 1901. The vice-president, Dr. H. Van Hoevenberg, of Kingston, N. Y., presided in the absence of the president. The morning session was called to order at 11.45 o'clock. The secretary read the minutes of the previous meeting, which were approved as read. The report of the treasurer was accepted. The executive committee reported the election to membership of Dr. James L. Preston, of Kingston, Ulster County. The meeting then adjourned for lunch.

The afternoon session was called to order at 2 o'clock. The nominating committee on officers for the ensuing year presented the following report: For president, Dr. Emil Mayer, of New York; for vice-president, Dr. Mary Gage-Day, of Kingston; for secretary, Dr. Edmund L. Cocks, of New York; for treasurer, Dr. Edward H. Squibb, of Brooklyn. Dr. E. Eliot Harris, of New York, and Dr. William G. Russell, of Brooklyn, were nominated as members of the nominating committee of the State Association. The secretary was directed to cast a vote for the nominees, and they were declared duly elected.

The following papers were read and discussed during the scientific session: "Gynecology and the Country Doctor," by Dr. J. H. Burtenshaw, of New York; "The Technic of Abdominal Operations," by Dr. Parker Syms, of New York; and "Eosinophilia in Trichinosis," by Dr. Alexander Lambert, of New York. The minutes of the meeting were then read and approved and the meeting was declared adjourned.

* * *

New York County Medical Association, May Meeting.—The regular monthly meeting of the New York County Medical Association

was held at the Academy of Medicine, New York, on the evening of May 20, 1901, Dr. Parker Syms in the chair. Dr. F. Quinlan presented a specimen of cancer of the posterior wall of the larynx, involving the esophagus. Dr. Syms presented a specimen of a prostate removed by perineal section. Drs. Newman and Gouley discussed the relative value of abdominal and perineal section in the removal of the prostate.

Dr. J. Riddle Goffe read a paper on "The Vaginal Route Compared with the Abdominal in the Surgical Treatment of Pelvic Diseases of Women." Dr. W. R. Pryor discussed the views of Dr. Goffe, and did not favor the vaginal route for operation on cancer of the uterus. Dr. Brothers discussed the paper with Dr. Delphey. Dr. Henry Roth read a paper, entitled "Penetrating Gunshot Wound of the Abdomen Without Injury to the Abdominal Contents," which was discussed by Drs. Gouley and Gallant.

During the executive session, under the head of new business, three important motions were made, seconded and carried: (1) That a committee be appointed by the president to secure legislation for compulsory vaccination in the State of New York. Proposed by Dr. Loughran; (2) that a committee be appointed by the president in reference to the control of the milk supply of New York City. Proposed by Dr. Fischer; (3) that a committee on organization be appointed by the president to select one member from each district of New York City to canvass for members for the New York County Medical Association. Proposed by Dr. Goffe. The meeting then adjourned until the third Monday in October.

* * *

Herkimer County Medical Association.—The members of the First District Branch, residing in Herkimer County, met May 14, 1901, at the office of Dr. W. P. Earl, of Little Falls, and organized the Herkimer County Medical Association, electing the following officers: President, Dr. C. H. Glidden, of Little Falls; vice-president, Dr. S. S. Richards, of Frankfort; secretary and treasurer, Dr. E. H. Douglas, of Little Falls; Fellow, Dr. A. B. Santry, of Little Falls; alternate, Dr. W. D. Garlock, of Little Falls; member of nominating committee, Dr. M. G. Burgess, of Herkimer.

* * *

Memorial Address on the Late Samuel Smith Purple, M.D.*—Samuel Smith Purple was born on the 24th day of June, 1822, at Lebanon, Madison County, New York, and died on the 29th day of September, 1900, at his residence, 36 West Twenty-second street, in the city of New York. His life extended over a period of seventy-eight years, three months and five days, or the last three-fourths of the nineteenth century.

Dr. Purple's ancestry was English, both on the paternal and maternal side. Christopher Purple (1580-1605) came to America from the County of Essex, England, and from him descended the Purple families of Connecticut. Dr. Purple was the seventh in descent from Edward Purple, who settled in Haddam, Conn., in 1674. His maternal grandfather, Dr. James Sheffield, of Earlville, New York, was also of English descent.

Dr. Purple began his life under conditions which would of necessity tend to develop a strong and self-reliant character. His father, Lyman Smith Purple, and his mother, Minerva Sheffield, belonged to the class of adventurous pioneers who emigrated from New England to Central New York and converted a wilderness into habitable homes. His business was that of tanner and shoemaker, two trades that were very naturally united in one in the new settlements. To this trade the subject of our sketch was rigorously bred, with only such opportunity for an education as the public school afforded. Every one familiar with the common school of the rural districts at that period can appreciate the advantages which he had for laying the foundations of a successful professional career. The bare rudiments of the primary branches alone were taught and the methods of instruction were so imperfect that the student was practically left to himself. After the age of thirteen, young Purple only attended the school in the winter, and at sixteen his opportunities for an education ceased altogether, for he was compelled to devote himself wholly to the business of his father. It appears from some notes which he made of his boyhood that it was devoted to the usual sports of children of his age, hunting and fishing being his favorite employment, which led to the remark of the members of the family that "Sam would never be good for anything else." It is evident now that he was unconsciously making preparation, physically and mentally, for the terrible struggle which awaited him at the outset of his professional career.

The failure to secure a thorough education in his youth was a source of profound regret to him in his later life, and greatly embarrassed him in his subsequent work in the field of medical, historical and genealogical literature.

In 1836 the father removed from Lebanon to Earlville, Chenango County, New York, where he pursued the business of manufacturer and dealer in shoes, until his death, in 1839. With this last event new responsibilities developed upon Samuel, the eldest son. At the age of seventeen he had to assume the charge of the business and the support of the family, now in reduced circumstances. That the task was difficult is apparent from the fact that it required three years of unremitting application of all his energies to relieve the estate of debt and secure for his mother a very humble home in the village.

But his thoughts were not altogether confined to his business during this trying period, for we learn that he not only conceived the idea of studying medicine, but actually began reading such books as were accessible to him. He was probably

* Abstract. Delivered before the New York Academy of Medicine, May 16, 1901, by Stephen Smith, M.D., of New York.

prompted to undertake this study through contact with his grandfather, Dr. James Sheffield, and a relative, Dr. W. D. Purple, of a neighboring county. He obtained books from the village physician, Dr. David Ransom, and devoted every leisure moment to their study. His habit was to rise at four o'clock in the morning and to study until seven o'clock, when he went to his shop, and during the day studied while working on the bench with his book placed on a rack before him. He carried on his studies in this manner for a long period without the knowledge of his family, and it was only when he engaged in a discussion on a medical subject with his grandfather, Dr. Sheffield, and was rebuked by his mother for presuming to contradict the old gentleman, that he announced that he had been a student of medicine for a long period. She used to relate the circumstance of finding a skeleton in an old sofa in his room where he studied it unseen, and the horror its presence in the house created until she compelled its removal.

In 1842, at the age of twenty years, he had so far succeeded in his father's business that he prepared to attend a course of lectures in a medical college. Geneva Medical College then offered the best opportunities for a student in his financial straits. Dr. Ransom secured for him, through the Censors of the State Medical Society, a free course in that college. To acquire the necessary means of support during the term he worked on a farm for wages during the months of June, July, August, and September, and on the first of October went to Geneva, having only sufficient means for his support during the term by the exercise of the most rigid economy.

The value of this course of lectures to a student who had been thus far his own instructor consisted in its power to systematize his studies and teach him how to study. In this respect the term at Geneva was of great value to the student Purple, and was regarded by him as the beginning of his real course in medicine.

During the following summer he pursued his trade and continued his medical studies with greater zeal and with far greater success than previously. Through the agency of his relative, Dr. W. D. Purple, a member of the State Board of Censors of the State Medical Society he now secured a free course of lectures in the Medical Department of the University of the City of New York, which had an available beneficiary fund. In the autumn of 1843, with money sufficient to sustain him through the term, he came to New York and entered the University Medical College.

He graduated at the close of the term in March, 1844, and returned to his home in Earlville.

Preparing for his residence in this city young Purple found he "possessed a poor wardrobe and $25 in money." In order to save as much as possible of his scanty means he engaged as a laborer on a canal-boat part of the distance and arrived in the city in May, 1844, with $17.50 in hand with which to begin the "fight for life."

It would be well if we could detail all the pathetic incidents of the first five years of our friend's professional career, for only in that review can we estimate at its true value the innate force of his character; such a recital would also impart a lesson of the first importance to the graduate of to-day, for it would prove in a striking manner that in our profession, as in every department of business, the most successful men in the long run are those who in early life are trained in the school of bitter experience to practice all the arts of self-reliance and self-help. But we must forebear opening these pages of his life-history, for to him they were too sacred to be revealed even to his most intimate friends. In a few notes which he left he alludes to these early years, and thus puts his seal of disapproval upon any revelations of his experiences during that period. "The struggles and trials through which I passed during the first three or four years will ever remain a secret in my bosom. If it had not been for one or two warm friends I could not have succeeded in the task I had undertaken. It was not until five years had elapsed that I was enabled to pay my expenses and liquidate the obligations incurred up to that time."

The professional life of Dr. Purple was altogether uneventful. Naturally diffident and retiring he sought no position in the hospitals or medical schools of the city, but quietly devoted himself to his practice and bibliographical pursuits. He was elected a member of the Pathological Society in 1846 and was a constituent member of the Academy of Medicine, which he aided in organizing in 1847. He also took a deep interest in the organization and management of the Society for the Relief of the Widows and Orphans of Medical Men. An event of much importance to him occurred during these five years of struggle, for it initiated the work to which he subsequently devoted so much of his time and means. While attending lectures at Geneva he became slightly acquainted with Prof. Charles A. Lee, of New York, then Professor of Materia Medica in that college. In 1845 Dr. Lee became editor of the *New York Journal of Medicine* on the death of its founder, Dr. Samuel Forry, and as his duties connected with his professorships in country colleges required his absence from the city several months he sought the assistance of Dr. Purple. So well did the latter perform the duties of his responsible position that when Dr. Lee resigned the management of the *Journal*, in May, 1848, Dr. Purple was chosen by the publisher as his successor. He continued to manage the *Journal* until 1857, when he retired to devote himself more thoroughly to his practice and other pursuits.

Dr. Purple's contributions to medical literature were few in number, and were, for the most part, made during his connection with the *Journal*. His first paper appeared in the *New York Journal of Medicine* of March, 1846, and is entitled, "*Menstruation; Its True Nature and Office, with*

a Review of the Evidence of Its Vesicular Origin, with Illustrative Cases." The object of the author was to contribute the results of his studies and investigations through the aid of the Coroner's office, to the controversy then going on as to the function of menstruation and the diagnostic value of the *corpus luteum* as to the occurrence of conception. The facts which he contributed from his own studies of cases obtained from the Coroner are more convincing than those gathered from other sources. At the close of the paper he intimates that he has formed opinions in regard to the *corpus luteum* which he may make public. Accordingly, in the November number of the *Journal*, 1846, he published a very elaborate paper, entitled, *"Corpus Luteum; Its Value as Evidence of Conception and Its Relations to Legal Medicine, with the Characteristics of the True and False. Being an Attempt to Reconcile the Conflicting Opinions of Writers by the Recent Discoveries in the Physiology of the Ovaries."* The medical literature of that period contained many controversial articles on that subject by eminent writers at home and abroad, but none show a larger grasp of the subject, and few equal it in literary style and argumentative force.

The third paper of our author appeared in the *Journal* of July, 1850, and is entitled *"A Literary and Practical Sketch of Acanio, Brainless or Pseudencephalus Monsters."* The paper is illustrated by three well executed engravings of the head of a monster of this type met with in his practice. This paper was written in the same clear, classical style as the preceding papers, and shows the same evidences of extensive research of medical literature for illustrative facts.

In 1855 Dr. Purple issued a pamphlet, entitled *"Contributions to the Practice of Midwifery, Forensic Medicine, Physiology and Pathology, with Illustrations."* The several subjects treated are illustrated by cases occurring in his own practice, or to which he had been called in consultation by neighboring physicians. It was an original paper of merit, and at that time attracted considerable attention.

In 1855 appeared a paper in the *Journal*, entitled *"Statistics of Injuries of the Heart; Observations on Wounds of the Heart, and Their Relations to Forensic Medicine, with a Table of Forty-two Recorded Cases."* The occasion of his writing this paper was the death of a notorious pugilist by a pistol-shot wound of the heart, which he survived several days. Much doubt was entertained as to the implication of the heart in the wound owing to the survival of the patient for so long a period, but the autopsy proved that the ball penetrated the walls of the heart. The paper shows great care in its discussion of the questions then at issue, and the conclusions are fortified by a judicious use of the large number of cases collected. The influence of the paper upon surgical opinion was very great for it was received as authoritative.

In the same year he published in the *Journal* a description of *"A New Trephine, with Remarks upon Its Construction,"* and accompanied by an illustration.

The most important event in the professional life of Dr. Purple was his election to the presidency of the Academy of Medicine. This event occurred on the election of officers for the year 1875, a quarter of a century after his settlement. It was an honor which he greatly prized, and which he richly deserved. He was honored with an election to the presidency of the Academy a second time, and on January 18, 1877, delivered his inaugural address. He chose for his subject "Medical Libraries of New York," a theme which he was peculiarily qualified to discuss intelligently, and in it he narrates the discovery which he made of the little brochure by Dr. Samuel Bard, entitled, "An Inquiry Into the Nature and Cure of the Angina Suffocativa, or Sore Throat Distemper, As It Is Commonly Called by the Inhabitants of This City and Colony," printed in 1771. He states that he "rescued it from the press-box of a second-hand paper dealer, in this city, *in transitu* to the maw of a paper-mill." On examining this pamphlet he became satisfied that in his description of the epidemic of 1770, in this city, Dr. Bard had very accurately and graphically described the disease now known as diphtheria. He quotes at great length from the pamphlet to prove that the clinical features of the "Sore Throat Distemper" of 1770 in this city were identical with the modern diphtheria.

During Dr. Purple's presidency of four years the Academy made rapid progress, both in creating the great reference library that he so strenuously urged in his inaugural, but equally in securing a permanent home of its own. His contributions to both objects were of vital importance. To the library he gave that priceless treasure, *the serial medical literature of this country.* What that collection cost him of time, money, and patient toil no one can have the remotest conception. For more than a quarter of a century he ransacked every collection of old pamphlets accessible to him in this and other cities. Many were the occasions when he despaired of completing sets, but by correspondence with dealers in old books, with the older physicians, and by advertising in medical periodicals, offering at the same time suitable payment, he succeeded in completing full sets of all of the medical periodicals ever published in this country.

Dr. Purple's contribution to the building fund of the Academy marked an era in the struggle of its ways and means committee to secure the money necessary to the purchase of a permanent home. This contribution was made through him by the widow of the late Dr. Alexander E. Hosack, and amounted to the sum of $75,000.

Dr. Purple's personality was that of a quiet, reserved gentleman, fastidious in his dress, dignified, but affable in his manners, with a kindly, benevolent expression of countenance that indicated a genial, happy temperament and an aver-

sion for all forms of contention and controversy.

There will be few more occasions like this in the history of the Academy, for Dr. Purple was nearly the last surviving Founder. How can the memory of these pioneers best be perpetuated is a question which should receive the most considerate thought. Your committee on a memorial have been deeply impressed with the belief that testimonials of respect and gratitude for the beneficent work of departed Fellows should have a visible and tangible form, which may be seen and read by all men. To this end we have the satisfaction of presenting to the Academy two memorials of our late Fellow and former president.

The first memorial is a bronze tablet, placed at the entrance of the library in Woerrishofer Hall. It seemed to us a peculiarly fitting act on the part of the Academy to place this tablet at the entrance to and exit from the library, where the present and future student might for all time be informed to whom he is largely indebted for the inestimable privilege of being able to perfect his knowledge in every branch of the medical sciences at the very fountains of medical literature. The inscription on the tablet is as follows: "Samuel Smith Purple, M.D. Born June 24, 1822—died September 29, 1900. Founder of the Library of the New York Academy of Medicine, to which he gave large and valuable contributions; a president of the Academy, and an earnest and successful worker in its interests. This tablet is erected to commemorate his many virtues and rare usefulness."

The second memorial is his full-sized portrait, for which the Academy is indebted to the generosity of Mrs. Edwin R. Purple. Every one will recognize how singularly accurate this painting is in the portraiture of its subject, and how perfect it is in every detail where the highest degree of art is required. It will prove a valuable addition to the growing and already notable collection of portraits of eminent members of the Academy, and as a work of art will compare favorably with the best of Huntington, Rossiter Johnson, and others, which adorn the walls of Hosack Hall.

Correspondence.

TO "DIAGNOSE."

To the Editor of the NEW YORK STATE JOURNAL OF MEDICINE:

SIR: Forty-five years ago "to diagnose" was declared, by a high authority, incorrectly coined and unfit to take the place of to diagnosticate. In the past few years, "to diagnose" was again taken up for discussion with no lack of advocacy for this mode of expressing to discriminate or to distinguish. I am decidedly in favor of to diagnosticate, but would like to hear from *Medicus* on this subject. "IATROS."

New York, May 15, 1901.

To the Editor of the NEW YORK STATE JOURNAL OF MEDICINE:

SIR: The correctness of the coinage of "to diagnose" seems to me more than doubtful. One of the pleas for the term is brevity. It is not by a short term in a sentence that brevity is attained in the expression of an idea, but by the use of the fewest well chosen words. "To diagnose" was not formed from the Greek infinitive *diagignoskein* or from the noun *diagnostikos,* and no satisfactory derivation of the term appears in authoritative works, such as the *Century Dictionary,* where it is set down as signifying to diagnosticate. Since it does mean to diagnosticate, assuredly it is superfluous, and will be so regarded by philologists, all of whom are agreed that only necessary words should be coined, otherwise language would soon be sorely encumbered with useless words.

The art of discrimination came to be expressed, by commentators of Galen, in the term *diagnostikos,* diagnostics, from which arose the adjective diagnostic, as in diagnostic signs, while the discriminator was designated *diagnostes,* diagnostician. Some writers, wishing to be brief, use diagnost for diagnostician. In the early part of the last century *diagnose* was used, by the French, as a feminine noun (*la diagnose*), to signify the knowledge acquired by the observation of diagnostic signs (*signes diagnostiques*), but made use of diagnostic (*le diagnostic*), as a masculine noun, and *diagnostique* as adjective.

The advocates of "to diagnose" would be inconsistent unless they should use diagnosian or diagnosist instead of diagnostician, and also unless they should use to prognose, prognosian or prognosist instead of to prognosticate, prognostic, prognostication, prognostician.

"MEDICUS."

New York, May 20, 1901.

"PRACTITIONER."

To the Editor of the NEW YORK STATE JOURNAL OF MEDICINE:

SIR: The dispute of the two esteemed colleagues, *Iatros* and *Medicus,* about words like "Disease" and "Practitioner" seems to me *leeres Stroh dreschen.* As long as the gentlemen sign themselves *Iatros* and *Medicus,* they might as well help me to eradicate barbarisms which are a disgrace to our scientific medical literature, which every good and truly scientific *Medicus* or *Iatros* or *Practicus* should expose.

Some thirty years ago we had a funny man in almost every sanctum of our medical journals; it was the "per orem" man. He is an impossibility now, especially since one of our medical journals some time ago gave him the coup de grâce, the *Gnadenstoss.* Another funny man, the "*technique*" man, has taken his place. Now let us turn him out also!

Allow me to take this opportunity to point out a ridiculous word which should be discarded, namely, "hæmophilia." *Iatros* will agree with me that "hæmorrhophilia" is the proper term.

In a very learned book, edited by prominent medical men and excellent philologists, I noticed the word "cephalogramm." It is sad enough that we *Iatroi* have to suffer in hearing the everyday corruption "telegram" of the word "telegraphema," but let us severely criticise such grammatical monstrosities in our scientific literature. We are beginning to dislike hybrids; allow me to mention two out of a great number which should be replaced by words of one language. "Ovariotomy" should be "oothecotomy"; "conjuntivitis" should be "epipephycitis." Some words are given a meaning which, in reality, they do not possess: "idiotisy" means peculiarity of language, and not, as we have used it, congenital deficiency of the mental faculties. We *Iatroi* call such deficiency "ilithiotis."

I shall appreciate it if *Iatros* and *Medicus* will give me an opportunity to continue this exposition. Science should not teach anything which is unscientific, and this refers to our nomenclature, which forms part of our science. "O ALLOS IATROS."

New York, May 10, 1901.

Original Articles.

TUBERCULOSIS OF THE EYE; ITS DIFFERENTIAL DIAGNOSIS, PATHOLOGY AND TREATMENT.*

BY CHARLES STEDMAN BULL, M.D.,
New York.

IT may be safely said that all our actual knowledge of ocular tuberculosis dates from 1868, when Gradenigo published the first case, with confirmation of his diagnosis by microscopical examination. Tuberculous disease of any of the tissues of the eye is a rare disorder. The exact proportion of such cases to all lesions of the organ has never been accurately determined, but the proportion of cases of conjunctival tuberculosis, given by Eyre as 1 to 2,700, is probably much too large.

Tuberculosis of the eye is met with between the ages of 5 and 30, though a few cases have been observed at a later period. It may invade any part of the organ, though the tendency of the disease is to attack in its progress the deeper structures primarily. Hence tuberculosis of the iris and choroid is more frequently met with than the same disease in the conjunctiva and cornea. According to Baumgarten (1878), the only pathognomic feature of tubercle, aside from the presence of the bacilli, is the tendency to caseation.

Tuberculosis of the Conjunctiva and Lids.—The eye may serve as the point of entrance of the primary infection, and generally from the conjunctiva, but this is rare. The intact, healthy conjunctiva is never infected by bacilli; there must always first be a loss of substance. In many cases, relatively, the conjunctival tuberculosis long remains the sole localization, and the early destruction of the neoplasm may lead to recovery. When an abrasion of the conjunctiva exists, it may become inoculated with bacilli from the lids, the nose or the lungs, and an ulcer develops at the point of inoculation. The lesion usually begins in the tarsal conjunctiva of the upper lid, or in the retro-tarsal fold. The lid is more or less swollen, and on eversion shows a punched-out ulcer with gray base, or a base covered with small, gray, miliary tubercles. These ulcers have ragged edges, the bottom has a worm-eaten appearance and is covered by detritus. The small nodules may be in the edges of the ulcer instead of on the floor, and vary much in size. These ulcers sometimes bleed on handling. The pre-auricular gland is almost always involved, and sometimes the submaxillary also. These ulcers may be unilateral or bilateral, and may spread to the ocular conjunctiva and sclera, and thus serve as a focus for dissemination of a general infection, though absolute proof of this is still wanting. The eyelids are sometimes greatly swollen but are soft to the touch, and the conjunctiva shows distinct folds around the ulcerated tuberculous mass. There is usually a slight purulent discharge, in which the bacilli are sometimes found, but even in the tuberculous nodules they are often searched for in vain. According to the latest accounts, about 60 cases have been reported, of which eight have been published in 1900. All were between the ages of 10 to 30 years, and there were more females than males affected. In a number of the cases the lesion was bilateral.

It is exceptional to detect tubercle bacilli in microscopic sections of the ulcerated tissues, though they may be found in the scrapings from the floor of the ulcers; and well-defined giant cells are not always met with. The ulcers also vary clinically in appearance. Some of them are sharply cut, with irregular margins and yellow base, and surrounded by a zone of infiltration. Others present a more diffuse form with small elevations of the mucous membrane, which are frequently ulcerated. Whether the conjunctival disease be primary or secondary, it is quite conceivable that the tubercle bacillus may be conveyed into the nose from disintegrating pieces of conjunctiva, and cause infection of the mucous membrane of the nasal duct and nose. The neighboring lymph-glands have not always been found swollen, though it is possible that the swelling may have existed and been overlooked, and then have subsided as the local disease has receded.

The differential diagnosis is not always easy. Yellowish nodules sometimes develop in the vicinity, giving a granular appearance to the conjunctiva, resembling trachoma. Tuberculosis of the conjunctiva must be differentiated from trachoma, epithelioma and syphilitic ulceration. In trachoma the glands are not involved, and in acute cases the granulations will yield to treatment by caustics and astringents, while these are useless in tuberculosis. If we accept Rhein's dictum that the follicles of trachoma and those of tubercle are analogous, the latter must be differentiated by the presence of bacilli. Tubercle may be distinguished from epithelioma by the age of the patient. In true granuloma, the granulation is a firm, reddish vascular mass of uniform character, and the lymph-glands are not involved. In brief, the character of the ulceration, the lardaceous aspect of the mucous membrane, the presence of peripheral tuberculous nodules, and the engorgement of the glands, will usually suffice to differentiate the case, and if bacilli are found in the scrapings of the ulcer, the diagnosis is confirmed.

Some very interesting experiments in inoculation were made by Langhans in 1873. He made sixteen inoculations of tubercle in the conjunctiva of the rabbit with varying results. Some were entirely negative. In others there appeared at the point of inoculation a translucent swelling formed of the grayish nodules, end-

* Third paper read in the Symposium on Tuberculosis at the Seventeenth Annual Meeting of the New York State Medical Association.

ing in an ulcer with flat edges and pultaceous base. In a third series of cases, after a period of incubation ranging from 21 to 34 days, there appeared yellowish granulations, which became red but did not ulcerate, and some of these animals became tuberculous.

Prognosis.—If the case is one of primary infection and is seen early in its course the prognosis is fairly favorable, provided the local lesion can be thoroughly cauterized or excised. If the ulceration is secondary, the prognosis is always unfavorable.

Treatment.—If the ulceration is single and removed from the lid margin, the whole ulcerated surface should be cauterized with the actual or the gavalno-cautery, and then the case carefully watched and the cauterization repeated if necessary. If the ulcer is close to the edge of the lid, the parts, including the entire thickness of the lid, should be thoroughly excised, and a plastic operation made subsequently to correct the resulting deformity.

Tuberculosis of the Eyelid appears in the form of lupus, usually along the ciliary margin of the lid, and soon involves the conjunctiva. The doctrine that lupus and tuberculosis are one and the same disease is now generally accepted, giant cells and bacilli being found in both. It may be primary or secondary. If primary it is due to direct infection from a foreign body or to operation. The disease is found mostly in children, but may occur at any age. On its first appearance it simulates an inflamed chalazion.

Prognosis.—If the lesion is primary, the prognosis is good. If secondary, it is unfavorable.

Treatment.—Thorough excision of the infected part is the only thing that promises any real cure.

Tuberculosis of the Sclera is occasionally met with in the form of nodules, coincident with tuberculous nodules in the iris and ciliary body. As an independent lesion it is very rare, one case having been reported by Müller in 1890. The sclera may also become involved in the ulceration of tuberculous nodules of the ocular conjunctiva. The prognosis is unfavorable. The only treatment which would seem to promise a cure is enucleation of the eyeball. Instances of treatment by antitoxin have been too few, and the results not sufficiently favorable to enable us to draw any satisfactory conclusion.

Tuberculosis of the Cornea.—The cornea is much less liable to tuberculous disease than any other tissue of the eye except the lens. Tuberculous nodules may develop primarily in the marginal zone of the cornea and extend towards its center. These small growths have been observed as a result of inoculation, and in the course of spontaneous tubercle of the iris. Panas has reported a single case occurring in a woman, aged 30, of delicate health, with disease in the apices of both lungs. After sharp pain in the right eye there appeared a diffuse interstitial opacity in the superior segment of the cornea, with episcleral injection. On the thirteenth day the disease had reached the center of the cornea, and around the opacity were a series of yellowish nodules resembling miliary tubercles. These gradually coalesced, and in the fourth week the whole infiltration was ulcerated, with a yellow base and irregular edges. Each advance of the ulcer was preceded by new marginal tubercles. At the end it cicatrized densely opaque. Panas made some experiments in corneal inoculation in animals, and the course followed resembled very closely that noted in his patient. A tuberculous tendency may be suspected in cases of non-inflammatory abscess of the cornea in scrofulous children, which show no tendency to healing, even when there are no positive signs of tuberculosis present.

Tuberculosis of the Uveal Tract.—Tuberculous disease here may be either primary or secondary, the latter being much the more frequent of the two; and the patients are usually found among those suffering from the chronic pulmonary, osseous or cutaneous forms of the disease, than among those affected with rapid general tuberculosis. In the uveal tract the nodules may be either miliary or disseminated, or in circumscribed small masses, or in solitary nodules. Small, gray nodules appear and disappear, and either terminate in healing or gradually extend to suppuration, perforation and destruction of the eyeball.

Tuberculosis of the Iris and Ciliary Body.—Tuberculous disease of the iris occurs most frequently between the ages of 5 and 25 years. It may be either primary or secondary, the latter being the more frequent. Primary tuberculosis of the iris may be unilateral or bilateral. Haab recognizes two forms: one of rare occurrence and ending generally in a spontaneous cure; a second, much more common, ending in perforation and phthisis bulbi. The symptoms of either serous or plastic uveitis are generally present. The diffuse form spreads rapidly and generally invades the entire eye, and the cornea necroses and becomes perforated. This form generally occurs in patients predisposed by hereditary tendencies to the disease. The first or attenuated variety of the disease may recede and disappear without causing general infection. These cases of attenuated tuberculosis, in which the growths become absorbed and the eye partially regains its functions are rare. The nodules are very small and scattered, are yellowish-gray in color, with a slight reddish tint due to the blood-vessels, and may involve the peripheral border, or occupy the angle of the anterior chamber. Their course is very slow, with periods of amelioration and aggravation, and the case ends in the total disappearance of the nodules. Tuberculosis of the iris occurs usually in children as small, grayish red nodules at the ciliary margin of the iris, which look like miliary growths. The successive development of new nodules leads to plastic iritis and cyclitis, and then to a general shrinking. The solitary tubercle of the iris or so-called

granuloma, begins as a small gray nodule, which slowly increases in size, fills the anterior chamber, perforates the cornea, and presents as a large granulation mass, and the eye is lost by general phthisis bulbi. The granulation mass always contains giant cells and almost always bacilli. At first tubercles of the iris are composed of masses of small epithelioid cells, disposed concentrically around an obliterated vessel, and of a varying number of giant cells. After softening has begun, histology does not help much towards a diagnosis. If a case of tuberculosis of the iris is accompanied by blood in the anterior chamber the disease has probably invaded the ciliary body, as hemorrhage from the ciliary body has been known to be the first symptom of tuberculous infection here.

Tuberculosis of the iris has been produced by inoculation of the anterior chamber in animals. Within three weeks of the inoculation the iris becomes inflamed, with the eruption of small, grayish nodules, which grow larger, coalesce, fill the anterior chamber, infiltrate the cornea and cause perforation. The animals succumb later to general tuberculosis. The intraocular tension is at first increased, but later, as cyclitis develops, the tension falls below the normal standard.

Tubercular growths in the iris may be confounded with gumma, sarcoma and lepra. They may be distinguished from gummata by their color, their predilection for involving the inferior half of the iris, and by the presence of glandular enlargements and the usual signs of pulmonary tuberculosis. A tuberculous nodule may in its early stages be confounded with sarcoma, but the latter is almost certain to be solitary, is rarely accompanied by any iritis, seldom occurs before middle life, and is usually more vascular than a tuberculous nodule. In general it may be stated that the lesion is probably tuberculous when the growths are multiple, non-vascular and gray, and are accompanied by glandular enlargements. Iritis in a child is generally tuberculous and always serious. The prognosis in cases of tuberculosis of the iris is always unfavorable, for none of the symptoms enable us to predicate the "attenuated" form of the disease. Until we have had a larger experience and have become more familiar with the nature and effects of Tuberculin T. R. as an antitoxic agent, our only advice is to recommend enucleation. It is possible that iridectomy may be useful in the case of solitary tubercle before softening has begun, and will leave the patient with a varying amount of useful vision, but in all cases of multiple growths the eye should be removed.

Schieck has recently reported some interesting experiments with tuberculin. (*Archiv für Ophthalmologie,* Ia. 2.) He considers that tuberculin T. R. has shown much weaker symptoms of reaction than the first tuberculin, and thus the danger of general dissemination is lessened. Tuberculosis of the iris and cornea furnish the best conditions for the employment of the remedy, viz., local, unmixed forms of disease and the absence of increased temperature.

He reports five cases of his own so treated, varying in age from 13 to 28 years. All had the characteristic nodules at the periphery of the iris, and in three the lesion was bilateral. All were treated with tuberculin T. R. beginning with a dose of 0.002 mg. and increasing each dose gradually from 0.002 to 0.5 mg., and going as high in one case as 6 mg. at a dose. In three of the cases the nodules rapidly disappeared, and all signs of inflammation subsided. In two cases all the symptoms of irritation were increased, while the nodules continued unchanged, but when the injections were discontinued they both healed promptly. Schieck then gives the statistics of the results of treatment in 116 cases of tuberculosis of the iris. In the thirteen cases treated by tuberculin injections all were improved and no eye was entirely lost. In the 103 cases which were not treated by tuberculin, thirty-nine were healed and sixty-four were lost. From this it would seem that the fear of the spread of the bacilli from a tuberculous nodule of the iris by the employment of Koch's tuberculin is not justified. It should be remembered that Koch's agent is not a bactericide, but merely supports the tissues and excites them to resistance in their conflict with the virus, while the bacilli are, at the most, but weakened. Hence the occurrence of a relapse should not be laid to the charge of the tuberculin. In nineteen reported cases, in which an attempt was made to remove the local disease by iridectomy, only eight were successful, four were total failures, and in the remaining seven the disease spread still more rapidly, due, doubtless, to fragments of tuberculous tissue left within the eye.

The second part of Schieck's work consisted in an endeavor to determine the effect of tuberculin T.R. upon cases of artificially produced tuberculosis of the iris and cornea, in order to see whether these diseased processes induced in animals followed the same course as did the nodules in patients treated by tuberculin.

The inoculation material employed was fresh, pure cultures of human tuberculosis on glycerin-agar. He made a number of elaborate experiments on rabbits, divided into six different series. The results varied greatly in the different series, and even when apparently positive results were obtained, they were not entirely free from doubt. The most important fact established seemed to be the possibility of a spontaneous disappearance of tuberculous nodules of the iris in rabbits, a fact previously mentioned by Sattler.

Schieck formulates the results of his experiments as follows:

1. An immunizing effect of tuberculin T. R. does not exist.

2. Tuberculin T. R. cannot cure every case of experimental tuberculosis of the cornea or iris in the rabbit.

3. The cases treated by T. R. are no more

malignant in their course than those in which T. R. is not used.

4. The study of the action of tuberculin in the rabbit cannot be an exact one, for undoubted cases of cure occur without the use of tuberculin.

If we compare our knowledge of the great value of tuberculin in cases of tuberculosis of the human iris with the very uncertain results of the experiments on animals, we find ourselves face to face with an inexplicable contradiction. Schieck endeavors to explain it as follows: In the diseased process known as tuberculosis of the iris, in man, we have to deal with an insidious inflammation of endogenous origin, with the formation of nodules within the tissue itself, with few bacilli. On the other hand, the experimental tuberculosis of the iris starts from masses of bacilli, which lie either free on the surface of the iris, or in artificial wounds in the iris. The action of the tuberculin does not consist in killing the bacilli, but in exciting the surrounding tissue to resist the tuberculous masses and the formation of scar tissue. In the experimentally produced tuberculosis the bacilli are numerous, and in the beginning lie outside the tissue, surrounded by a structure, rich in cells, but poor in connective tissue, and here the tuberculin has but slight effect. In tuberculosis of the human iris, however, the bacilli are few in number, and the iris is abundantly rich in connective tissue, and here the tuberculin finds the most favorable conditions for its curative action.

Tuberculosis of the Choroid.—Tubercles in the choroid were first recognized by Von Jäger, in 1855, shortly after the invention of the ophthalmoscope. They were supposed to be always secondary growths, till 1873. They are met with under two forms, the miliary, or disseminate tubercle, and the solitary or circumscribed. The former are usually found in the posterior part of the fundus, and the latter in the anterior part. They are most frequent before the age of twenty, and much more common in children than in young adults. The miliary form is met with in general acute tuberculosis, and in tubercular meningitis, while the circumscribed large masses of infiltration occur in chronic tuberculosis.

Miliary tubercules nearly always occur in both eyes. They vary in size from 0.5 mm. to 2.5 mm. in diameter, and are usually found in the vicinity of the optic nerve and mucula lutea. They appear as round spots, pale yellow in color, with a pinkish zone, shading gradually at the margin, and later become gray in color and somewhat prominent. They resemble recent patches of choroiditis disseminata. They start in the deep layers of the choroid, growing from the adventitia of the larger vessels, and, as a rule, cause no defect of vision. The older, large tubercles show, under the microscope, giant cells surrounded by a circle of nuclei, and these in turn are surrounded by a reticulum of fibers, with small cell infiltration, caseation and extravasations of blood. The newer and smaller tubercles appear to be collections of lymphoid cells between the vessels. Bacilli are by no means always found. Their presence in the choroid has no connection with the presence of the tubercular meningitis. They are said to be common occurrences in miliary tuberculosis, but the writer believes this to be an exaggeration. It is probable that tubercles of the choroid, which are visible with the ophthalmoscope, belong to the terminal stage of general tuberculosis, and often develop shortly before death. Owing to the small size of miliary tubercles, their tendency to develop in young children, and the consequent difficulty of examination, they are much oftener found after death than before it. Those which are readily visible with the ophthalmoscope are usually from six to ten in number, though they may reach thirty or forty.

When the tuberculous deposit is in the anterior segment of the choroid and takes on an acute process, it resembles an irido-cyclitis, and is accompanied by extensive destructive changes. It consists of a mass of tuberculous matter which generally undergoes caseation, suppurates and perforates the eyeball. The bacilli, when found, are relatively very few. Chronic tubercular tumors of the brain are sometimes accompanied by tubercles of large size and slow growth in the choroid, which gradually fill the eye and simulate malignant tumors. They tend to perforate the eyeball, usually anteriorly in the ciliary region, but sometimes extend backwards along the sheath of the optic nerve. Extension downward along the same course, from a tuberculous mass in the brain, has been known to occur, but is not common. General tuberculous infection from these cases has only been observed when the eyeball has ruptured and the orbital tissue has become infected. Hence the advisability of an early enucleation. The chronic miliary form progresses slowly and insidiously, the capillaries become obliterated, there is no pain, and very rarely any external evidence of disease, such as episcleral injection, is observed. It should not be forgotten that, while miliary tubercles of the choroid are sometimes found in connection with tubercular meningitis, they are more frequently met with in general tuberculosis without meningitis. In any case they are comparatively rare, and while their absence is of no significance, their presence is valuable evidence of general tuberculosis. Owing to their rapid development, ophthalmoscopic examinations in suspected cases should be frequently and repeatedly made.

Tuberculosis of the Retina and Optic Nerve.—Tuberculous lesions in the retina and optic nerve are almost always associated with tubercular meningitis, and in about 15 per cent. of the cases of meningitis, miliary tubercles are found in the chorioid. When these are found in doubtful cases of meningitis, the differential diagnosis between typhoid fever and tubercular meningitis may be considered as made. Moreover, myosis is frequently a symptom in the early stages of

tubercular meningitis, just as mydriasis is in the later stages, and a rapid oscillation between myosis and mydriasis is rather characteristic of the disease. In these cases there is a peculiar marbled reflection in the retina, near the veins, in conjunction with the tubercles in the choriod, associated with edema of the retina and optic nerve. There are also occasionally seen, near the optic disc, some small white spots, the so-called retinal tubercles, but these are rare. Unequivocal tubercles in the retina are usually associated with tubercular growths in all the structures of the eye.

The subjective symptoms in complications of the retina and optic nerve are periodical obscurations of vision and protopsia, and to these is sometimes added the objective symptom of papillitis. The optic nerve often remains normal throughout the entire course of the disease, but there are some changes in about half of the cases. The disc becomes red and the outline hazy, with more or less marked striation on the papilla and in the retina. It is more a neuritis than a papillitis, and hemorrhages are rare. There is a gauze-like opacity over the disc and retina, resembling that seen in syphilitic retinitis. The changes are always bilateral, and, in most cases the patients soon die. In those who recover the intra-ocular signs are slight. The neuritis is a typical descending neuritis, the sheath of the nerve not only being distended, but inflamed. In many cases the symptoms of meningitis are distinct before the ocular changes occur. In some cases the cerebral symptoms are latent or doubtful, and here the ophthalmoscope affords assistance. A diminution in the severity of the cerebral symptoms may be accompanied by a diminution in the ocular changes. It should be remembered that optic neuritis is more commonly present in this form of meningitis than in any other, and in consequence of its tendency to attack the base of the brain paralyses of the ocular muscles are frequently met with.

Tuberculosis of the Orbit and Orbital Walls.—No case has ever been reported of primary tuberculosis starting in the orbital tissue. In the cases where this tissue has been involved the disease has started either in the iris or ciliary body, and the orbital tisue has become infected by perforation of the eyeball. As regards the bony walls of the orbit, the presence of periostitis or caries, when non-trumatic in origin, should excite suspicion of either syphilis or tuberculosis, especially in children.

Heart Failure in Typhoid Fever.

℞ Spts. ammoniæ aromat..... ℥iv
Tinct. digitalis..... ℥ij
Elixiris simplicis..... ℥iv
Aquæ destil., q. s. ad..... ℥iij
M. Sig. Shake. One teaspoonful every three hours.

AFTER-TREATMENT OF THE CHILD IN NORMAL CASES.*

BY BERNARD COHEN, M.D.,
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THIS is the age of scientific midwifery, and therefore every detail of the care of the parturient woman and child should be a matter of routine practice. Too often the physician thinks his responsibility ended when the labor has terminated and he has attended to the few customary duties relating to the comfort of the mother. He forgets that her child is entitled to an equal share of his attention. Usually, as soon as the new-born child makes its entrance into the world, it is handed over to whoever happens to be acting in the capacity of nurse; unfortunately, very often, to one who is entirely incompetent; and, frequently, unless the physician's attention is called to it, he never thereafter gives it a passing thought. The helpless little innocent who is left to the mercy of such a nurse is obliged to run the gauntlet of all sorts of granny notions, and it is a miracle if it escapes uninjured.

The accoucher should perfect himself in the details necessary to the care of the new-born child, as well as in the duties toward the mother. He should see that all things necessary to its well being are at hand; of most importance, that some trustworthy person or trained nurse be there to receive the babe as soon as it is delivered.

As soon as the infant is born it should be placed on its right side, so as to favor the prompt closure of the foramen ovale; the child's face should be turned from the vulva, so that it may breathe freely and not be suffocated by any sudden discharge of blood or liquids that may escape from the vagina. At the same time the cord, if twisted, may be disengaged from the child's neck or body. The child must not be placed too far from the mother, so as not to put the cord on a stretch and thereby pull out the placenta prematurely. As soon as convenient, the eyes and parts adjacent, that is, nose and mouth, should be attended to, the eyes thoroughly washed with a warm boric acid solution, the mouth wiped out with a clean soft cloth placed over a clean finger. Do not infect the child's mouth with a dirty finger. It is entirely unnecessary.

As soon as respiration is fully established—and I prefer to wait until pulsation in the cord has nearly ceased—the cord should be attended to. Systematic observations have shown that by delaying the ligation of the cord for several minutes after birth the children thus treated are notably more robust than when immediate ligature has been practised. I do not think that this is due to the child receiving more blood from the mother, although it is claimed that the child gains from one to three ounces of blood, but it

* Third paper read in the Symposium on Obstetrics at the Seventeenth Annual Meeting of the New York State Medical Association.

is due to a better circulation, from a combined action on the part of the circulations of both mother and child. In cases of well developed, vigorous infants the rule of late ligation loses much of its importance.

The cord should be stripped for several inches from the umbilicus by gently pressing along its continuity with the thumb and index fingers, to displace as far as practicable the gelatinous material. The ligature should be placed about two inches from the abdomen and firmly tied, without cutting the tissues. I prefer a short stump, because there is less dead tissue, less fetor, and there is less danger to the stump from manipulation by the nurse and from movements of the child. The ligature should consist of half a dozen strands of cotton thread or a narrow piece of tape. They should be sterilized. Either of these ligatures placed in proper position will not slip, and we need not fear subsequent bleeding. A second ligature can now be placed about two inches distant to secure the placental end. The cord is now cut, preferably with scissors.

We now lift the child up by grasping the breech with one hand. The other is placed under the shoulders and neck, and the baby carried to the nurse's lap, already prepared for its reception. The cord can now be examined to ascertain that no loop of intestine exists at its base and that it is not bleeding. Should it be found necessary another ligature could be placed below the first. It has been suggested to cauterize the end of the cord so as to prevent every possibility of infection. I have not used the method, because I have never had a cord infection and because it would be necessary to add another cumbersome instrument to our already burdened obstetrical outfit. The eyes now take our attention. Should there have been an excessive lochial discharge, a suspicion of gonorrhea or other local disease of the mother, the eyes should be treated according to the method of Crede. Otherwise, a good second cleaning with warm boric acid solution and a few words to the nurse as to how to attend to the baby's eyes, are sufficient.

I do not believe it right to cause even a slight inflammation of the child's eyes unless there exists some indication of disease. Every one who undertakes obstetrical work should be able to detect, and care for, the first symptoms of that most dreaded of all diseases, ophthalmia neonatorum.

The remainder of the child's body may now be examined for any defects. The child is then ready for its first cleaning and bath. It should be well covered with oil, to remove the ceruminous substance which usually covers the body. This may be gently rubbed off and the child plunged into a bath at about 80 degrees. The infant, being now washed and dried, is to be dressed. The physician should wrap the cord in a piece of absorbent borated cotton which is large enough to absorb all of the moisture that may come from the cord. Within three or four days the cord, desiccated and withered, drops off. This I think is the natural process, leaving but a small red spot which requires a simple dusting powder of boric acid.

The dressing of the child is now continued, and should consist of as few garments as possible, yet remembering that the child's body must be kept very near a temperature of 80 degrees.

I do not think a belly-band necessary. Warmth and the retention of the cord dressing can as well be secured by a loose knitted shirt. As to the belly-band being a preventive of umbilical hernia, I believe such a tight band compresses the contents of the abdomen, and so actually favors its formation. At any rate, it embarrasses the movements of the abdominal muscles and so weakens its walls.

The child may now be placed in its crib, away from the mother, and it will remain quiet and restful for several hours. When the mother has rested a few hours the babe may be placed at the breast.

During the three or four days following its birth the physician ought carefully to watch over the excretion of urine and meconium. Sometimes the latter is delayed for a few days. If the baby's bowels do not move, some mild laxative, such as manna, comp. syr. of rhubarb or the oil of sweet almonds should be used. Either or all of these may be mixed and several drachms of the mixture be given during the course of the day. If the child does not urinate the first day, simply plunging it into a warm bath is sufficient. As a usual thing most nurses give the baby warm water with a little sugar. This seems to be all that is necessary to facilitate the expulsion of the meconium and viscid fluids that sometimes obstruct the fauces and stomach. The warm water and sugar is also sufficient nourishment for the child until the mother is able to nurse it. Anything else given to the baby is likely to cause it to become colicy and uneasy.

A human being beginning its journey through life, and a whole eternity to follow, has an inherent right to demand a fair start. Attention to the details mentioned above has an important bearing on its physical and mental wellbeing, and may prevent serious consequences of a permanent character.

Habitual Constipation.

℞ Potassii bitartratis, Sulphuris loti aa..... ʒj
Pulv. sennæ (leaves)..... ʒiv
Syrupi rhei..... ʒij
Syrupi rhamni purshianæ, q. s.. ʒiij

M. Sig. One teaspoonful morning and evening.

PARASITES IN THE BLOOD.

BY LEON T. LE WALD, M.D.,
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OF the true parasites which are found in the general systemic circulation, there are two of great importance. First the *filaria sanguinis hominis,* causing the disease which we know under the term filiariasis. For some time it was believed that this parasite could be found in the blood of an infected person only at night. But it has now been established that there are three varieties of the parasite—the one first described as occurring in the general circulation

FIG. 1.

Anopheles quadrimaculatus: Adult female.

only at night and hence known as the *filaria nocturna;* another found only during the day, *filaria diurna,* and a third variety found at any time, day or night, *filaria perstans.*

An interesting anatomical peculiarity has just been observed by Dr. James Ewing of this city in the examination of the blood of a case of filariasis. The peculiar structure noted is a transverse striated appearance, giving much the appearance one sees in an earthworm. This was very beautifully illustrated in a photograph exhibited by Dr. Ewing and Dr. Buxton at the New York Pathological Society meeting October 10, 1900. Another interesting point in regard to the filaria is the establishment of its transmission by means of the mosquito.

The second parasite we shall consider is the *plasmodium malariæ.* Of this there have likewise been determined three varieties, producing, as you know, the three ordinary types of malaria; the tertian, the quartan and the estivo-autumnal, the latter also known as the irregular form and also as the tropical form. What we formerly called quotidian fever does not have the honor of a separate variety of organisms, but is due, we now know, to a double infection with tertian organisms, the two sets overlapping and maturing on alternate days. In the light of the mode of infection which we now know to be true of malaria—infection by mosquitoes—it is easy to understand how this double infection occurs.

As far back as 1850 Virchow saw the malarial parasite. Laveran and Golgi established the correspondence between its life cycle and the clinical cycle of the disease. That is to say, at the end of the apyretic stage of the cycle the parasite has arrived at maturity, and that in the shivering stage the parasite has reached the sporulating stage. During the succeeding hot and sweating stage the spores enter the red blood-cells and the fever comes to an end. This in tertian malaria takes forty-eight hours; in quartan, seventy-two hours. In the tropical form the time of the chill likewise corresponds with the sporulating stage of the estivo-autumnal parasite.

Now, this explains how the parasite maintains its existence in the human body, but does not show how it passes from person to person. Nor does it explain the presence of crescents and of flagellate bodies found in the blood. The presence of these latter bodies has been a puzzle for several years. The relation between these two bodies has been very close, crescents if watched having been seen to have given off flagellæ.

For years it has been suspected that mosquitoes had something to do with malaria, and, strange to relate, even savages in German East Africa, who lived in mountainous, and, therefore, non-malarial districts, noticed that when they went to the sea coast they acquired a fever. They said they were bitten by certain insects—mosquitoes—which they called *Mbu.* They gave the same name *"Mbu"* to the fever which they acquired, thus linking a cause and effect. Peasants in certain parts of Italy believe that the bite of the mosquito may be followed by malarial fever.

Drs. Manson and Ross, of England, working on this theory, were able to demonstrate in the stomach of mosquitoes which had bitten malarial patients flagellæ and spherical bodies. On watching these parasites in the mosquito's stomach, Ross found that they grew from six micromilli-

meters in diameter to 60 micromillimeters and that they retained the black pigment. And he also found after a large number of dissections from mosquitoes that this change took place only in one variety. Probably it is because the malarial parasite does not continue its development in the bodies of all kinds of mosquitoes that so much difficulty has been met with in establishing the truth of the theory.

It has been found that the parasite, after developing in the stomach of the mosquito, breaks up into small bodies which pass to the salivary glands and thus into the proboscis of the mosquito. The mosquito thus acts not only as the definite host of the malarial parasite, but also as the transmitting agent.

It is not necessary at this time to go into a discussion of the close relationship that people living in malarial districts have often observed between

FIG. 2.

Culex tæniorhynchus: Female, showing the short palpi which distinguish *Culex* from *Anopheles*.

the prevalence of mosquitoes and the prevalence of malaria; that warmth and moisture and low moist places both conduce to malaria and to the breeding of mosquitoes; that protection of the body from mosquitoes by veils, wraps, screens and netting, also protects from malaria; that people going into malarial districts were always warned not to be out after sunset—the time when mosquitoes are particularly active; that the cultivation of the soil prevents both the breeding of mosquitoes in stagnant pools and malaria; that whenever we find malaria we find mosquitoes. The converse does not hold true, but this is easily explained by the fact that so far it has been ascertained that only one variety of mosquito is capable of transmitting the disease. Hence we know why, for instance, northern regions are non-malarial, although explorers have found swarms of mosquitoes there.

The two celebrated yet simple experiments of Dr. Manson, of London, which have now just been completed, leave no longer any ground for the most skeptical individual to stand upon.

Experiment No. 1 was as follows: From Rome he had mosquitoes which had bitten a patient suffering from tertian malarial fever, as demonstrated by a careful examination of the blood, sent to London, where they were then allowed to bite a previously perfectly healthy individual—Dr. Manson's son. Here are the words of the patient: "I am twenty-three years of age. I was born in China, but have lived in this country since I was three years old and have never been abroad since, nor in any district in this country reputed to be malarial. I am healthy." Between August 29th and September 12th the young man was bitten many times by the mosquitoes thus obtained. On September 13th he began to feel languid and out of sorts and his temperature rose to 99° F. At midday he felt chilly and inclined to yawn. At 4.30 P. M. he went to bed with severe headache, pain in the back and bones, and a temperature of 101.4° F. On the following day temperature was 100° to 102° F. Patient had anorexia and an exaggeration of symptoms of the day before. September 15th he awoke feeling better, but at 2 P. M. felt chilly and at 4.30 his

FIG. 3.

Anopheles at left, *Culex* at right—enlarged (drawn by C. O. Waterhouse).

temperature was 103.6° F. At 9 P. M. diffuse sweating set in. September 16th temperature became normal. September 17th, temperature was 99° F. in the morning, but at 2 P. M. he had a chill and at 5 P.M. the temperature was 103° F. followed by sweating, and at 9 o'clock the temperature had fallen to 99.2° F.

Examination of the blood showed many tertian parasites. The edge of the spleen could be felt on deep inspiration, and there was a slight feeling of discomfort in this region. He was then given ten grains of quinine and the following day ten grains more and five grains every eight hours. No more parasites were found after 5 P. M. of this day. September 19th, temperature normal and appetite had returned. September 25th in good health, no recurrence of malarial symptoms.

Experiment No. 2 was as follows: A wooden hut constructed in England was shipped to the heart of the malarial district of Italy, where the permanent inhabitants all suffer from malarial

cachexia and where the laborers who come from healthy parts of Italy for harvesting purposes all contract fever. The only precaution taken by the experimenters who lived in the wooden hut was to have the windows and doors most carefully screened and their beds protected by mosquito netting. During the day they went about as others, but were always careful to be indoors from sunset to sunrise. From early in July until September 21st they have enjoyed perfect health, while their neighbors in marked contrast were all either ill with fever or had suffered with severe malarial attacks.

You will be interested now in knowing the distinguishing characteristics of the mosquito which carries the infection. It is of the variety known as *Anopheles,* and differs from the more common variety of mosquito known as *Culex,* by the following peculiarities: Its palpi are about as long as its proboscis, while in the *Culex* the palpi are very short. In the resting stage the *Anopheles* projects at right angles from the surface while the *Culex* holds its body parallel to the surface. Another distinguishing point is that the *Anopheles* holds its beak and body in one line, while the *Culex* holds its beak and body at angles with each other, thus giving a humpbacked appearance. The larva can be distinguished in the pools of water by the fact that the body of the *Anopheles* larva is parallel with the surface of the water, while that of the *Culex* hangs with the head downward.

Too much credit cannot be given to the work of Dr. Manson in proving his theory, and it only remains to destroy as far as possible the breeding of the *Anopheles* mosquito to render malarial districts habitable.

Most careful work has been done by the Division of Entomology, United States Department of Agriculture in the study of the structure and biology of the mosquitoes of the United States, and the illustrations of this article have been obtained from that source.

THE TONSILS AS PORTALS OF INFECTION.

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WALDEYER'S tonsillar ring consists of (1) the pharyngeal or Luschka's tonsil, (2) the tubal tonsils or cushions of the Eustachian tube, (3) the faucial or true tonsil, and (4) the glossic tonsil. The structures belong to the lymphatic system, and have been compared to Peyer's patches in the intestinal tract. The faucial tonsils are oval shaped nodes the size of hazel nuts. In health they should be barely seen. Each tonsil is imbedded in faucial peritonsillar tissue. On the surface are from eight to eighteen openings, the entrance of crypts (lacunar spaces). The crypts are lined with mucous membrane. They are apt to become filled with a thick yellowish secretion (fat, molecular, loosened epithelium, lymph corpuscles, granular matter, cholesterin crystals, etc.). The pharyngeal tonsils differ from the tonsillar tissue in that they have no crypts, but an abundance of irregular spaces between them, in which dirt and discharges are held (Dawbarn).

The tonsils have a very large blood supply, and the lymph sinuses communicate freely with the lymphatics of the mouth, pharynx and deep cervical lymph nodes. (Ashby and Wright).

One of the functions of the tonsils is the formation of leucocytes, which according to Stöhr find their way into the salivary secretion by an ameboid movement. Kingston Fox says that the tonsils have an absorbing function, *i. e.,* the absorption of a superabundance of saliva. It is also claimed that they produce a secretion which lubricates the food, but containing no mucous glands they do not secrete in the sense of glandular secretion, and Hodenpyl relegates this secretory function to the adjacent tissue and not to the tonsil itself.

Killian believes that the contained leucocytes have the power to destroy micro-organisms. Labbe also thinks that the follicles, by an extension of the epithelial surfaces are a means of defence against bacterial infection, but Goodale has lately claimed that the leucocytes present are of the mononuclear variety. The lymphocytes are not phagocytes and cannot therefore be regarded in this light. Goodale also claims that absorption exists in the tonsil and takes place through the mucosa of the crypts, whereas Hodenpyl in a series of experiments maintains that the epithelium of the crypts prevents absorption, but that substances finding their way beneath the epithelium may be taken up rapidly by the lymphatics, and this he explains frequently to be the case on account of the very thin layers of epithelium and its constant rarefaction. He also showed that soluble and insoluble materials in the substance of the tonsil remain in the tissue, or are carried by the lymphatics to the other parts of the body.

As to the capability of the absorption of micro-organisms by the tonsil, Ribbert found that the bacillus of rabbit diphtheria is not absorbed by the buccal mucous membrane, except in the tonsils in which the epithelium is desquamated. Schlenker having found tuberculosis of cervical nodes occurring in which the tonsil either may or may not be diseased, states that in the latter case the tubercle bacilli must have wandered through the tonsil.

Busche also concludes that the tonsils are portals for pus-producing organisms. They do not enter the system without affecting the tonsils, be it ever so lightly, nor is much ulceration required, so that Pluder contends that tonsillar protection to the invasion of disease is very small, as the tonsils are frequently diseased and hence portals for the entrance of bacteria. Schech

also makes the statement that in the adult the tonsil is seldom normal.

From the foregoing remarks it is seen that the function of the healthy tonsil is but little understood. Certain it is, that being of the lymphatic system, they have to do with the formation of leucocytes of a mononuclear variety, and that these leucocytes have little phagocytic action.

The tonsils may protect the system by a filtration of micro-organisms and an attenuation of their virulence, thereby giving a certain amount of immunity in health. They are, however, very susceptible to the invasion of bacteria and to infection. Because of their position the various forms of aerial poisons are prone to be aspirated and to lodge here; food substances, with their poisons, bacteria, etc., may also find lodgment coming in contact during the deglutition act. The tonsils afford places of lodgment because of their irregularity of contour; the presence of lacunar spaces, the rarefaction of the epithelium lining the crypts (Hodenpyl) and the exudation of the epithelium leaving places of denudation afford the locus minoris resistentiæ to the various organisms. The tonsils are then constantly exposed to pathogenic organisms contained in liquid, air and food. They are also exposed to the bacteria constantly to be found in the nasal and buccal cavities. As occurring in the nose, Eisenberg mentions staphylococcus pyogenes aureus, streptococcus erysipelatus, bacillus fœtidus ozænæ, Friedlander's pneumobacillus, rhinoscleroma bacillus, bacillus mallei and bacillus smaragdinus fœtidus; the same author mentions in buccal secretion pyogenic bacteria, diplococcus pneumoniæ, diphtheria bacillus, tubercle bacillus, and many pyogenic organisms in and about the teeth, as described by Miller, such as bacterium gingivæ pyogenes, bacillus dentalis viridans, also fungi, like actinomycosis and aspergillus fumigatus. These bacteria require heat, moisture, and a good soil for their growth. They obtain the two former conditions, and, so far as soil or proper media is concerned, it requires but a loss in the immunity of the individual or host to make active the pathogenic organisms always present, and to induce infection.

Having shown that the tonsils are easily accessible to micro-organisms, and that they are constantly exposed to their action, it requires the clinical proof that such takes place.

The tonsil, especially the faucial tonsil, often becomes inflamed through the agent of pyogenic organisms lodging in the lacunar spaces. The epithelium of the mucosa, because of the engorgement of the vessels, is deprived of its nutrition, and exposed to the poisonous substances produced by the organisms becomes swollen, clouded and dies; in other words, is converted into pus. As a consequence of this metabolic change and the secretion of the bacteria, toxic substances are formed, which being absorbed produce constitutional symptoms, namely, malaise, headache, bone-ache, chills, elevation of temperature, bounding, frequent pulse, etc.

Among the organisms demonstrated in the lacunæ in tonsillitis are the streptococci, staphylococci albus and aureus, Fraenkel's pneumococcus, and Friendlander's pneumobacillus.

As to the predisposition for an attack of tonsillitis may be mentioned the relation existing between the hyperplasia of either the lingual or pharyngeal tonsil in young children. The adenoids through their obstruction induce mouth-breathing and a lowering of the vital resistance, rendering an assault of bacteria the more successful. There is a constant aspiration of pathogenic bacteria to the faucial tonsil, and the individual is more susceptible because of a lowering of vital resistance.

One attack of tonsillitis predisposes to another, and as a result the crypts are deeper, the fibrous tissue and lymphoid tissue is increased, the vessel walls are sclerosed. Depending on the increase of fibrous tissue will depend whether or not the hypertrophied tonsil is hard or soft. It is this tonsil which is par excellence the principal portal for infection, for here we have lost the normal function, the parts are dry, the lacunar spaces widely open, and the antigermicidal secretion of the lymphoid cells, if any, is *nil*. But it is nevertheless not my intention to state this without some qualification, for in many cases of infection via the tonsils, they are very little affected.

Jessen emphasizes that a tonsil with normal appearance may contain foci of suppuration. Many cases are reported which show severe infection following an attack of tonsillitis. This infection may be classified into (1) a toxemia, as diphtheria, (2) a septicemia, and (3) a septicopyemia. The involvement of the faucial tonsil in a great majority of cases in diphtheria and its toxic effects (paralysis of muscles of deglutition and heart) need not be emphasized in this paper.

If the organisms producing a tonsillitis are pyogenic and enter the tissue a simple follicular tonsillitis becomes septic by the formation of a tonsillar abscess or the adjacent peritonsillar tissue is affected by contiguity with the formation of a peritonsillar abscess, a Ludwig's angina or a retropharyngeal abscess. In this process the cervical lymph nodes are also affected, and many constitutional complications, pyemic in character, may follow, which are severe and often fatal.

Spaet describes two fatal cases of general septicopyemia in which he thinks the port of entrance to have been a catarrhal affection of the tonsil. Treitel speaks of the importance of tonsillar abscess as a port of entry of general sepsis. Jessen reports four very interesting cases of sepsis following tonsillitis:

(I.) Man with exudation on the tonsils, followed by constitutional symptoms, pain in extremities, stupor followed by an erythematous

eruption, the erythema and pains in joints disappearing in eight days, with an irregular fever curve. Pus cultures of staphylococci and streptococci were obtained from the tonsils, but none in blood.

(II.) Woman who came to hospital in a comatose condition and died from uremic convulsions. The autopsy showed the superficial tonsil smooth, but on section many abscesses were found. The kidneys were filled with hemorrhagic areas and abscesses.

(III.) Chlorotic girl, with angina of left tonsil, from which pure cultures of streptococci were obtained. The angina was followed in twelve days by a wandering pneumonia (only streptococci in sputum, no pneumococci or influenza bacilli) then a pericarditis, pleuritis and nephritic irritation, evidenced by finding albumin and casts in the urine.

(IV.) Girl had angina, followed by a pericarditis, double pneumonia, and general sepsis. Author recovered post-mortem the same organisms obtained in culture from the tonsil in all the organs. In this case the tonsil superficially showed little or nothing, but on section, pus.

Du Mesnil de Rochemont describes an epidemic of angina in a hospital in Altona, thereby demonstrating the contagiousness of ordinary angina. There were 18 cases out of 67 patients, or 23 per cent. affected. In the following two months 19 were added. The angina varied from a catarrhal-follicular form to a gangrenous exudate and swelling of the peritonsillar tissue. Streptococci and staphylococci were found in culture. As complications, the author noted acute articular rheumatism three times and once each nephritis, pericarditis, endocarditis, and myocardial weakness. Dr. William Bergtold, of Denver, Col., in a personal communication has described to me an epidemic of sore throats occurring in Denver in November, 1898. He believes there must have been a very large number of cases (20,000). The disease was very contagious. There was only a slight sore throat, the pharynx had a purplish-blue look, almost edematous, with, in some cases, an occasional patch of membrane. The symptoms were much those of influenza. Dr. Bergtold, in the cases examined by him, obtained streptococci. One case observed by him (Dr. Joslyn) had two relapses, in the third of which he developed a bronchopneumonia, pericarditis, and ulcerative endocarditis, and died. He believes there were many other cases of sepsis due to the angina, unfortunately, however, not reported.

Hiddeaus reports a case of tonsillitis due to staphylococci pyogenes aureus, followed by a pleuritis, in the exudate of which he found the same organisms. Hanot also reports pleuritis following streptococci angina, as does Richardiere. Heinze, in 1261 cases of angina examined by him at the Leipzic clinic, found 38 cases of nephritis, some of which were protracted and one of which died.

Fraenkel records ten cases of leukemia; the course of each seems to point to an infection, and the early involvement of the cervical lymphatics suggests an invasion from the pharynx or tonsils. Wood, in a report of cases of Hodgkin's disease, says that in one case observed by him the infective agent gained entrance through the tonsil.

Thomas reports the case of a child 17 months old, attacked with tonsillitis sinistra, swelling of cervical submaxillary glands. On the third day otitis media of left side, then retropharyngeal abscess of right side, with pharyngitis and acute suppuration of nares and nasopharynx, then an erythema scarlatinoid, enteritis, pneumonic infarcts. On the forty-first day of disease the child died of meningitis. Cultures from the pus of the ear showed streptococci and staphylococci pyogenes aureus. The author regarded the disease as a streptococci infection. Simonini records an epidemic of five cases of infantile paralysis; as to its origin he believes it related to rheumatism and, hence, to tonsillitis. Packard says that angina may be the cause of many unexplained systemic cord diseases. K. Dehio reports a septic maculopapular erythema following follicular tonsillitis.

Through the courtesy of Dr. Grover Wende I saw a case of giant urticaria following an ulcerative tonsillitis in both tonsils. The case simulated somewhat scarlatina with angina. Cultures of streptococci were obtained from the tonsils. This case rather conforms to the later theory of urticaria, which speaks of it as due to toxic substances in the blood. Cases of urticaria following tonsillitis are described by Rosenthal, Boeck, Fowler, and others. Bull described purpura following tonsillitis. F. A. Packard reported five cases of endocarditis which were preceded by an attack of tonsillitis, in three of which it was definitely known that the heart was normal before the attack of angina. In the other cases the previous condition of the heart was not known from personal observation, but there was nothing in the past history referable to the heart.

Emil Mayer also relates the case of a man in whom the diagnosis was made of an endocarditis following tonsillar infection. Endocarditis frequently follows many of the infectious and contagious dseases. It is an early complication of sepsis, in which it may occur as a simple or ulcerative form. It follows acute articular rheumatism in 60 to 70 per cent. of cases.

It has been shown in cases cited above that sepsis may be produced through the tonsil. So far as concerns the exanthemata it is well known that a majority of them have an early angina; witness the severe throat lesions in scarlet fever, so difficult to differentiate from a true diphtheria. Abbott, although he says it is not generally accepted, states that "the clinical manifestations of the disease (scarlet fever) as well as the anatomical lesions, except those in the throat, are the result of the absorption of toxins, produced

by the streptococci located in the diseased tonsils.

Class describes a diplococcus scarlatinæ as a cause of scarlet fever, and gives a synopsis of 300 cases, showing the presence of this organism in the throats. Gradwohl, in seven cases, confirms Class's findings, and speaks of the contagiousness of inoculated mice to others not so inoculated in the same cage. Baginsky and Sommerfeld, from a study of forty-two cases of scarlet fever, found in the angina pure culture of streptococci sometimes accompanied by other cocci, and in all fatal cases (forty-two) examined by them, the organisms were found in the blood and bone marrow, from which they conclude that the streptococcus is constant in scarlet fever.

Class, in a later contribution, differs from the above-named authors in the morphology of the organisms, claiming that it is a diplococcus and not a streptococcus. He speaks for priority in discovering it, and shows that the organism is constantly present in scarlet fever; that it is a pathological organism for mice, swine, and guinea-pigs; that scarlet fever can be produced in the white swine by the diplococcus; that the morbid changes in the organs caused by the diplococcus scarlatinæ resemble those of scarlet fever; that the disease produced is of a contagious character; that the influence of the blood of a scarlet fever patient on plate-culture inhibited its growth; that the organism was found in the throat secretions of scarlet fever patients. The author's claims accord to Koch's law, but further cumulative and confirmatory evidence can only give to this organism its place as the specific organism of this disease. One proof of the tonsillar affection in this disease, as in diphtheria, is the common early involvement of the cervical lymph nodes.

Trosseau, in his writings, speaks of rheumatism as being ushered in by a sore throat. Buss emphasizes the relation between angina and acute articular rheumatism. The examinations showed the same micro-organisms for both, namely, pyogenic cocci, and he concludes that in many cases the port of entry for rheumatism is in the tonsils. Sterling also reports five cases of follicular or articular or catarrhal tonsillitis immediately followed by acute articular rheumatism, and draws the same conclusions as does Buss.

G. Block discusses the etiology of rheumatism from a clinical standpoint; *i.e.*, the relation existing between angina and rheumatism. It may follow any form of angina, from a light catarrhal to a deeply lacunar, from a herpetic tonsillitis to a peritonsillar abscess. From 20 to 80 per cent. of rheumatic cases follow an angina, the disease of the tonsil giving a direct cause for a mild, attenuated pyemia. Sahli obtained the staphylococcus pyogenes citreus from the blood, synovial membrane of joints and exudate of endo- and pericarditis in rheumatism. Singer reports having found the staphylococcus pyogenes albus in urine and blood, and later the staphylococci and streptococci. This author also speaks of the close relationship between acute articular rheumatism and osteomyelitis, and looks upon the latter as a peculiar form of pyemia in youth, staphylococcus occurring in the form of osteomyelitis in older individuals as acute articular rheumatism.

Bertram Abraham found in the exudation of so-called sore throats a staphylococcus and streptococcus. These germs may also be found in blood and urine. The presence of the germs in the joint effusion seems not only to point to their being the actual cause of the disease, but to the strong probability that they enter the system by way of the tonsil. Achalm described a bacillus found in the blood in rheumatism which is anaerobic, and whose growth is facilitated by lactic acid and prevented by salicylates.

J. Thiroloix, in a case of acute articular rheumatism complicated with pericarditis, double pleuritis, and pulmonary congestion, derived from the pleural exudate and venous blood a diplococcus and bacilli arranged in chains, with four to twelve flagellæ. In animals inoculated with the bacillus the author could induce similar morbid changes, as in acute articular rheumatism, with the exception of changes in the joints.

In the discussion on acute articular rheumatism at the last meeting of the American Medical Association, Packard, Musser, Anders, Stockton, and Favill regarded acute articular rheumatism as an infectious disease. As to the specific organism, if any one species of organism may be mentioned, further investigation will have to be made. One thing is certain: that the port of entry to the variety of organisms having to do etiologically in a majority of cases of acute articular rheumatism, is the tonsils. Packard, however, quotes several authors showing, beside the tonsils, the port of entry of germs, inducing acute articular rheumatism to have been phlegmon, otitis media, dysentery, bronchiectasis, gum boil, vaccination, etc.

There is a close relation existing between tonsillitic rheumatism, endocarditis, and chorea. MacLagan says that rheumatism is essentially a disease of the motor apparatus, and that chorea is a disease of the motor centers. Chorea affects those having a history of present or prior rheumatic attack, with or without a heart affection, and there are cases, as, for instance, those following shock, in which there is a family history of rheumatism. Bertram Abraham found in 243 cases of chorea that 53.4 had a family history of sore throat. Collins and Abrahamson, in a series of 100 cases examined, state their conviction of a definite relation between chorea and rheumatism, but do not believe in the infectious theory, claiming that the recurrences and relapses speak against it; but Triboulet in 1892 described a coccus obtained from the blood in canine chorea, and later found cocci in the blood of a case suffering from chorea and cerebral rheumatism, so Mircoli believes chorea rheum-

atica to be an infectious process allied to several forms of bacteria, of which the staphylococci are the more common, whereas Guiderossi and Genzetti show that staphylococci may be in the circulation and organism, Sydenham's chorea, without attributing to them the cause of the nervous disease. They regard it as a secondary infection, and do not believe it to be a primary cause.

Joseph H. Abraham reports a case of tonsillitis, followed by endocarditis, articular symptoms, and chorea, and Packard also reports a case of chorea following tonsillitis.

I recall the following case:

Lena Winter, aged 13 years, school girl. One sister died of dropsy; mother is rheumatic (I have since attended her for an attack of acute articular rheumatism). Had diseases of childhood. One year ago was sick seven weeks with a severe attack of acute articular rheumatism. It was followed by choreic movements and heart trouble. Patient does not learn well at school. Lost weight, has no appetite, complains of shortness of breath on exertion. Has chilly sensations, bowels irregular, and complains of sore throat. The girl is anemic, tongue coated, and a mouth breather. On pharyngeal examination I find both tonsils markedly hypertrophied, the lacunar spaces open, and some filled with detritus. Slight choreic movements are noted. Lungs negative, heart gives a soft, systolic bruit, transmitted to the axilla. Because of the previous family history, and condition of the tonsils, I advised their removal, fearing another attack of rheumatism. The patient takes it under consideration, but in three days I am called to her home. The dwelling is old, and the floor of the bedroom is lower than the ground outside. There being no cellar, the month February, the floor is cold and damp. The patient is in bed, and has the appearance of being in great pain and distress. Temperature, 102⅖° F.; pulse, 110; respiration, 32. Anemia is marked, tongue is coated, breathing is labored. The heart sound gives the systolic bruit at apex and in addition hemic bruits at the base. Lungs negative. There is a polyarthritis: phalanges, metacarpal articulations of left hand, also wrist, and elbow, and of feet and ankles. There is redness, heat, and great pain, rendering the examination of patient difficult.

The patient was sent to the General Hospital, where, through the courtesy of Dr. Stockton, I further observed the case. With large doses of sodium salicylate (1 to 2 gm.), local applications of heat, and iron and strychnin, the patient soon improved. The heart lesions and some choreic movements still remained, and she was discharged in March, 1900. She again came to my office in September, 1900, complaining of sore throat, headache, and severe pains in extremities. I removed both tonsils, since which she is doing well. The heart lesion and slight choreic movements persist.

The lesions of typhoid fever are usually located in Peyer's patches and the solitary follicles of the intestinal tract, but Banti, Vaillard, Karlinski, Vincent, Guarmieri, Kühnau, Flexner and Harris, Cheadle, Chiari and Krauss, Lartigau, Ophiils, McPhedran, and others have reported true cases of typhoid fever in which no intestinal lesions were discovered *post-mortem*. Capillari reports five cases of typhoid fever in an epidemic, in which the disease set in by a tonsillar growth. He gives similar observations by Coradischi and finds a like infection for tonsils and Peyer's patches as not unlikely, on account of the similarity of structure in the tissues. He quotes Lucatello, who found the bacillus of typhoid fever in laryngitis.

In this connection may be mentioned a case reported to me by Dr. Allen A. Jones. Girl, aged 20, went on a trolley ride, and on the following day complained of a sore throat. Temperature, 105⅘° F., and symptoms of fever. The examination of throat showed in left tonsil an acute follicular tonsillitis; cultures showed staphylococci in pure culture. On the third day the uvula and soft palate were edematous, the right tonsil showed follicular tonsillitis; temperature, 104° F. Despite cold pack and antipyretics her temperature for five days was never below 103.5° F. On the fifth day delirium was present and a Widal examination was made, which was negative, but two days following Widal was positive.

The blood showed a leukopemia; erythrocites, 4,700,000; leucocytes, 6,800; hemoglobin, 80 per cent.

Was this a mixed infection through the tonsil, or did the pyogenic infection lower the resistance to a secondary typhoidal infection? In view of the fact it leads necessarily to the suggestion that in some few cases the portal of entry for the Eberth bacillus may be the tonsillar tissue. It is worthy of notice that in the oropharyngeal cavity, next to the lips and tongue, the tonsils are seats of initial lesions of syphilis, the open mouths of the crypts presenting a favorable lodgment for the virus.

Jessen believes, as does Zarniko, that in many cases scrofulosis represents nothing more or less than a general infection from the tonsil, more especially the pharyngeal tonsil. Jessen quotes four very interesting cases which show that, after the removal of adenoids in young children, the symptoms of scrofulosis subsided. As scrofulosis is blended with tubercular adenitis of cervical and bronchial lymph nodes, the cause of a sudden eruption of a latent tuberculosis into acute phthisis, miliary tuberculosis, or tubercular cerebral meningitis is at hand. This leads to the suggestion that the tonsillar tissue may oftener than credited be the port of entrance of tubercle bacilli into the general system.

Pluder and Fischer demonstrated the presence of tubercle bacilli in the tonsil limited to the mucosa in five out of thirty-two cases examined, and believe this condition represents a latent primary form of the disease. They quote Lermoyez,

who in thirty-two cases examined, found tonsils tuberculous twice; Gottstein, in thirty-three cases examined, four times, and Brindel, in sixty-four cases examined, eight times.

Friedman, in a careful histological examination of 145 cases, in 54 of which the tonsils were removed during life, and in 91 *post-mortem*, from young children, says that tonsillar tuberculosis occurs as often primarily through infectious feeding as secondarily from the sputum, and he concludes that the tonsils, especially in small children, are not without importance as portals for tuberculous infection.

To me the following case illustrates the relation of tonsillar disease and pulmonary tuberculosis:

Sam Aguglia, aged 21 years, a barber, has been under observation for two years; never, however, for any pulmonary complaint. In several examinations of the chest made during that time no evidence of pulmonary disease was noted. The family gives no tubercular history. In August the patient came to me complaining of malaise, weakness, cough, and night-sweats. There had been hemoptysis a number of times, a few days prior to his visit, which the patient interpreted as from his stomach. The physical examination reveals along the left supra- and infraclavicular space, harsh breathing, sub-crepitant râles, and bronchophony. In the mammary region of same side, broncho-vesicular breathing, and friction râles. In the right apex, increased vocal fremitus and a few râles. The left and right suprascapular regions showed increased vocal transmission, bronchial breathing, and fine crepitation. The cervical lymph nodes are enlarged. The examination of the sputum shows tubercle bacilli. On examination of the pharynx the right tonsil is markedly hypertrophied. It was removed, not in the hope of offering anything in the way of treatment, but for histological examination. No tubercles could be detected, but the lymphoid tissue is increased, as is connective tissue stroma; the epithelium of crypts is increased. Though no tubercle can be detected in the sections thus far examined, I am nevertheless convinced that because of the enlargement of the cervical lymph nodes the tonsil is the portal for the tubercle bacillus.

In conclusion it has been shown:

1. That the normal tonsil has a physiological function, probably protective to the organism.

2. That being in itself often diseased, the physiological function of the tonsil is impaired, and that instead of being protective it is often the nidus for the growth and distribution of pathogenic organisms and their poisonous products into the system.

3. That many grave and fatal general infections have their origin in the tonsils.

4. That if the exanthemata, especially scarlatina, are of bacterial origin, the tonsil acts in part as port of entry.

5. That acute articular rheumatism and the diseases often associated with it, endocarditis and chorea, in a great majority of cases are due to the action of attenuated bacteria, their toxins, or both, entering the general system through a diseased tonsil.

6. That in rare cases of typhoid fever in which no intestinal ulcerations can be demonstrated, the similarity of the tonsillar tissue and Peyer's patches suggests the portal of entry to the Eberth bacillus in the tonsillar tissue.

7. That scrofulosis is often associated with diseased tonsillar tissue, and that the tubercle bacillus often enters the system via the tonsils.

8. That the tonsil is too seldom examined at necropsy, and that much light might be shed on fevers of uncertain origin by their bacteriological and histological examination.

Persistent Hiccough.

A method of treating persistent hiccough, which is not so widely known as it deserves to be, is the one first suggested by Laborde. It consists in drawing the tongue outward and upward, and subjecting it to rhythmic traction from 12 to 14 times a minute. Noir has recently reported two cases in which this treatment proved very successful. The first case was in a girl of 6 years, extremely nervous, who had paroxysms of hiccoughs of such severity that death from exhaustion was feared. Traction on the tongue, however, for a minute and a half, immediately stopped the spasm and it did not recur. The second case was in a tuberculous patient with diabetes, who had been troubled with hiccough for several days. After all forms of medicinal treatment had been used without avail, traction on the tongue was tried and it proved completely successful. In two cases occurring within our own experience Laborde's treatment gave speedy relief.—*Amer. Medicine.*

The Journal.

"The New York State Medical Association has departed from its old custom of publishing a volume of transactions and is now issuing the proceedings and papers of the Society in the form of a monthly journal, *The New York State Journal of Medicine*, a copy of which we have received. We congratulate the Society on this advance, for such we regard it. It is edited by a Committee on Publication, consisting of Dr. J. W. S. Gouley, F. H. Wiggin, Stephen Smith, W. R. Townsend, and James Hawley Burtenshaw, Chairman."—*Hot Springs Med. Jour.*

Acute Diarrhea.

℞ Sodium bicarbonate 5i
Aromatic spirit ammonia.... fl. 5iij
Comp. tinc. cardamon..... fl. 5vj
Aq. cinnamon..... fl. 5vj
M. Sig. Two tablespoonfuls every two or three hours.—*Medical Record.*

The New York State Journal of Medicine.

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THE NEW YORK STATE JOURNAL OF MEDICINE is published on the first day of each month by The New York State Medical Association. It supersedes the annual volume of *Transactions* formerly issued by the Association. It aims to be a direct medium of communication between the members of the Association, and to widely disseminate Association news. Scientific Articles, Clinical Memoranda, and News Items of interest are solicited for publication. Communications should be typewritten. Reprints of Original Articles will be furnished at cost price, provided a request therefor accompanies the manuscript. Price-list on application. The Committee on Publication does not hold itself responsible for individual views of correspondents.

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THE AMERICAN MEDICAL ASSOCIATION MEETING.—The American Medical Association has met, has discussed scientific matters of great moment, has transacted important business of a character more vital to its development than ever before, and has adjourned. With the business part only have we to do here. The details of the organization-plan adopted by the association are now known to all. Lack of space forbids a review of its many admirable provisions at this time, but to one clause we call especial attention, as it embodies the principle upon which our own association is founded. Section 2, Article III. reads as follows: "Permanent members will consist of such members of the State societies, together with their affiliated local societies, entitled to representation in this association as shall make application for admission, in writing to the treasurer, and accompany said application with a certificate of good standing signed by the president and secretary of the society of which they are members, and the annual dues." The Judicial Council, in discussing this section, put itself on record to the effect that a permanent member of the association must be a member of the affiliated State and local societies *in the State and county in which he holds a legal residence.* The effect of this ruling will soon become apparent. Many members of the American Medical Association at the present time are not affiliated with their local organizations, having joined the former through affiliation with what will now be considered alien societies, or with an affiliated organization of another State.

The several State associations now will be called upon to reorganize on the lines first proposed and so successfully carried out by the New York State Medical Association, each having as component parts the county associations within its jurisdiction. Even a superficial study of the plan of reorganization adopted by the national body shows that it is based on and is an elaboration of our own plan. More complete approval of the policy of the State Association could not be desired. Already several other State bodies have followed our example, and requests are constantly received for copies of our charter and by-laws from those contemplating reorganization.

* * *

In the May number of the JOURNAL we presented an admirable paper by one of our members on the reason for the existence of the New York State Medical Association. The arguments brought forward in favor of unity and oneness of purpose were so logical, so unanswerable that more need not be said on the subject here. But a brief résumé regarding the growth of the association may not be out of place. At the date of the first annual meeting, held November 18, 1884, the total membership was 514; in 1890 it had increased to 733; in 1899 it had dropped to 616, and during the year 1900, to 562, 54 members having been dropped for non-payment of dues. A charter was granted to the association by the Legislature on April 14, 1900, and at the next annual meeting, held in October of last year, a complete reorganization was effected. The affiliated county associations quickly fell into line, new associations were formed in counties in which there had been no representation, delinquent members willingly paid up arrears of dues, and in less than *eight months* the membership roll had increased to more than 1,500. The scheme of reorganization had been so carefully thought out in all its details, and advantages of membership in the association were made so man-

ifest that this healthy growth steadily continues, and it is confidently expected that before the beginning of next year at least 2,000 members will have been enrolled.

In previous years, that is, since 1882, the representation from this State at the meetings of the American Medical Association was very inadequate to the interests involved. The New York State membership in the national body, likewise, was insignificant, until two years ago being not more than 250; at the present time this membership approaches 1,200, a very large number from one State when one considers that the total membership is about 10,600 from forty-six different States and Territories.

* * *

A special train of six cars this year carried the delegates of the association from New York to the meeting at St. Paul, the representation from this State being among the largest. The last time an annual meeting was held in New York State was in 1880; the meeting of 1902 will be held at Saratoga Springs. This choice is but an additional indication of the appreciation of the work done by our State body.

No greater compliment could have paid our association by the profession of this country gathered at St. Paul than by the selection of our president, John Allan Wyeth, to hold the highest office in its gift—the presidency of the American Medical Association. The election was a graceful and well-deserved compliment to Dr. Wyeth as a man and as a surgeon of world-wide renown; but it also demonstrated in an unequivocal manner that the entire American medical world has watched with keen interest the work that the New York State Medical Association is carrying forward to such a successful issue, and has taken this method of stamping it with the seal of its approval.

* * *

First District Branch Association, Annual Meeting.—The annual meeting of the First District Branch Association was held at the Butterfield House, Utica, May 21, 1901. The following officers were elected for the ensuing year: President, C. B. Tefft, Utica; vice-president, J. W. Douglas, Booneville; secretary and treasurer, E. H. Douglas, Little Falls. F. J. Douglas, Utica, was elected member of the nominating commit of the State Association. The next annual meeting will be held June 3, 1902.

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Oneida County Medical Association.—The Oneida County Association held a meeting at the Butterfield House, Utica, May 21, 1901. James Hunt of Utica, and W. B. Reid of Rome, were elected Fellows of the State Association and John Groman of Utica, and J. O. Stranahan of Rome, alternates. F. J. Douglas of Utica was elected a member of the nominating committee. The following were elected to membership: Dr. B. S. Moore, Health Officer of Syracuse; and Dr. Clarence J. Slocum, assistant physician, State Hospital, Utica.

President-Elect Dr. John A. Wyeth.*—The newly elected President of the American Medical Association, Dr. John Allan Wyeth, is a Southerner, having been born May 26, 1845, in Marshall County, Ala. His father was Judge Louis Wyeth, of Alabama; his grandfather, John Wyeth, one of the early publishers of Philadelphia. His early education was received at the Lagrange Military Academy and during the Civil War he served as a private soldier in the 4th Alabama Cavalry. Some of his expe-riences therein have served for subjects of his later literary work. His medical studies were

JOHN A. WYETH, M.D., LL.D.,
President of the American Medical Association; President of the New York State Medical Association.

carried on in the University of Louisville, and later at Bellevue Hospital Medical College, New York. After a brief period of practice in Alabama he removed to New York City, where he quickly became a prominent figure in the profession, taking almost at once a position on the teaching force of his alma mater, and also an active part in society proceedings and medical matters generally. Since then his record is before the profession; it is nedless to say that it is an honorable one, and one that includes numerous and valuable contributions to the sum of

*From the Journal of the American Medical Association.

medical knowledge. It is indeed by his practical work in surgery that he is best known to the general profession, and this has made his name a familiar one to every practising physician. His contributions to surgery and other departments need not be enumerated; they include not only many articles in the current medical literature, but also a well-known text-book and other works of note. It is not only as a scientific medical writer that he is known, he has contributed also to general literature, his best known work being his life of General N. B. Forrest, which has a decided historic as well as a literary value.

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Third District Branch, Annual Meeting. —The seventeenth annual meeting of the Third District Branch Association was held at the rooms of the Business Men's Association, Ithaca, June 13, 1901. The meeting was called to order at 11 A. M., by the president, Dr. Theron A. Wales, of Elmira. The minutes of the previous meeting were read and approved. The president appointed Dr. J. J. Sweet, of Unadilla, and Dr. Frank Kenyon, of Scipio, a committee on registration. It was moved and seconded that the president appoint a committee of three to prepare and present to the meeting for adoption by-laws for the Third District Branch Association. This resolution was passed, and the president appointed Drs. John C. Fisher, of Elmira; Le Roy D. Farnham, of Binghamton, and W. L. Ayers, of Owego, as this committee. Dr. Frederick H. Wiggin, of New York, acted upon this committee in an advisory capacity. The by-laws, as presented by the committee, were adopted. The following new members were elected: Drs. B. S. Moore, Charles B. Gay, and O. A. Thomas, of Syracuse; V. A. Moore, of Ithaca, and Judson Beach, of Etna.

Dr. V. A. Moore, of Cornell University, read a paper on "Texas Fever, or Malaria in Cattle, with Special Reference to Its Mode of Transmission." Some ticks were shown which act as the means of transmission in Texas fever, in the same way that the mosquito acts as the means of transmission in malarial fever.

The afternoon session was called to order at 3 o'clock, and the Committee on Nominations reported. The following officers were elected: President, Dr. Elias Lester, of Seneca Falls; secretary, Dr. B. S. Moore, of Syracuse; treasurer, Dr. Chauncey P. Biggs, of Ithaca; members of the Nominating Committee of the State Association, Dr. J. G. Orton, of Binghamton; Dr. C. D. Ver Nooy, of Cortland. The address by the president, Dr. Theron A. Wales, on "The Outlook for the Medical Practitioner in the New Century," was then delivered. Dr. Wales compared the resources and equipment of the physician of 1801 with those of the physician of 1901. In 1801, he said, the medical student began his medical education by acting as driver for the physician. When he learned to provide for the wants of the physician's horse and became proficient as a driver, he was allowed to pound up the crude drugs that were used for medication in those days. Then he was allowed to assist the physician in minor operations. When he felt that he had acquired sufficient knowledge he hung out his shingle and bloomed out as a full-fledged physician and surgeon.

Dr. B. S. Moore, of Syracuse, read a paper on "The Health Bureau of the Department of Public Safety." Dr. Frederick H. Wiggin, of New York, and Dr. A. A. Hubbell, of Buffalo, made reports of the meeting of the American Medical Association recently held at St. Paul. The following papers were also read: "Syringomyelia," by Dr. Luzerne Coville, of Ithaca; "The Nature and Treatment of Strabismus," by Dr. A. A. Hubbell, of Buffalo; "Gynecological Notes," by Dr. Frederick H. Wiggin, of New York; "Notes and Specimens from Some Operative Cases of Appendicitis," by Dr. H. B. Besemer, of Ithaca; "Reminiscences," by Dr. I. M. Farrington, of Binghamton; "Otitis Media Purulenta: Indications for Operation," by Dr. John Kiskendall, of Ithaca. The meeting adjourned at 6 P. M., to meet next year in Syracuse.

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Orange County Medical Association.— The regular monthly meeting of the Orange County Association was held at the office of Dr. M. C. Conner, the president, at Middletown, N. Y., Wednesday, June 19, 1901. Drs. J. W. S. Gouley and Parker Syms, of New York, were present by invitation, and delivered interesting addresses on the palliative and operative treatment of prostatic enlargement. The Bottini operation was mentioned only to be condemned. Enucleation, with or without the use of Syms' special rubber retractor, by incision through the perineal body, was recommended as the method of choice. Drs. Gouley and Syms were given a vote of thanks for their interesting and valuable contributions.

Dr. W. E. Douglas, chairman of the Committee on By-laws, reported that he had received bids for the printing of the by-laws, and he submitted them to the association for approval. It was voted that Dr. Douglas be authorized to procure the necessary number of copies for distribution among all the members of the medical profession in Orange county. Dr. Douglas also volunteered to present a paper at the next meeting of the association on his impressions of the recent meeting of the American Medical Association at St. Paul, to which he was a delegate from Orange county. Dr. Albert W. Preston, of Middletown, was elected to membership. Applications for membership were presented from Dr. W. I. Purdy of Middletown, and Dr. L. G. Distler of Westtown.

The following were present at the meeting: Drs. Townsend of Newburgh, Woodhull of Monroe, Wise of Turner, Dennis of Unionville,

Evans and Distler of Westtown, Douglas, Conner, Mills, Purdy, Redfield, Preston and Canfield of Middletown. An interesting feature of the meeting was that Drs. Mills, Townsend and Preston had been house surgeons at Bellevue Hospital, New York, under Dr. Gouley, and therefore he was able to again welcome his former internes and talk over old times, and they, in their turn, were pleased to greet their former chief. The next meeting of the association will be held at Middletown, July 17, 1901.

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THE MEDICAL DIRECTORY OF NEW YORK, NEW JERSEY, AND CONNECTICUT.—The Committee on Publication calls the attention of members of the State Association and other physicians whose names should appear in the Directory to the fact that many of them have failed to reply to letters of inquiry as to the correctness of their names and addresses. In many cases two and three such communications have been sent and no notice taken of them by the recipients who, of course, will have no just cause of complaint of omissions or inacuracies in the lists of names. To avoid mistakes of any kind the committee will be thankful if every physician will send some answer even if his name and titles had appeared correctly in the last volume of the Directory.

The committee appointed by the New York County Medical Association to assist the Committee on Publication of the State Association in correcting street lists for the Directory has done its work well. Practically every street from the Battery to the Bronx in New York City has been actively canvassed. This work has been supplementary to the thousands of postal cards sent out by the editor of the Directory during the past few weeks. Dr. Eden V. Delphey, the chairman of the County Association's committee, acknowledges his indebtedness to the following, who have been untiring in their efforts to aid the committee: Drs. E. M. Alger, Mary Appleton, J. C. Bryan, J. B. Cooke, W. S. Cooke, F. W. Davis, R. C. Davis, A. Denenholz, L. Fischer, J. P. Foland, E. Fosket, I. Frank, G. Harrison, J. W. Hedden, J. M. Heller, S. Herst, R. L. Irish, C. R. Jackson, W. B. Jennings, F. Kleeberg, G. B. McAuliffe, M. L. Maduro, James Moran, J. J. Nutt, S. Oppenheimer, W. W. Palmer, T. F. Reilley, Henry Roth, G. A. Saxe, H. M. Silver, J. E. Traub, A. B. Tucker, S. Yankauer, L. W. Zwisohn.

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THE N. Y. S. M. A.'S SPECIAL TO ST. PAUL.—The following account of the trip of the delegates from the New York State Medical Association on their special train to the meeting of the American Medical Association at St. Paul will be read with interest:

"As the last boat had arrived at Weehawken and all was ready to start, Mr. Neil Mooney, of the West Shore Railroad, went rapidly through the train to see that each had his tickets. He accompanied us to the end of his railroad and left us in charge of Mr. George Flint, of the Wabash Railroad, who in turn left us in charge of the agent of the C. M. & St. P. R. R., who remained with us until we reached St. Paul. Each one of these looked after our comfort, telegraphed ahead for meals, received newcomers at various points along the line, saw them safely placed, and was tireless in his attention. To their foresight we owe the fact that we were always on time and that we arrived at our destination fifteen minutes ahead of the schedule hour.

"A variety of traveling caps soon adorned the heads of most of the gentlemen. The ladies made themselves comfortable; some took magazines or books from their grips, while many of the men gathered in the smoker. Here the story-tellers soon became busy, and each tale brought out another. Most interesting of all was our Grand Army comrade. His fund of anecdote was large and so interesting, because so personal, and it was all deftly drawn out by another who knew just how to elicit the information. What a clever attorney the latter would have made! The camp fires were lit again, and interesting and entrancing were the tales of hairbreadth escapes 'mid shot and shell. As the stories were told, one of our number jotted down the main facts of each pat anecdote and we expect to hear from him soon as having a large fund of good stories which we hope he will not claim as original.

"We stopped at Kingston at midnight, and some made a wild rush for a saloon where sandwiches were to be had. It was a one-hundred yard dash, and was won by Dr. Blank, who took the prize, which consisted of four sandwiches. About seven other contestants came in neck and neck, and as there were but two sandwiches left, five had to go without the midnight feast. An hour or so later we stopped at Ravena. Additions were made to our party, and as it was now 1 A. M., we thought it time to go to sleep. Passing through Buffalo, a glimpse of the buildings of the Pan-American Exposition was had, and at 9.30 A. M., Niagara Falls was reached. This last part of the trip gave our historian a chance to show his intimacy with the struggles of the early settlers in this part of the country and his faith in Parkman as a recorder of those events. Breakfast over, the six hours ensuing gave ample opportunity for a thorough view of the Falls with its beautiful park. The sun shone warmly, and the pleasure of our stay was marred only by the serious illness of one of the party, Dr. Daniel W. Marston of New York, whom we were compelled to leave behind when the special pulled out.

"A few hours' ride brought us to St. Thomas, Canada, where we were to have supper at the main hotel. Two trolley cars took us from the depot. We noticed that the younger men of the party made a dash for a certain table, and saw that the reason lay in the fact that a rosy-cheeked

beauty with Titian locks presided there. Our own table had a mature and toothless lady to preside, and it was soon seen that the advent of so large a number swamped the resources of the hotel in the waitress line, for the meal was punctuated with the sound of smashing of dishes as the excited bearers ran into each other. The Titian beauty was a fixture and things went smoothly enough with her. She made herself quite at home, and promptly answered the sallies of the Pennsylvania and Connecticut bachelors, coyly returned the smile of the New Yorker, and took her tips with gracious condescension. At the end of the meal she dropped a dish which broke, of course, whereupon the ten at her table applauded heartily, but she gave no encore. She was the subject of much pleasant raillery during the evening.

"We crossed to Detroit by ferry that evening and the next morning found us whirling through Michigan. A dining-car served breakfast very well indeed, and soon cards were indulged in, and whist parties were in active progress. We now passed through a very fertile country, and saw lake after lake, mountain upon mountain, and town after town. An attempt to describe them would take page after page, perhaps to be an oft told tale, and my mentor looking over my shoulder says 'be brief.' At La Crosse, Wis., we had dinner, and were joined by Dr. Christiansen, of St. Paul, a member of the Committee on Arrangements, who came to La Crosse to welcome the New York delegation.

"A Council meeting was held in the state-room of the president of the New York State Medical Association and the subcommittee on the plan of reorganization of the American Medical Association presented its report. This report was accepted and a call was issued for a full meeting of the delegates from New York State at the Ryan Hotel, St. Paul, that evening. At Hastings, Minn., thirty miles from St. Paul, there was a stop of five minutes, and the occupants of each car came together on the platform. Dr. E. Eliot Harris of New York City mounted a truck and said: 'Ladies and gentlemen: Our friend, Dr. Wiggin, has labored earnestly and well for our comfort and happiness. We have all been benefited by his thoughtfulness and care; the delegates have unanimously endorsed the following resolutions:

" 'On board the special train to St. Paul, we, the delegates to the American Medical Association, recalling the pleasant companionship of our friend, Dr. Frederick Holme Wiggin, do hereby subscribe ourselves in sincere appreciation of his many kindnesses.' This resolution is accompanied by five pages of signatures, numbering one hundred and four.

"Dr. John A. Wyeth then said: 'Ladies and gentlemen: Permit me to present to you a gentleman who needs no introduction, 'Frederick the Great.' He has made this train a 'home' to you and but for a letter he would be 'waggin' instead of Wiggin.'

"Dr. Wiggin, in response to hearty cheers and applause expressed his thanks for the compliment intended, and said that all the nice things really applied to Dr. Wisner R. Townsend of New York City, chairman of the transportation committee, who was unavoidably detained at the eleventh hour. The trip had been one of unalloyed enjoyment and he was glad to greet all once more before dispersing at St. Paul.

"To the cry of 'all aboard' we re-entered the train, arriving at St. Paul fifteen minutes ahead of schedule time. Of our most pleasant trip we have but a delightful reminiscence."

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Chautauqua County Medical Association. —An adjourned meeting of the Chautauqua County Association was held at Jamestown, N. Y., May 21, 1901, at which a constitution and by-laws were adopted and the organization perfected. The following officers were elected: President, Dr. Thomas D. Strong, Westfield; first vice-president, Dr. William M. Bemus, Jamestown; second vice-president, Dr. O. C. Shaw, Cassadaga; secretary and treasurer, Dr. H. A. Eastman, Jamestown. The following committees were appointed: On legislation, Drs. Laban Hazletine, Jamestown; J. R. Smith, Conewango; L. P. McCray, Clymer; on public health and charities, Drs. V. D. Bozovsky, Dunkirk; A. A. Becker, Jamestown; E. A. Rood, Westfield; on ethics and discipline, Drs. E. A. Scofield, Bemus Point; Morris N. Bemus, Jamestown; O. C. Shaw, Cassadaga. It was decided to hold three meetings each year, on the second Tuesday in January, May and September.

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Death of Dr. Daniel W. Marston.—The members of the party which went to St. Paul by the State Association's special train, as well as a wide circle of friends in New York and elsewhere, will learn with sincere regret of the death of Dr. Daniel W. Marston from pneumonia at the Cataract House, Niagara Falls, Sunday morning, June 9th. He had complained of illness previous to leaving New York, but by the time the Falls were reached he had become much worse, and it was found necessary to remove him from the train. Dr. William H. Hodge, of Niagara Falls, who was summoned to attend him, writes as follows: "Dr. Marston's case ran about the usual course for the first few days and he appeared to be doing very well up to Friday, June 7th, although, previous to this, he suffered a great deal from pain in the head. The latter part of the week he developed a typhoid condition and a low form of delirium. His heart began to fail, and the left lung, as well as the right, became involved. Inhalations of oxygen, strychnin and nitroglycerin, hypodermically, and saline infusions were employed, but to no effect. His brother, Dr. E. P. Marston of Maine was with him constantly, and his mother and sister came on before he died."

Dr. Daniel W. Marston was the youngest son

of the late Dr. D. F. Marston of Monmouth, Maine, and at the time of his death was 26 years of age. He was a man of great ambition and energy, which secured for him an enviable reputation in his profession. He was graduated from Bowdoin College and afterward was connected with the Hospital for Ruptured and Crippled, the City Hospital on Blackwell's Island, and the Post-Graduate Hospital, New York City. He also held the positions of lecturer at the Post-Graduate Medical School and visiting surgeon to Randall's Island Hospital.

Dr. Marston was a frequent contributor to medical literature, and was to have presented a paper before one of the sections at the recent meeting of the American Medical Association at St. Paul. His keen intuition and his power of concentration in his work gave promise of great results in the future. His associates and friends join in regret at the sudden cutting short of so promising a career.

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Presentation to Dr. J. M. Crawe of Watertown.—A number of the members of the Jefferson County Medical Society recently presented Dr. J. M. Crawe of Watertown, N. Y., with a testimonial of their regard on the occasion of his seventieth birthday anniversary, the gift being a goldheaded cane. The presentation was made by Dr. J. R. Sturtevant of Theresa, his speech of felicitation being a most happy one. He said, in part:

"It is a great personal pleasure to me this evening, though I feel wholly unqualified to perform the duty, to remind you of some things that in the natural modesty of your mind you may have forgotten. Forty-two years ago you began the practice of the healing art, and during all these years you have lent your best energies for the benefit of your fellow men. Your courage has never faltered in all those things which tend to maintain the true dignity of the noblest profession on earth. Neither did it falter in those dark days of the country's history when you gave your life, so to speak, and your best energies to serve the interests of your country. It is pleasant to reflect that during all these years you have lent your best energies to maintain the character of the medical profession. You have never been known to degrade it, but have always endeavored to build it up and make it known as the highest and holiest of callings. In your personal relations with your co-workers you have ever manifested a generous disposition. Your wise counsel has ever been at our command, and you have ever sought to defend us in our rights and have ever given us words of encouragement at all times; and so your brother physicians desire to place in your hands this emblem of that assistance that they have ever leaned upon and to express the wish that your declining years be spent in the greatest possible comfort and health. Though this event marks what is commonly considered as the alloted span of the age of man, we entertain the hope that we may enjoy for many years to come your wise counsel and your desirable association; and when at last you have finished your work here and the Great Physician calls you to the higher life, may this token be changed and give place to a scepter and may you hear from the lips of the Master the welcome words: "Well done, thou good and faithful servant. Thou hast been faithful in a few things; I will make thee ruler over many things, and inasmuch as you have done it unto the least of these you have done it unto Me."

The following physicians were present: J. D. Spencer, Gordon P. Spencer, F. R. Calkins, E. S. Willard, W. J. Kellow, O. C. Eastman, J. A. Barnette, A. Joslin, B. C. Cheeseman, H. H. Deane, W. N. Brown, G. G. Sabin, E. A. Chapman, of Watertown; D. C. Rodenhurst, Philadelphia; J. R. Sturtevant, Theresa; P. H. Johnson, Adams; F. W. H. Massey, Brownville. County Judge E. C. Emerson, City Treasurer Frank Walts, George S. Hooker and J. M. Dorsey were also present.

Dr. Crawe is one of the charter members of the New York State Medical Association, having withdrawn from permanent membership in the State Medical Society in 1884.

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Information Wanted by the Committee on Vaccination.—At its May meeting, the New York County Medical Association appointed a special committee to inquire into the expediency of making vaccination compulsory in the county of New York. The report will be made at the October meeting and probably presented to the State Association for consideration. The chairman of the committee, Dr. F. W. Loughran, will be grateful for any information bearing upon this important question and for the views of physicians regarding the limitations of compulsory vaccination. He will also be thankful to chiefs of local boards of health or health officers in country districts for such information as they will kindly impart. Communications should be addressed to Dr. F. W. Loughran, 744 Prospect avenue, Borough of the Bronx, New York City.

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Oneonta's New Hospital.—The Aurelia Osborn-Fox Hospital, at Oneonta, N. Y., erected by Col. Reuben Fox of New York, in memory of his wife, is ready for occupancy. The building is neat and substantial and the donor has spared no expense in its equipment. About twenty-five patients can be accommodated. The staff of the hospital is made up as follows: Consulting physicians, O. W. Peck, S. G. Pomeroy; attending physicians, A. H. Brownell, F. H. Hurst, G. S. Olin, A. A. Reid; attending surgeons, A. W. Cutler, J. C. Smith, M. Latcher.

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Membership in the American Medical Association.—The following is a copy of the re-

port of the Judicial Council presented at the recent meeting of the American Medical Association at St. Paul:

The request of the New York State Medical Association that the name of Dr. ——— of New York City be dropped from the roll of members of this association and the protest of Dr. ——— against such action were considered, and as it appeared that Dr. ———'s name had been dropped from the roll of members of the New York State Medical Association for non-payment of dues for the years 1898, 1899 and 1900 his name was ordered to be dropped from the roll of members of the association in accordance with the by-laws, until all such arrears of membership have been paid up and he has been reinstated to membership by his local society and the secretary so notified.

The request of the Jackson County, Missouri, Medical Society that the name of Dr. ——— of Kansas City, Missouri, be dropped from the roll of members of the American Medical Association, because he is not a member of a local society in affiliation, was granted and his name was ordered stricken from the roll of members.

The protest of the New York State Medical Association to the unintentional violation of the by-laws of the association relating to members by invitation or guests was considered and it was ordered that the secretary call the attention of the officers of the association and of the sections to this by-law and inform them that it must be enforced hereafter.

The request of the New York State Medical Association that the name of Dr. ——— of Buffalo, N. Y., be dropped from the membership roll of this association on the ground that he is not a member of the Erie County Medical Association, the local affiliated society of this association, was granted, but the secretary was first ordered to inform Dr. ——— of his violation of the by-laws relating to the membership and to request him to secure membership within a reasonable time in the Erie County Medical Association, and that in default of this his name would be dropped from roll of members of this association.

The secretary was also ordered to drop from the roll of members the name of Dr. ——— of Elkhart, Ind., as he had ceased to be a member of his local affiliated society, the Council having decided that a member of this association forfeits his membership when he ceases to be a member of a local affiliated society either county or State where one exists.

The secretary of the association, having called the attention of the Council to the fact that there are at the present time on the roll of members of the association the names of men who, having obtained their membership from an affiliated association, have removed their residence to another county or State and have not joined the local affiliated society in the place of their new residence, the secretary was ordered to inform such gentlemen that they were acting in violation of the by-laws of this association relating to membership and to request them to at once obtain membership in an affiliated society in the place of their legal residence and in default of this within a reasonable time, to drop their names from the roll of members.

The secretary having asked for an interpretation by the Council of the following sentence in the by-laws relating to membership, to wit: "Nor shall any person not a member of a local medical society," it was decided that this clause be considered to mean a local affiliated society in the county or State in which the applicant resides.

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Cortland County Medical Association.—The regular meeting of the Cortland County Association was held at Cortland, N. Y., on the evening of May 17th. The paper of the evening was read by Dr. S. J. Sornberger, and was on "Scarlet Fever." The members discussed the paper in detail and Dr. Sornberger was thanked for the masterly way in which he presented the clinical features of the disease.

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Ulster County Medical Association Organization.—A meeting for the purpose of organizing the Ulster County Medical Association was held at Kingston, N. Y., June 20, 1901. The following members of the Fifth District Branch of the New York State Medical Association residing in Ulster county were present: Drs. Henry Van Hoevenberg, Mary Gage-Day, Alexander A. Stern, Frederick Hühne, Albert Reed, Alice Devine, R. L. Thompson, and J. L. Preston. Drs. John Allan Wyeth, president of the New York State Medical Association; Frederick Holme Wiggin, secretary; Emil Mayer, president of the Fifth District Branch Association; Parker Syms, president of the New York County Medical Association, and J. W. S. Gouley, all of New York City, were also present.

Dr. Mayer called the meeting to order. Dr. Frederick Hühne was elected president, Dr. J. L. Preston, vice-president; Dr. Alice Devine, secretary, and Dr. Alexander Stern, treasurer, for the ensuing year. Dr. Henry Van Hoevenberg was elected Fellow of the State Association, and Dr. Mary Gage-Day, alternate. Dr. Albert Reed was elected member at large of the Executive Committee. The following new members were elected: Drs. George S. La Moree, Alexander Stillwell, and Elijah Osterhout.

After the business meeting those present adjourned to the dining-room of the Huntington Hotel, where they were joined by a number of friends and partook of a course dinner. The committee having the dinner in charge was composed of Drs. Gage-Day, Van Hoevenberg, Hühne, Stern and J. L. Preston, and these were assisted by a reception committee of ladies, Mrs. Van Hoevenberg, Mrs. James L. Preston, Mrs. Robert R. Thompson and Mrs. D. W. Preston acting in this capacity. The affair was very enjoyable, Dr. Van Hoevenberg acting as toast-

master. The following toasts were responded to in a most happy manner: "The President of the American Medical Association," Dr. Mary Gage-Day; "The Medical Profession of Ulster County," Dr. John Allan Wyeth; "Our Guest, One of the Original Seventy-six," Dr. Frederick Hühne; "The Past and the Present," Dr. J. W. S. Gouley; "The Medical Directory," Dr. James L. Preston; "The Original Members," Dr. Frederick Holme Wiggin; "Perfect Organization of the Fifth District," Dr. Alice Devine; "The County Associations in the Fifth District," Dr. Emil Mayer; "The Largest County Association," Dr. Robert R. Thompson; "The Physicians of Kingston," Dr. Parker Syms; "Medical Legislation," Dr. Alexander Stern.

The following letter from Dr. E. Eliot Harris of New York, who was unable to attend the meeting, was read:

CHICAGO, June 19, 1901.

Dr. Mary Gage-Day, Kingston, N. Y.

MY DEAR DOCTOR: I am sorry that I will be unable to meet the members of the medical profession in your county on Thursday evening next, as I had planned to do at a recent meeting held at the house of Dr. Emil Mayer, the president of our District Branch Association. I send this letter to you in order to make you feel that my heart and soul are in the movement to unite the medical profession of this State along the lines establishing a closer community of interests and the maintaining of the honor and character of the profession by increasing the respect of the community for the individual members of our State Association, to which end the officers and the standing committees of the State Association are earnestly working. I am firmly convinced that the hour for the reorganization of the medical profession of the United States has arrived. The eyes of the medical profession of all the States are directed toward the State of New York for inspiration and guidance in the matter of making the medical profession as a whole a powerful influence in the community for its general welfare and everlasting good. The ways and means by which this most desirable end shall be accomplished must be pointed out by the medical profession of the State of New York, and it is gratifying to know that as far as we have gone, the principles underlying our reorganization have been adopted by the national body and through it by other State associations. When you consider how many petty jealousies are wiped away by a closer communion in county medical associations, you will understand the great fundamental idea in the reorganization of our State Association when it decided to sink its individuality for the greater good of the medical profession of our State by constituting the federated county associations as the State Association.

We realize that there can be no State Association worthy of the name that is not made powerful through the activity of its component county medical associations. The county associations of the State of New York united as one body stand for something better than the medical profession of this or any other State has ever known. It means that the medical profession in this State shall be the only guide of the general public in matters of legislation relating to sanitation and the care of public health; that the interests of the general public and of the medical profession are and must ever be made identical. That which benefits the medical profession scientificially and materially, secures to the public physicians whose characters are trained and moulded along the lines of truth and science and away from pure commercialism in medicine.

The material interests of the medical profession are never identical with those of trusts, because the interests of trusts are separated from the interests of the general public, while those of the medical profession are one and inseparable.

I call attention to our Medical Directory and JOURNAL, which accept only ethical advertisements, namely, those whose formulæ are published, and I can assure you that the *Journal of the American Medical Association* will soon come up to the standard set and maintained by the New York State Medical Association.

During my recent trip through the Yellowstone I had occasion to bring this matter to the attention of some of the trustees as well as to the editor of the *Journal of the American Medical Association*, and I can assure you that the high standard maintained by the State Association will soon be followed by our national *Journal*. The life of the New York State Medical Association rests in the power and influence of its officers and standing committees to increase the power and influence of the individual members of the association throughout this great State.

I wish you God speed and success in organizing the Ulster County Medical Association, and beg that you will count on me ever for encouragement and material support.

Yours very sincerely,

(Signed) E. ELIOT HARRIS.

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THE IMPORTANCE OF ORGANIZING COUNTY MEDICAL ASSOCIATIONS.—The following communication has been received from Dr. John Allan Wyeth, president of the American Medical Association and the New York State Medical Association:

"It should be a matter of pride to every member of the medical profession in the State of New York to make the forthcoming meeting of the American Medical Association, to be held June 10 to June 13, 1902, at Saratoga Springs, the most successful meeting in the history of the association. It will be the first meeting under the reorganization and the adoption of the new constitution and by-laws which was made upon motion of the delegation of the New York State Medical Association at St. Paul, and was endorsed by the entire delega-

tion, and was passed before the entire convention with an enthusiasm and unanimity never surpassed in the history of the American Medical Association. The democratic and liberal character of the scheme of reorganization and the new constitution and by-laws should commend its acceptance to the entire profession.

"The chief feature of this scheme, like that of the plan adopted by the New York State Medical Association in October, 1900, is that the local or county associations are made the controlling factors, these being held responsible to the district associations, which in their turn are responsible to the central State association, each State association in its turn being responsible to the national body. The importance of organizing county associations in conformity with the charter and the constitution and by-laws of the New York State Medical Association, and in this way establishing an affiliation with the American Medical Association, must be evident to all, since without the county organization it will be impossible to have any relations with, or exert any influence in, the national body.

"The officers of the association will give any assistance in their power to the formation of these local associations, eighteen of which have been organized within the last six months."

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Conviction of Illegal Practitioners.—The counsel of the New York County Medical Association, James Taylor Lewis, Esq., has just secured the conviction of two illegal practitioners of medicine in New York City. In each case a fine of $75 was imposed by the court, which will be paid to the County Association.

* * *

The Merchants' and Physicians' Adjusting Agency.—Several physicians of New York City have recently been sued by this agency for alleged failure to adhere to the terms of a contract entered into by them for the collection of accounts. The counsel of the New York County Medical Association has rendered valuable aid to members of the association in the matter.

* * *

New York County Association Special Committees.—The president of the New York County Medical Association has appointed the following special committees: On Compulsory Vaccination: Dr. F. W. Loughran, chairman; Dr. J. W. S. Gouley, Dr. Charles S. Benedict. On Milk Supervision: Dr. Louis Fischer, chairman; Dr. O. C. Ludlow, Dr. J. J. Walsh, Dr. C. A. Whitney, Dr. Robert Abrahams.

* * *

Bound Volumes of "Transactions."—The treasurer of the State Association still has in his custody a considerable number of volumes of *Transactions* of the association. New members, and those desiring volumes to complete their sets, should apply to Dr. E. H. Squibb, P. O. Box 760, Brooklyn, N. Y., who will promptly comply with requests for the books. The only expense to members is that of expressage.

Correspondence.

PROTECTION AGAINST BLACKMAILERS

To the Editor of the New York State Journal of Medicine:

Sir: One of the inducements which has helped place the New York State Medical Association at the head of all medical organizations of this republic was the assurance that doctors who identified themselves with it were to have accorded them in some manner, protection from the unwarranted assaults of blackmailers. This defense must be taken up and the Council must be prepared with a suitable plan at the October meeting. The views of the members should be placed on file with the secretary of the State Association at once in order that the Council may be advised of the wishes of all, and after careful study, may be prepared to present the best possible plan.

The success of the Committee on Publication, the strides toward making the Directory a self-sustaining institution, soon a source of revenue, has in a year removed channels of a possible expenditure of funds, and you are now approaching another annual meeting when this matter is to be discussed, perhaps a plan adopted.

That this defense should be undertaken by the State Association there can be no doubt. The State Association must be kept in mind as the governing body; from it should come all plans for the local management of county and branch organizations. The charter, constitution, and by-laws of the State Association are the guides for the subordinate organizations to follow and it is the State Association, through its Council, which must provide this most important protection to the profession.

The beneficial results to the practitioner of this defense against suits for alleged malpractice are unnecessary to recite, the benefits to the public are many. Blackmailers are criminals and are as distasteful to the layman as they are to the professional man. The public accords to you the right to this protection as it expects you to also protect it from *isms,* imposters and quacks. The profession of medicine is the most sensitive to public criticism, and the physician is for that reason the most vulnerable to the attacks of the blackmailer aided by the impecunious and unscrupulous lawyer. It is therefore necessary that a great, strong organization shall say to him, "Use your best knowledge, conduct yourself as a gentleman and fear nothing" and with the New York State Medical Association holding such a position to its members, the blackmailer in a few months will learn to look for his prey outside its membership.

The protection of your membership is your ever present duty.

James Taylor Lewis,
Counsel, N. Y. State Med. Assn.

New York, May 30, 1901.

THE JUNIOR PHYSICIAN.

To the Editor of the New York State Journal of Medicine:

Sir: Many of the newly graduated in medicine have often asked me what the beginner should do to attain professional and pecuniary success. I have never answered the query to my satisfaction, and now think it is because I omitted to give examples. The question having again come up, I shall append to my answer an illustrative case. It may not be inappropriate to sum up the requirements to success as determination, prudence, patience, industry, and energy, before telling the beginner that he should devote not less than two hours each day to study, including general literature and the perusal of medical journals, be a constant attendant at the meetings of some medical society, secure a dispensary appointment for a limited time, pay assiduous attention to his clients, and give a reasonable amount of time to his social duties. He should not think of taking up a specialty until after eight or ten years of general practice.

The subjoined statement from the account books of a thrifty, economical, well equipped young physician, three years in practice, will show the result of compliance with these requirements:

First year's income		$1,000
Disbursements:		
Contributions in money to charitable institutions—five hundred dollars had been solicited, but he thought that five per centum of his gross income as much as he could afford	50	
Office rent—sharing the expense with a friend	300	
Other expenses, such as board, clothing, society dues, etc.	600	950
Balance in Savings Bank December 31st		$50

Dispensary work for which no money was received, but which, if paid at half his ordinary charges would amount to three thousand dollars. This charity in kind, added to the gift of fifty dollars, swells the charity account to three thousand and fifty dollars. Not many persons in easy circumstances give as much as five per centum of their incomes, nor do they give any more valuable time to charity than this struggling youth has given.

Second year's income		$1,200
Charity account; in kind three thousand dollars, in money	60	
Office rent	300	
Necessary expenses	710	1,070
Balance in Savings Bank December 31st		$130
Third year's income		1,500
Charity account; in kind, three thousand dollars, in money	75	
Office rent	300	
Necessary expenses	800	1,175
Balance in Savings Bank December 31st		$325

In these three years he had saved more than five hundred dollars bearing interest at four per centum, and had given up his dispensary appointment in order to have more time to devote to his increasing practice and to study. That young man is on the high road to success, and those who may follow his good example will surely succeed. "SENIOR."

New York, June 3, 1901.

Book Reviews.

HEALTH AND HYGIENE FOR THE HOUSEHOLD. By John Joseph Nutt, M.D. New York: The Abbey Press, 114 Fifth Avenue, 1901.

The scope of this volume of sixty-nine pages is outlined in the author's introduction. He says, "The object of this pamphlet is to acquaint the reader with some of the simpler uses of the science of hygiene and its relations to the best of health. We are not satisfied with being told that this is good for us or that it is bad for us; we want to know the reason, and these pages explain many things about which the board of health, or the family physician, does not take the pains to enlighten us."

The contents include chapters on Bacteriology; Ventilation, Light and Heat; Water, Milk and Sewage; Foods and Drugs; Care of the Person; Selecting the Family Physician; and the Most Dangerous Classes of Diseases, and How to Prevent Them. Though of necessity rather superficially treated, the author has done his work well. His language is direct and forceful, his explanations simple and direct. The lay reader will experience no difficulty in comprehending the rules here laid down for his guidance in matters relating to hygiene and kindred matters. In its field the book is distinctly readable and valuable.

A TEXT-BOOK OF GYNECOLOGY. Edited by Charles A. L. Reed, A.M., M.D., Gynecologist and Clinical Lecturer on Surgical Diseases of Women at the Cincinnati Hospital, etc., Cincinnati. New York: D. Appleton & Company, 1901.

It is a mistake to term this "a text-book which shall serve as a working manual for practitioners and students," as stated in the preface. If by "students" is meant undergraduates in medicine, the book, in company with practically every so-called text-book of gynecology yet published, falls woefully short of the desired mark. For the gynecologic specialist, and for the general practitioner who combines a certain amount of non-operative gynecologic office work with his other practice, it is distinctly valuable; but for the undergraduate student or for the beginner who wishes to perfect himself in gynecologic technic it is very deficient. When authors write and publishers publish text-books for the benefit of *students,* the fact should be realized that minute *detail* is what the latter require more than anything else. As regards operative work, the proper manner of handling instruments, the correct method of denuding surfaces, the size of catgut or other suture to be used, and many other minor points, should be clearly set forth. In this way, and in this way only, can a "text-book" be made to fulfil its mission. The present reviewer doubts, for instance, if any but a skilled operator of great experience could, with safety to his patient, perform the operation of vaginal hysterectomy, as described on page 448 of the book under discussion, or could even understand its technic. And this is but one instance in many. Then, too, even an expert would be puzzled at reading the first paragraph on page 450: "The vesico-uterine folds of the peritoneal membrane are opened close to their uterine attachment and the fingers inserted, enlarging the opening laterally, *pushing the ureters carefully to either side,* and completing the separation of the bladder." It will surprise most anatomists that the ureters are to be found in this location.

The section devoted to the treatment of displacements of the uterus is incomplete. The operative treatment does not include such well-known methods as those of Leopold or Czerny, or the lateral method. The advantages or disadvantages of permanent retaining sutures are not referred to. Pryor's cul-de-sac operation for the correction of displacement is described in certain detail, but not a word is added in explanation of *how* good is accomplished.

It is stated that Alexander's operation for shortening the round ligaments "has stood the test of time and experience" (page 294), and the technic of the operation is given in detail, but no mention is made of the vast amount of discussion and condemnation of the operation, as a whole, that has been presented during the past few years.

The chapters devoted to injuries of the external genital organs, and to the pelvic floor and its injuries, are very incomplete, especially with regard to operative procedures directed toward repair.

The "quotation" method of explaining illustrations is a very unsatisfactory innovation, and in some instances, the illustrations themselves are faulty.

But it is not to be inferred from what has been said that faults of commission and omission predominate in the book. On the contrary, it is well constructed, as a whole, is up to date in most respects, and will prove a decided addition to the working gynecologist's library.

The New York State Journal of Medicine is one of the recent additions to the medical journal family; it is published in the interest of the New York State Medical Association under the editorial management of Dr. James H. Burtenshaw. The tendency to "official organs" is characteristic of these opening days of a new century. In this instance the "organ" is a good one.—*Medical Fortnightly.*

Original Articles.

ACUTE TUBERCULOSIS OF THE MESENTERIC LYMPH GLANDS.*

BY MAURICE H. RICHARDSON, M.D.
Boston, Mass.

THE discussion of papers by J. W. Elliot and myself on this subject at the meeting of the American Surgical Association in May, 1900, emphasized the rarity of surgical intervention in this disease. The frequency of tabes mesenterica, nevertheless, is great. In the present development of surgery it is an interesting question, worthy I think of being brought to the attention of representative bodies of physicians, whether more cases of mesenteric tuberculosis are not amenable to treatment by surgical means.

The solution of the question of efficacious intervention depends upon possibilities of early recognition of acutely infected glands, as well as upon possibilities of thorough dissection.

The frequency of abdominal explorations upon the living in recent years has rendered conspicuous many lesions in their earlier manifestations, —lesions which had never given rise to symptoms and which had therefore never been suspected. The examination of all abdominal viscera as a routine step in abdominal operations reveals much that is interesting. Such general examinations have shown many curious things, among which by no means the least important are early changes in the lymph glands of the mesentery not associated with any apparent focus of infection, and not causing any symptoms. I do not refer to that caseated condition of the glands which, like caseated or calcified bronchial glands, shows a cured tabes mesenterica, but rather to isolated groups or general disseminations of inflamed glands the presence of which has been unsuspected and the future of which is a matter of conjecture.

The practical problem which confronts the surgeon is that of the appropriate course when such conditions appear.

In a recent case (October 30, 1899) of chronic appendicitis I found in the mesentery of the sigmoid flexure a small, hard tumor closely invading the bowel wall, if not actually a part of it. The removal of this tumor would have necessitated a partial resection of the intestine, an operation of considerable magnitude and danger. Its presence suggested a possible cause of symptoms which had been attributed to the appendix. It was deemed inadvisable to remove the tumor, a decision warranted by the subsequent restoration of the patient to perfect health.

In another case of chronic appendicitis, operated upon some years ago, the mesentery of the ileo-cecal coil felt like a bunch of grapes. I had not considered the possibility of removing such mesenteric glands at that time, and no question of its practicability or necessity arose. The appendix was evidently diseased and its removal has restored the girl to robust health. There has been no symptom referable to the enlarged glands, and yet an extensive development of mesenteric tuberculosis would not have seemed extraordinary.

In a third case, supposed to be a chronic appendicitis, in a child whose general appearance and history strongly suggested a tabes mesenterica,—a case indeed in which the diagnosis of tubercular peritonitis had been previously made, —a diseased appendix was found, accompanied by widely disseminated involvement of the mesenteric glands which eventually proved fatal.

The occurrence of tuberculosis of the ileo-cecal coil itself is frequent enough to justify the suspicion that in some cases of appendicitis the process is originally tubercular, involving appendix, bowel wall, and mesenteric glands. I have operated for intestinal obstruction in several cases of tuberculosis of the whole ileo-cecal coil, marked by stricture of its lumen and enlargement of its mesenteric glands. In several cases I have operated for permanent fecal fistulæ following operations for appendicitis, in some of which there had been simple drainage of an abscess, in others appendectomy. In several of these patients it was necessary to resect a large portion of the cecum, for the tubercular process had invaded all the layers and had caused extensive ulcerations of the mucous membrane.

In still other patients I have incised freely over the tumor, and have drained for a long time, in the hope that under free evacuation of tubercular products the disease would disappear. The usual occurrence of enlarged glands in the mesentery of the coil infected directly and continuously from the tubercular areas of the cecum and appendix makes the outlook for cure extremely doubtful. One such patient under observation now for a year with symptoms varying, but on the whole getting worse, will require soon extirpation of the whole tubercular mass—an operation which, though successful in every case thus far, is one of great magnitude and danger. In patients with such marked evidence of tuberculosis it may be wise to perform the radical operation in the first place; but our knowledge is still so imperfect that it cannot yet be said that the patient's chances are not better under the safer operation of drainage.

The occasional occurrence of small suspicious-looking nodules in the peritoneum of the cecum, with moderate enlargement of the mesenteric glands of the coil, as demonstrated in operations for chronic appendicitis, has excited the fear that an extensive tuberculosis was beginning—a tuberculosis which might later necessitate more radical surgical measures.

In general disseminated tuberculosis of the peritoneum, the disease appears either as miliary nodules, everywhere studding the peritoneum—

*Fourth paper read at the Seventeenth Annual Meeting of the New York State Medical Association, in the Symposium on Tuberculosis.

parietal and visceral—or as tubercular masses varying in size and unequally distributed. In these cases the mesenteric glands may or may not be especially involved. If they are extensively diseased, removal is out of the question because of the impossibility of thorough dissection.

In other cases there may be a localized infection of a single group of glands, with a general dissemination of miliary nodules. Under such circumstances it might seem worth while to remove the infected glands as thoroughly as possible—an operation, which, with the removal of ascites, might aid in that recovery which sometimes so inexplicably takes place after simple abdominal incision.

Intra-abdominal tuberculosis presents so many and so widely diverse lesions that a great variety of symptoms seems not unnatural. The subject seems to one studying it of great importance and of deep obscurity.

Not to mention all the questions which overwhelm the surgeon, a few seem of especial interest: What is the source of the infection in general and in localized peritoneal tuberculosis? Are the tubercle bacilli absorbed through the intestinal walls, or are they peritoneal manifestations of a general tuberculosis? If they are a peritoneal development of a general tuberculosis, why is it that the disease is always confined to the abdominal cavity? If the disease is confined to the peritoneum, spreading from a local nidus like the Fallopian tubes, or from a localized area of absorption in the intestines, why is it so confined? Why are not other viscera invaded—like the kidney, spleen, liver? Or are they really invaded, but so slowly that death takes place before deep involvement has been brought about. Why are infections localized in some cases and general in others? Why are general peritoneal infections so rare in tuberculosis of the kidney, and in genito-urinary tuberculosis affecting the seminal vesicles and bladder? Why is general tuberculosis of the peritoneum so rare in marked localized tuberculosis of other viscera—tubercular strictures of the intestine for example? Why should such a tubercular stricture, which before causing obstruction is always of long standing, be localized? Why do some general abdominal tuberculoses show unmistakable miliary tubercles, while others show large and infiltrating masses?

From the clinical point of view it may be asked what are the symptoms by which an early tuberculosis may be recognized? Without exploratory laparotomy, can the operable case be distinguished clinically from the inoperable? And, if so, by what history and local signs? What are the indications for opening the abdomen in suspected tuberculosis—what the technique—what the prognosis?

The symptoms of acute tuberculosis of the mesenteric glands are so obscure that their interpretation is impossible. Beyond a surmise as to the existence of this lesion, no opinion is possible. In chronic tubercular affections of the peritoneum, and of the mesenteric glands, a diagnosis is tolerably sure, for the history and physical signs may form conspicuous guides. Such lesions, however, are beyond the scope of the present communication. It is with the beginning invasion of the peritoneum that we are concerned—that early stage which may permit cure by thorough removal—rather than with that later one when exploration, recognition, and drainage of abscesses is all that can be accomplished.

It is clear that from personal observation little can be said of the early symptoms of mesenteric tuberculosis. In my one case and in Elliot's the disease first showed itself by abdominal pain, fever, and tenderness, and by those general disturbances so often seen in appendicitis. As the disease progresses a tumor may be felt, if in regions easily palpated, such as the iliac fossæ. The symptoms may be those of a localized peritonitis. If we imagine acute inflamed axillary glands, such for example as are found accompanying septic wounds of the hand, transferred to the right iliac fossa, we bring up the picture of a localized tuberculosis of the mesenteric glands of the iliac fossa. There will be, in addition to the pain and tenderness of the glands themselves, that of the surrounding peritoneum. The constitutional signs will be the same, with the addition of those from an infected peritoneum. The local conditions will be aggravated by symptoms of a localized peritonitis. If there is any ascites at this stage, it will be too little for detection.

I have seen a few infections of the supra-inguinal glands—tubercular, syphilitic, and gonococcal—the course of which could be definitely followed from the groin upward and backward behind the peritoneum. The symptoms in these infections have been not unlike those of the mesenteric infections, but their nature and extent have been perfectly obvious. The partial involvement of the peritoneum covering these glands has given rise to this localized abdominal tenderness and muscular rigidity. The constitutional signs have been those of acute adenitis elsewhere. In one instance a general and fatal peritonitis supervened.

The diagnosis of acute mesenteric tuberculosis must be, in the early stages, a matter of guesswork. When the glands affected are near the usual seat of the appendix, we cannot but make the diagnosis of appendicitis.

When the localization is in other regions of the abdomen, we do not have the satisfaction even of giving a positive, though wrong, opinion.

What can be said of the following case, for example—one in which I strongly suspected an acute intra-abdominal tuberculosis? The patient was a married girl of 17, six months pregnant, examined by me Sunday, October 14, 1900. She was first taken September 10th with violent pain low down in the left side of the abdomen, with vomiting and high fever. The

temperature rose to 104° F. There was no distension and there were no localizing signs by abdominal palpation or by vaginal examination. There was no perceptible ascites. The family history was negative, and there had been no suggestion of tuberculosis. From September 10 to October 14 her chief symptoms were repeated recurrences of pain, remarkable fluctuations of temperature, and vomiting. Shortly before my examination she became jaundiced, but the stools still contained bile. The temperature would be 104° F.; then 98° F.; after remaining near the normal line for days, it would go to 103° F. For some days in succession it would vary between 104° F. and subnormal. In other words, it was an erratic temperature fluctuating between wide limits.

This case is introduced, not as a case of acute tuberculosis of the mesenteric glands, but as one that suggests that lesion. The jaundice is hard to explain unless it is dependent upon a pylephlebitis starting from some intra-abdominal nidus. There were no signs in the liver, however, or anything pointing directly to a portal thrombophlebitis. The jaundice would not be incompatible with a tuberculosis, for the glands about the duodenum might be enlarged enough or inflamed enough to involve and to close temporarily the common duct.

The girl was so feeble that exploratory laparotomy would have added the last straw. Her only hope lay in palliation. It would have been unjustifiable in so desperate and uncertain a case to explore when the symptoms pointed in no particular direction. If exploration should show a salpingitis, a pelvic abscess, an acute mesenteric tuberculosis, or any other serious lesion, we could not hope to remedy it in a feeble patient six months pregnant. On the other hand, it would not necessarily follow that the lesion, whatever it might be, might not subside under palliation. The case presents features which have always led me to suspect an acute tubercular process deep in the cavity of the abdomen.

In most of the cases of tuberculosis of the mesenteric glands operated upon, the disease had advanced to the stage of caseation and breaking down, so that the operation consisted in the drainage of a tubercular abscess cavity. In other words, the process was a chronic rather than an acute one. In certain of the cases the process of breaking down was so rapid that it may be looked upon as acute. Elliot* has collected a number of cases of the acute and subacute variety operated upon by drainage of pus. In the case reported by Elliot and in that of my own† the lesion was much more acute and the operation more radical. The cases are very similar in every respect, and are, I think, the first of the kind reported.

Elliot's patient (*loc. cit.*) was a boy of eight who was seen and operated upon January 20, 1899. He had had the preceding fall an attack of abdominal pain, without fever, nausea, or vomiting. On January 15, 1900, having recently recovered from influenza, he woke with a pain in the abdomen. He went to school, however, and had no more pain till the following morning, when he had severe pain. Dr. Prior, the attending physician, a man of large experience in abdominal lesions, found a right-sided abdominal tenderness, without tumor, not well localized, but more marked in the region of the gall bladder. The temperature was 101° F.; no nausea or vomiting. In the afternoon the temperature was 104° F. The next morning it was 99° F.; at night 102.5° F. Until the time of operation the temperature fluctuated between these wide limits, the patient gradually getting worse.

Dr. Elliot found on January 20 a slightly distended abdomen without muscular spasm. Though the tenderness, which was distinctly localized, was rather high for the appendix, it was accompanied by an induration which was supposed to be a diseased appendix.

At the operation, which was performed immediately, Dr. Elliot found a normal appendix and a mass of acutely inflamed glands in the mesentery of the ileum within two or three inches of the cecum. He removed the whole group, which consisted of several small glands and one large one, cheesy and breaking down in the centre. The patient is now perfectly well, sixteen months after operation.

Elliot's operation was the removal of the disease, root and branch, by dissection long before the breaking down into abscess could have taken place. It permitted early closure of the wound and healing by first intention.

My case is almost precisely like Dr. Elliot's. The patient was a boy of five, seen and operated upon June 19, 1895. He had never had any previous abdominal pain. On June 17, having two months before recovered from a severe attack of influenza, with double otitis media, he was out of sorts, feverish, and constipated. He had frequent colicky pains that day and the next, and the temperature rose to 104° F. and the pulse to 140. The transitory pains continued through the 18th and 19th, the temperature ranging between 102.6° F. and 104.2° F. Dr. Craigin, the attending physician, a man of great experience, found on pressure deep in the right lower abdomen a small uneven mass, nodular, and slightly tender. On the evening of June 19 I found a tender tumor, rather higher than usual, in the region of the appendix. Drs. Mixter, Craigin, Brewster, and myself supposed, of course, that the tumor was an acutely inflamed appendix. Immediate operation was advised. I found a healthy cecum and a healthy appendix, but in the mesentery of the ileo-cecal coil were numerous large, juicy, inflamed lymph glands. These I removed as far as I could carry the dissection. The boy made a perfect recovery, and has been the picture of health ever since. Dr. Mallory

* Transactions American Surgical Association, 1900, p. 264.
†Idem, p. 326.

reported an acute tuberculosis of the glands of the mesentery.

The indications for operation in both cases were clear. The patients were in fairly good condition, and demonstration of the lesion was followed in both cases by a dissection which was brilliantly and permanently successful.

What is the outlook in a case of acute tuberculosis of the mesenteric lymph glands? It has always been regarded as extremely unfavorable, the patient slowly succumbing to the anemias and cachexias of prolonged tuberculosis. The glands themselves either break down and suppurate, or become cheesy and calcified. Cure by natural processes takes place only through caseation, atrophy, or calcification.

Evidences of the spontaneous cure of widely disseminated tuberculosis is often seen at operations. I have found localized areas thickly studded with small atrophied and cheesy glands, and not infrequently isolated glands completely calcified. On the other hand, I have many times found extensive and hopeless infiltration of every coil, with glands evidently not especially active, but still exerting a toxic if not a fatal influence.

Tabes mesenterica has always been regarded as one of the most serious and fatal of abdominal lesions. It would doubtless be regarded now as practically hopeless were the prognosis based only upon cases in which the diagnosis is clear. When we add, however, the evidence of cases found at operation and at autopsy, the disease does not seem so invariably hopeless. Indeed, the number of natural and spontaneous cures may be so great as to suggest a question as to the justifiability of surgical intervention. The chances, however, of cure by natural evolution cannot be great in any case, even when the disease is demonstrated early—certainly not as great as by surgical intervention at that early and promising period.

The propriety of surgery when the question of a possible acute tuberculosis of the mesenteric glands is under consideration, seems to me unquestionable. The surgeon may feel encouraged to operate from several considerations. First, because of the practically hopeless outlook if the patient is treated medically; secondly, because of the chance of exerting a favorable influence on the course of the disease by the exploration *per se;* thirdly, because of the possibility of removing the affected glands by thorough dissection; and finally, because of the possibilities of mistaken diagnosis—he may be withholding an operation from lesions in which an operation is essential for preserving life.

Exploration is contraindicated when there is in the abdomen unmistakable evidence of hopeless tubercular infiltration; when the general condition is one of advanced and extreme cachexia; when hopeless lesions of other organs are present.

The general practicability of dissecting out tubercular mesenteric glands is a matter of considerable doubt. In certain cases nothing could be easier than removal from its capsule of an enlarged and inflamed gland, free division of the capsule permitting immediate enucleation. Separation may be quite as facile as in similar glands in the neck. The chief danger is in injury to the veins and arteries of the mesentery by which the circulation of the intestine may be impaired. Removal of one or two large masses may be accomplished without interfering with the nutrition of the gut, but whether a mesentery would stand the removal of a large number of glands from its layers, seems questionable, even if under all these circumstances the glands are easily shelled from their capsules.

The removal of glands from the whole mesentery is out of the question, however easy and rapid their dissection. When the glands, breaking through the capsule, infiltrate surrounding tissues, dissections cannot but be difficult and therefore dangerous.

It seems clearly beyond the possibilities of surgical art to attempt this thorough extirpation of such infiltrating masses, even if they are well isolated and few in number, unless the extirpation includes the coil supplied by the affected mesentery. Extirpation of an intestinal coil in order to extirpate a tubercular mass in its mesentery would be the height of folly, unless the disease had involved the intestine so seriously as to demand its excision also. The mesenteric glands in acute infections are fortunately like similar glands elsewhere—in the neck, the axilla, or groin,—they are easily separated without damage to neighboring vessels. In Elliot's case, however, the danger of cutting off the circulation by injury to the mesenteric vessels was so greatly feared that no ligatures were used, the chief dependence being placed upon gauze packing. In my case there was no difficulty whatever in this regard, and no fear was entertained of an anemia necrosis.

As to the technique of the operation of removing enlarged glands from the mesentery, there is little to be added. The chief danger is injury to the blood vessels, and more especially to the thin-walled veins of the portal system. As the dissection approaches the spinal-column, the greater tributaries to the receptaculum chyli are reached. These cannot ordinarily be recognized. I have never seen them except in a case of chylous ascites in which there was a general enlargement of the mesenteric lymph glands crowded together in the layers of the mesentery and possibly causing obstruction.

In case many large glands are coalesced and mutually infiltrated, total extirpation may leave so large a gap in the blood supply as to threaten gangrene of the intestinal coil. Under such circumstances in abdominal surgery the coil will show in a few moments whether its vitality is impaired or not. When impaired, resection of the coil is necessary. Destruction of the mesentery at its intestinal border is more serious than

at its spinal margin, for anastomosis is free in the layers of the mesentery, although almost absent longitudinally through the intestine itself.

The extent to which the dissection should be carried is a matter of conjecture. Anatomically it may be carried as far as the glands can be detected, though the hazards increase with the depth of the dissection. I have followed retroperitoneal glands from Scarpa's trangle to the head of the pancreas, and that without extreme difficulty.

When the diseased glands are evenly distributed throughout the mesentery, no attempt should be made at their removal, except perhaps for investigation in the laboratory. It may be well to dissect the larger and more diseased glands if any are especially prominent. The only chance in such extensive infiltrations lies in the curative power of the exploration *per se*. It seems not unreasonable to hope that the removal of a few of the larger glands may hasten the cure.

When a single coil is affected the dissection may be as thorough as the environment will permit. If a few small glands remain, they are quite as likely as not to offend no further. Judging by similar experience in the neck, however, these glands may go through the same process as the larger ones. Such a result I fully expected in the case of Dr. M.'s boy, for small glands undoubtedly remained in the remote areas of the mesentery. Fortunately no untoward symptoms have ever occurred in this case.

When the glands are caseous and suppurating, temporary drainage is necessary. The wound will heal, however, by first intention, even if there is cheesy pus in the depths of it. Sooner or later, judging by the experience in the neck, the wound will break down and closure will be tedious.

When the glands have broken down into abscesses, drainage is the only treatment possible. I have drained several abscesses which I suposed to be owing to the breaking down of tubercular mesenteric glands. The outlook in such cases is extremely grave, not only because of their local, but because of their constitutional effects.

From the considerations already advanced, it seems clear that questions of intervention will seldom come up. Yet, unless I am much mistaken, emphasis laid upon this subject by full discussion, with renewed experience, will show that acute tuberculosis of the mesenteric glands is not so unusual a disease as has been supposed. There is, moreover, every reason to hope that early recognition and prompt intervention will remove effectually what has ever been regarded as a serious menace to life.

Dr. Gliddon's Illness.—Dr. H. H. Gliddon, of Panama, the oldest medical practitioner in Chautauqua county, is seriously ill at his home. He has been in active practice for more than 54 years.

THE RESOURCES OF MODERN MINOR GYNECOLOGY.

BY AUGUSTIN H. GOELET, M.D.,
New York.

THIS paper has been suggested by the growing tendency to lose sight of the capabilities of minor gynecology, as shown by the assertion of some men that they find little use for it, but after examining their patients they are sent to the hospital.

Is gynecology becoming a surgical specialty? If so, I desire to enter an earnest protest. There is much we can accomplish by minor gynecology. There are many gynecological disorders that are curable without resort to surgery.

But the man who limits his resources to glycerine tampons and iodine is truly in a sad plight, as there are few cases that he can cure by this means alone. It must be admitted that not all gynecological disorders are amenable to non-surgical treatment and I would not be understood as being opposed to surgical gynecology. I am heartily in favor of any method of treatment that gives the best result for the patient. But the growing indifference to non-surgical treatment or minor gynecology seems to me an error. The multiplicity of our modern gynecological resources shows that we are better equipped than we were fifteen or twenty years ago. Yet many of these cases were cured even then. May we not, by exercising a little more patience and perseverance, avoid much needless surgery? Is it not our duty to conserve, rather than to destroy?

It has occurred to me that it might be profitable to enumerate some of our modern gynecological resources and consider what they may aid us in accomplishing.

Our resources may be divided into Diagnostic and Therapeutic:

DIAGNOSTIC RESOURCES.

Microscope.—Foremost among these is the microscope. It occupies the position of a preventive resource, since by the early detection of infection through its aid many of the more serious gynecological disorders may be averted. I believe I am not demanding too much when I say no man should practice gynecology, or even examine gynecological cases, unless he possesses this means of investigating the character of vaginal discharges and the knowledge to employ it intelligently. This applies to the general practitioner as well as to the specialist. It is unnecessary to remind you that many lives have been wrecked and many lost by neglect of proper investigation of vaginal discharges, both in women and children. This is a diagnostic resource that none of us can afford to neglect, or be without. and is one very important advantage we have over our predecessors of a quarter of a century ago.

Uterine Endoscope.—This is comparatively a new diagnostic instrument, and the one I show you, which illuminates the field by means of a

small electric light carried down nearly to the end of the tube, is one which I presented in connection with my paper on the "Treatment of Endometritis by Drainage and Irrigation" last year at the Columbus meeting of the Amerian Medical Association. The advantages of this as an aid to diagnosis in conditions involving the interior of the uterus cannot be appreciated until it has been used. One of its chief advantages is in showing when curettage is necessary and when it is not necessary, and also showing when the work has been done thoroughly.

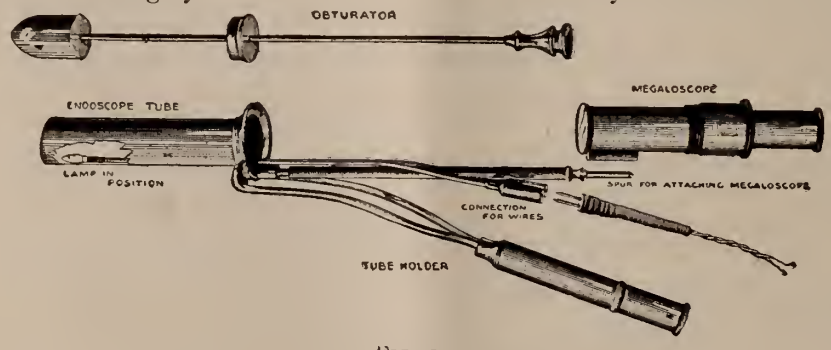

FIG. 1.
Author's uterine endoscope, showing parts detached.

Cystoscope.—It is not necessary to enter into the details of the uses of this instrument. Its utility is now very generally recognized and no well-equipped specialist in this line is without one. It is positively indispensable for diagnosis of diseases involving the interior of the bladder.

Steel Dilators.—After the sponge tent was abandoned, because of its liability to cause sepsis, the steel dilator came more generally into use, and there are a dozen or more varieties on the market. The advantage of this instrument, as a means of diagnosis, by affording facility for exploration of the interior of the uterus, is too well recognized to require more than passing mention.

The usefulness of the two branch dilator is, however, limited, since with it only a comparatively small degree of dilatation can be accomplished. When the cervix is rigid, sufficient dilatation to permit the introduction of the finger for exploration cannot be accomplished with this instrument.

The four branch dilator which I show you has been made to extend the degree of dilatation of the cervix and answers the purpose better than any of its kind that I have used. It is, however, a powerful and dangerous instrument in careless hands and should be used with extreme caution.

Sponge or Laminaria Tent Covers.—We have never had anything that produced such thorough and satisfactory dilatation of the cervix as the sponge or laminaria tent, and I am sure that I was not alone in feeling deep regret in being obliged to abandon them. Very frequently cases are encountered where exploration of the cavity with the finger is desirable, yet the cervix is too rigid to be dilated safely with the steel dilator.

Recognizing this, I was induced to devise a plan of employing them in a manner that would be perfectly aseptic. The outcome is this rubber tent-cover, that is made for me by the Miller Rubber Co. To fully appreciate its advantage, we must consider why a sponge or laminaria tent could never effect aseptic dilatation of the cervix when used bare. It is certainly possible to render the tent aseptic, but its expansion depends upon absorption of the secretion from the surface with which it is in contact. Hence, the secretion from the cervical glands, which is so frequently infected with bacteria, is taken up by the tent and conveyed to the cavity above, where the bacteria find a fertile field for development.

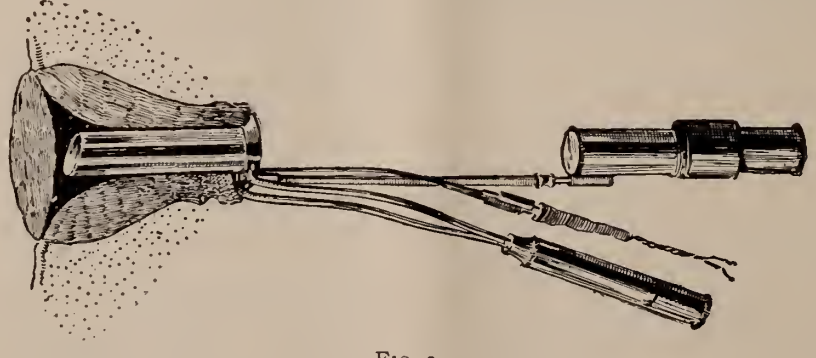

FIG. 2.
Author's uterine endoscope in position.

By using the tent-cover this is avoided, because the tent expands within it. A strip of gauze is carried up along the side of the tent and over the end, one end of the gauze being left long. This is wet and the cover is slipped on over it and it is then introduced. One end of the gauze is left hanging from the mouth of the cover in the vagina. The vagina is now filled loosely with gauze and this is made thoroughly wet. The capillary action of the gauze carries the moisture from that in the vagina to the tent and causes it to expand within the cover. Therefore, even if the vagina is not sterile, there is no risk of infecting the endometrium from this source.

Anesthesia.—Anesthesia, whereby unconsciousness of pain and relaxation may be acquired to facilitate examination by palpation in doubtful cases, where the patient is too sensitive to permit a satisfactory examination, is of inestimable value as a means of diagnosis. This advantage is only too self-evident.

Increased dexterity in bimanual palpation acquired by practice, and the positions of the patient which have been found to facilitate these examinations make examination under anesthesia less frequently necessary than formerly, but this can only be attained by a few who have unusual facilities and know how to utilize them to the best advantage.

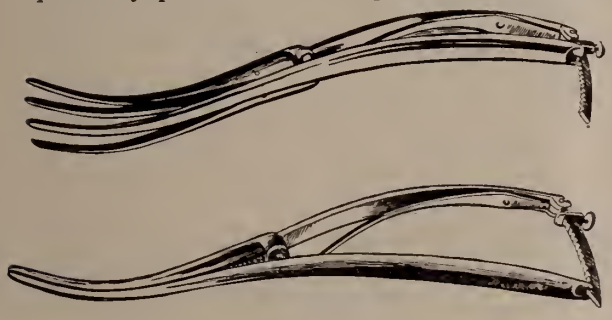

FIG. 3.
Author's four branch steel dilator closed and open.

Greater familiarity with the pelvic organs and abnormal growths in the pelvis, afforded by abdominal section, is one of the many advantages we, of the present day, possess. and which was denied us before these operations became so frequent. The immense aid this is to one's diagnostic ability cannot be appreciated until one has had this experience.

Exploratory Abdominal Section.—Finally may be mentioned exploratory abdominal and vaginal section. This is a diagnostic resource of great value, since it is now a recognized procedure in doubtful conditions within the pelvis or abdomen, where it has been impossible otherwise to reach a conclusion.

THERAPEUTIC RESOURCES.

It is a mistake to think that our therapeutic resources are few. I find them more numerous and more efficient than when I began this line of work sixteen years ago. I regret that I have time only to give a brief review of those that are the most important.

The Vaginal Tampon and Local Applications of Iodine.—The vaginal tampon and local application of iodine are given first place, not because they are the most valuable or the most indispensable of our therapeutic resources, but rather because they have held first rank so long. It cannot be denied that they still serve a very useful purpose in the treatment of gynecological disorders, especially those of a chronic inflammatory character, and I do not wish it to be inferred that I discredit their usefulness, but I think too much is attributed to them and they are often misapplied.

The application of iodine to the vaginal vault is certainly beneficial in certain chronic inflammatory conditions about the uterus and bladder.

FIG. 4.
Author's aseptic sponge-tent cover.

FIG. 5.
Author's aseptic tent-cover showing tent within cover.

It relieves pain and soreness, stimulates absorption of inflammatory exudates and is the most reliable and valuable local antiseptic that can be employed. Therefore it is particularly useful in counteracting infection about the cervix and even within the uterus when it is properly applied. It should not be applied to the interior of the uterus, however, in full strength, nor upon a cotton wrapped applicator, but should be diluted with water and applied through a double current irrigator, when the canal of the cervix is sufficiently patulous to permit free drainage afterwards.

Tampons soaked with glycerine are useful for effecting depletion of the pelvic structures, but they cause discomfort and do harm if not properly used or if they are retained too long, by exerting pressure upon sensitive structures. There

are some improvements in the method of using these agents that have been suggested by personal experience. For instance, if the glycerine is applied on a strip of absorbent gauze that is distributed loosely and evenly against the vaginal vault around the cervix, there is less discomfort than from the application of tampons soaked in glycerine. The patient should be placed either in the Sims' or knee-chest position for its insertion. In some instances, where even less pressure than this latter exerts can be endured, I have employed glycerine by placing the patient in the knee-chest position, inserting a perineal retractor and pouring about half an ounce of glycerine into the vagina from a small test tube. Then a flattened tampon of non-absorbent cotton is placed just within the vulvar orifice to retain it in the vagina. The patient, when possible, should retain the recumbent position for an hour or two afterwards.

I have found glycerine and iodine, combined in the proportion of 1 part to 32, more satisfactory than boroglyceride, or ichthyol and glycerine. It is an excellent astringent and possesses all the advantages of the other two remedies mentioned with none of their disadvantages.

caused too much to be expected of it. An enumeration of its uses and abuses would constitute a chapter in itself and would take up too much space here.

Uterine Irrigation.—I regard uterine irrigation as one of the most important additions to our gynecological resources, because it is the only reliable method of cleansing the uterine cavity, and it affords the most effective method of application to the surface of the endometrium. If it has not already done so, it should supersede all other methods of application to the interior of the uterus. The clinical irrigator which I show you makes it possible to employ this method without previous dilatation of the canal of the cervix and without an anesthetic. Therefore it may be used in office or clinical work, without discomfort to the patient and without risk, if asepis is observed. It is small enough to be introduced, in most cases, with ease and, when it does not pass the internal os readily it is converted temporarily into an electrode by slipping a piece of rubber tubing over it for insulation and connecting it with the negative pole of the battery (galvanic). By using 10 M. for half a minute or a minute the obstruction is overcome.

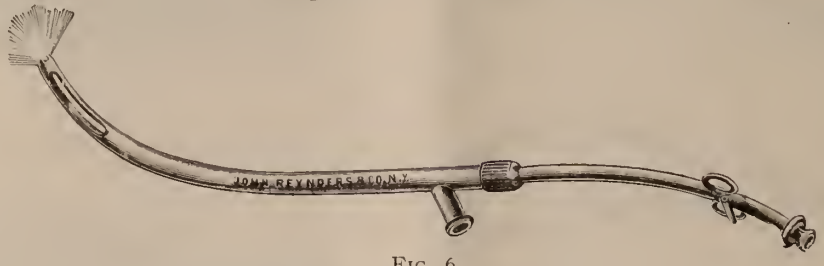

FIG. 6.
Author's clinical uterine irrigator.

The dry wool tampon is a very useful elastic support for the uterus when the pelvic structures are too sensitive for the unyielding pressure of a pessary, and by applying it at first the parts are prepared for a more permanent and reliable support. Thus the sensitive structures are gradually made accustomed to pressure and the uterus is lifted in the pelvis, thereby relieving the obstruction to the return circulation and reducing the weight of the organ. When used for this purpose, the surface of the vagina and tampon should be coated with some bland, non-irritating antiseptic powder, to keep the tampon from becoming foul and prevent irritation of the vaginal surface. (I have found Markasol very satisfactory for this purpose.)

These tampons are best introduced with the patient in the knee-chest position and care must be taken to adjust them so they will support the uterus in the desired position without exerting unequal pressure at different points.

Pessaries.—The pessary is certainly a very useful artificial support for the uterus, but it should be regarded only as an auxiliary to other measures in effecting a cure. Unaided, it can accomplish little. Unfortunately, past teaching has

If the current is continued while the irrigation is going on thorough relaxation of the canal is produced for subsequent drainage. The outer tube of this instrument is made long that the outflow may escape outside the vulvar orifice. It can be employed in either the dorsal or lateral position.

It would consume more time than I am allowed to enumerate the advantages of uterine irrigation. They should be sufficiently self-evident to make it unnecessary.

Electricity.—Despite the fact that the purely surgical gynecologists have tried to kill it; that they have repeatedly declared it dead; that the enthusiasts have mortally wounded it by their exaggerated claims and that it has failed, or done harm when employed indiscriminately and incompetently, it is still very much alive and is doing much good. The gynecologist who does not employ electricity neglects one of the most valuable gynecological resources.

It will not be possible here to give you more than a mere suggestion of its capabilities in gynecological disorders.

Galvanism.—Galvanism, or the direct current, will relax the cervical canal and promote drain-

age of the cavity above and of the submucous glands of the cervix as well, thereby establishing a condition essential for the cure of endometritis, which cannot otherwise be done, except by surgical intervention.

It will dispel pelvic congestion, relieve pain depending thereon and promote absorption of exudates and effusions more satisfactorily than any other agent except faradization. It will relieve the symptoms and reduce the size of certain varieties of fibroid growths within the uterus, and where they have not attained too great a size, or have not acquired extraneous nutrition through organized adhesions with adjacent structures they disappear under its use.

Faradization.—In faradization we have a most effective remedy for the relief of pelvic pain and congestion, for promoting rapid absorption of effusions and exudates, and for the cure of both acute and chronic inflammatory conditions in and about the uterus. As a remedy in the above named conditions it is without an equal. I cannot consume the time here to explain how it produces these results. A correct appreciation of its physiological action will render such explanation unnecessary.

Internal Medication.—The administration of remedies that act through the general circulation and exert some special action upon the generative apparatus is very generally understood. It is only necessary to warn against expecting too much of them, to the exclusion of local measures, as the busy practitioner is inclined to do. There are some internal remedies which, from personal observation, I have found particularly valuable as auxiliaries that deserve special mention here. A combination of bromide and iodide of potassium (10 grs. of the former and 5 of the latter), given in water three times a day, is particularly beneficial as a sedative for painful conditions of the pelvis and for promoting absorption of inflammatory exudates.

The ordinary compound cathartic pills, given one every second or third night, is one of the most satisfactory remedies for chronic constipation so common in this class of cases. Unlike other cathartics the dose does not have to be increased, but owing to their stimulating action on the liver, it is kept active and they can soon be dispensed with. I have never observed any undesirable action from the calomel they contain.

The bromide of gold and arsenic I have found very serviceable as a sedative to the pelvic circulation and to the generative apparatus in general, particularly where there is ovarian irritation and in anemic conditions. It produces marked diminution in the menstrual flow, even where the endometrium is in a condition to demand curettage. For this reason it is effective in menorrhagia and metrorrhagia, but it would not be appropriate where menstruation is deficient except when due to anemia.

I fully appreciate that I have not done my subject justice and I have omitted much that is important. My excuse is the limited time at my disposal here. If what I have said proves an incentive to renewed efforts in the line of minor gynecology, which I feel has been somewhat neglected of late, I shall be repaid for my efforts in that direction.

GENERAL SEPTIC PERITONITIS.*

BY IRVING S. HAYNES, M.D.,
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New York.

DEFINITION.—By this is meant an inflammation of the peritoneum, septic in origin, and unlimited in extent by adhesions.

Cause.—The cause is due to bacteria, or cocci, or both, chiefly the bacillus coli communis, or the streptococcus or staphylococcus.

Mode of Invasion.—These septic germs gain entrance into the peritoneal cavity by several ways:

(1) The most common is by rupture of some portion of the alimentary canal, as from a perforation of the appendix, or stomach, or duodenum. By rupture of a gangrenous loop of intestine, due to a strangulated hernia, volvulus, or traumatism without wound of the abdominal well. By rupture of a malignant growth involving the alimentary canal. The gall bladder or its passages, or the urinary bladder, may rupture and furnish the septic material. The infection may arise from a ruptured pus tube or extend from a septic uterus through the Fallopian tubes.

(2) Bacteria may be introduced from without, through the wounds of the abdominal wall, with or without injury to the viscera containing septic matter.

(3) The bacteria from within a damaged, but not ruptured intestine, may penetrate its walls and originate a peritonitis.

The fifteen cases reported here were due to the following causes: Eight to a rupture of the appendix; one to rupture of a cancer of the intestine; one to rupture of an ulcer of the duodenum; two to wounds of the abdomen, one with, one without, perforation of the intestine; one was caused by the rupture of a pus-tube; one to infection extending from a septic uterus following abortion, and one from traumatism of the abdomen without rupture of the intestine.

A general suppurative peritonitis cannot exist unless the septic germs are present. The infection is acute, and virulent. Its spread is so rapid, or the infection is present in such quantities, that no time is given for the peritoneum to limit it by forming protective adhesions.

Symptoms.—These follow, and are added to those of the primary lesion or, in case of wounds, rapidly ensue after the injury.

The course of septic peritonitis may con-

*Read before the New York County Medical Association, November 19, 1900.

veniently be considered in three stages: First, the stage of shock or invasion; second, the stage of reaction or inflammation; third, the stage of recovery, or collapse and death.

The symptoms are: Pain, muscular rigidity, tenderness, tympanitis, obstinate constipation, vomiting, accelerated pulse, elevated temperature, and minor symptoms, such as chills, state of tongue, urine, etc.

Pain is a prominent symptom, and is present in all cases at the beginning, although it may become less severe as the patient nears a fatal termination. It is usually local, but soon becomes general. While the point at which the pain is first felt aids, in a measure, in determining the lesion, as in appendicitis, after a few hours it becomes diffused and does not offer a clue to the seat of the trouble, as, for instance, in ulcer of the stomach or duodenum, where the pain may be greater in both iliac fossæ than over the site of the rupture. The most important feature of the pain is its *sudden appearance, steady increase,* and *rapid spread.* Late in the disease it may become less intense, or nearly disappear.

Muscular rigidity is the next prominent symptom. It is due to a reflex contraction of the abdominal muscles, caused by the severe peritoneal irritation. While the rigidity involves all the abdominal muscles, it is most pronounced at first over the locality where the infection originates, and later is more distinctly shown in the recti muscles, the various sections of the muscles becoming clearly defined, and often visible to the eye.

Another uniform symptom is abdominal tenderness. This is usually general, and its presence is another indication of a diffused peritoneal inflammation. If more pronounced in some regions than the others, as in the right iliac fossa, or over the pelvic cavity, it affords valuable indications in connection with the history of the case and other symptoms of the probable source of the infection.

Tympanitis.—This is seen after the lapse of several hours. It may be due to dilatation of the intestines, or to free gas in the peritoneal cavity. The latter will cause a diminution in the area of liver dulness by separating the abdominal wall from the viscus. In the former condition, while the liver is pressed upward, it still maintains its normal dull area. In some cases, however, the abdomen will be found more contracted than normal, even with purulent fluid in all parts of the peritoneal cavity. These cases are those where the source of infection is usually other than the alimentary tract.

Constipation.—The bowels do not act voluntarily, and only imperfectly after cathartics or enemas.

Vomiting at the beginning is due to shock. It is irregular, and consists of the contents of the stomach only, and is not significant, but if persistent after the stomach has been washed out, and contains bile, then coffee-ground material and, finally, fecal matter, it indicates a rupture, paralysis, constriction, or strangulation of the bowel. The respiration is rapid, and of the costal type, the action of the diaphragm being inhibited by the peritoneal inflammation. The pulse and temperature at first do not reflect the seriousness of the lesion that will, in a few hours, if unrelieved, cause the patient's death. They are both low, the pulse in frequency, and the temperature in degree. In the adult cases that were seen early (before the eighth hour), and recovered, the pulse ranged from 90 to 120 and the temperature from 101.6° to 102°. Later, after the elapse of from eight to twenty-four or more hours, and when the patients died, the pulse varied from 122 to 140 and the temperature from 99.6° to 103.8°.

The character of the pulse is a better index of the severity of the infection than its frequency. It is thin, thready, and weak, the retreating pulse of shock. It is due to the partial filling of the peripheral blood-vessels, as the greater quantity of blood is contained within the dilated vessels of the viscera.

It is only later, when the reaction sets in, or the inflammatory stage begins, that the hard, wiry pulse, usually described as typical of peritonitis, is present. But this form of pulse was not noted in any of these cases, and I am inclined to think that it is not so often associated with general suppurative peritonitis as with inflammation of the intestines or a localized peritonitis.

In the cases that were seen early, and recovered, the pulse (adults) averaged less than 100. In the cases (adult) that died, the pulse averaged 130.

This must not be interpreted as meaning that cases with a low pulse-rate will recover and those with a high one will die, for all will die if not promptly treated by surgical methods. But it means, on the other hand, that in the first class of cases the system has not been fully poisoned by the infection.

Besides the weak pulse, a grave symptom which indicates the failure of the heart's power and a fatal termination, is shown by a cyanosis which gradually extends towards the trunk. The blueness begins in the extremities, then involves the head and neck, and, later, the trunk.

I have not seen any patient who had general septic peritonitis recover, in whom this was a marked symptom. It indicates not only a damming of the blood in the visceral vessels, but also a failure of the heart's action and respiration from poisoning of the cardiac and respiratory centers in the medulla.

The temperature is no better guide to the seriousness of the peritoneal condition.

When seen early, the temperature is rarely above 102°, usually around 101°. A short time before a fatal termination it begins to rise, but even in this class of cases it does not go, as a rule, above 104°, and is more apt to fluctuate between 102° and 103°.

The *face* of the patient, next to the abdomen, reflects the severity of the condition. It is drawn, pinched, pale, and anxious. The patient is alert, watchful, and thoroughly conscious of his grave peril. One of the earliest signs of recovery will be a change in the facies to a quiet, restful look.

The tongue does not change rapidly enough, if the patient is seen early, to indicate a sudden peritoneal invasion. It becomes furred, dry, and cracked, however, in those cases which have been preceded by several days of inflammation, as an appendicitis, before the infection involved the general peritoneum.

Prognosis.—The patient will die unless operated upon, and may, even after operation. However, our only hope lies in removing the infectious material and preventing the escape of any more, by abdominal section at an early hour.

The cases in my charge that recovered were operated upon on an average of four hours after the peritoneal invasion, except in case of a ruptured pus tube. (See Case XV.)

In those cases that went eight hours or more before the operation the result was fatal. Hence the necessity of recognizing early the serious nature of the disease, and promptly employing surgical measures.

There is a question which often arises in this work. It is, "Shall an apparently moribund patient be operated upon?"

Some will say that death is sure, and why submit the patient to an ordeal that will hasten his end, increase the surgical mortality list, and bring discredit upon the operation? To this advice I would offer the opinion that while we are sure the patient will die without operation, we cannot be equally sure that he may not survive if the abdominal cavity is cleaned out and drained. One of my first cases to recover was in such a desperate state that it was against the advice of two of my physician friends I operated. The patient made an uninterrupted and rapid recovery.

It is such a result as this now and then that encourages us to offer to all the only means by which their lives can be prolonged, even though the great majority terminate fatally. If the patient lives we can congratulate ourselves that we have saved a person's life; if he dies, we know we did all that was possible, and our conscience is clear.

Therefore, I advise operation in all cases, and as early as possible. Even the most desperate may improve the "one chance in a thousand," and recover.

The great interest centers, then, about making an early diagnosis, and following it up immediately by abdominal section.

The cardinal diagnostic symptoms are, as already rehearsed:

Pain—sudden, severe, continuous, spreading—muscular rigidity, abdominal tenderness, and symptoms of shock.

I have operated upon fifteen cases. Of these, seven recovered and eight died, a mortality of 53⅓ per cent., or 46⅔ per cent. of recoveries.

Among those that died there were three that were past hope, but were operated upon to give them the "one chance in a thousand." These cases were a rupture of an ulcer of the duodenum, of twenty-eight hours standing, rupture of a carcinoma of intestine, time uncertain, but more than a day, and one case of appendicitis of over twelve hours duration since the rupture.

If these cases, which at the time of operation were known to be *in extremis,* were eliminated the record would stand of seven recoveries and five deaths, a much better showing. I am willing, however, to shoulder the higher death rate and operate than to refuse operation and think that possibly the patient might have lived.

The Operation.—In case the origin of the infection can be localized, as a ruptured appendix or ulcer of the stomach, the incision should be made in the locality indicated.

In wounds it may be advisable to enlarge them, but in most cases it will be found preferable to do a median celiotomy. In all doubtful cases, cut through the linea alba, just below the umbilicus. The incision can then be extended upward or downward, as necessary.

As soon as the peritoneum is incised, thin fluid will usually gush out. The character of this gives us a clue, in doubtful cases, to the location of the lesion.

A thin, yellowish fluid, with a strong fecal odor, will probably come from a ruptured appendix, and will well up more from the right iliac fossa than the left. A thin fluid, acid in reaction, containing particles of undigested food, indicates the stomach as its source. If stained by bile, will probably come from the duodenum or from a rupture of the gall bladder, or biliary passages. A thin, purulent fluid, which rises up more from the pelvis in a female, should lead us to look to a ruptured tube as its probable origin.

The source and character of the secretions is noted, while the abdominal cavity is being irrigated with a decinormal salt solution, introduced to all parts of the cavity by a large intra-uterine douche tube, to the region of the spleen, the liver, the flanks, into the pelvic cavity, and in among the coils of intestines. A sufficient quantity is used until it returns clear. This is done before dealing with the lesion, for I thing it is expedient to get rid of the poisonous material as soon as possible. Do not sponge it out. Sponging is useful at times, but the area is too extensive to be successfully cleansed by sponging. Furthermore, the contact of any fibrous material with the intestine wipes off the delicate epithelium of the surface. Such abraded surfaces will later form adhesions with each other. On the contrary, the smooth glass irrigating tube will glide over the peritoneum without damaging its epithelium, and without causing adhesions.

In this connection I wish to speak against the so-called evisceration for cleansing the intestine, or in looking for lesions in its wall. Evisceration adds a distinct shock to the depression of the patient. It is like dealing him a blow in the solar

plexus. The handling and chilling of the intestine favors paralysis later, with the attending evils. The abdomen was made for the intestines, and they should be dealt with in situ as far as possible.

Now deal with the cause as expeditiously as possible. It is hardly within the scope of this paper to discuss the operative details for each condition that may cause septic peritonitis. One obstacle to free manipulation is great distension of the intestines. If this interferes with the work the gas should be allowed to escape through a small linear incision, in the margin of the intestine, opposite its mesenteric attachment. Exercise care in isolating the loop during the proceedings, and see that no leakage takes place into the abdominal cavity after the intestine has collapsed. Close the rent with two rows of fine chrome gut, continuous sutures.

In treating lesions of the stomach, duodenum, or common bile passage, inspect the cavity of the greater omentum. Wash it out, and drain it if infected.

Peroxide of hydrogen can be used full strength locally, followed by free saline douching, but I would not advise its use throughout the abdominal cavity, as it has a damaging effect upon the epithelial lining of the peritoneum, and favors the formation of adhesions.

After finishing the reparative work, flush out the abdominal cavity with large quantities of the hot saline solution. I refer to this feature again, as I believe that it is the most efficient means we now have for reaching all parts of the infected areas.

The question of drainage is an important one. All these cases must be drained, some through a single incision, others through two or more. In females drainage through Douglas' pouch into the vagina is advisable. The best means is probably iodoform-gauze wicks, covered with india-rubber tissue, as suggested by Dr. Morris, introduced into all pockets and over all infected areas. The rubber covering limits adhesions to the gauze, especially in the wound, renders its removal much easier, and with less pain to the patient. If the discharge is thick, rubber tubing may also be used in connection with the gauze.

One point about gauze drains is often overlooked. Usually they are cut almost flush with the surface of the skin. In the middle line this has to be done, but if the incision is in the iliac region I think you can increase the drainage power of the gauze by leaving the external end long enough to run over the body to the postero-lateral border. This dependent end assists the capillary force of the drain by a sort of syphon action. Another point is that the dressings should be frequently changed, because after they become saturated they cease to absorb, and drainage almost ceases.

In regard to closing up the wound: The state of the patient decides this. If the patient is in good condition, suture the peritoneum, muscles, and skin, in layers up to the drain, but if his condition is precarious we must be content with closing the wound *en massé*, or not at all. A ventral hernia in a live patient can be cured at a subsequent operation, but a beautifully sutured wound in a corpse gives no satisfaction.

All the usual restoratives and helps to tide over the critical hours must be at hand, and utilized according to the individual requirements. Subcutaneous or rectal injections of hot salt water, or venous transfusion of saline solution are most useful in filling the depleted vessels and stimulating the flagging heart and shallow respirations.

In reference to the use of drugs, as strychnine, digitalis, strophanthus, caffein, camphor, etc., I desire to caution against *over stimulation*. We sometimes are inclined to work the hypodermic too hard in critical cases. Seek to aid the feeble forces of the patient rather than to flog them to a standstill. But whiskey can be used by hypodermic *ad libitum*. It would take a good many syringefuls to inebriate a well man, and the sick one is in need of many more.

There are other measures to be used, familiar to all, as external heat, elevation of the foot of the bed, dram doses of plain water every few moments, to obtain the well-known stimulating effect that swallowing has on the action of the heart.

If the patient is to recover, the most important change is in the face, circulation, and respiration.

The patient's expression loses its drawn, deathly look, and becomes more restful. The circulation improves with a change in the heart's action. Respiration becomes deeper, more abdominal, and slower. The temperature may run moderately high, with irregular fluctuation.

The abdominal changes are: diminished tympanitis, relaxation of the muscles, and loss of tenderness and pain. The bowels can be got to act by salines or enemas. The tongue becomes moist, clears off, and the appetite returns.

After all our efforts we will meet with more failures than successes, in this class of patients. We can only console ourselves, then, with the reflection that we have done our best, and leave the issue of life with Him who gave it.

I.—APPENDICITIS: PERFORATION; GENERAL SEPTIC PERITONITIS; RECOVERY.

Charles L., aged thirty-two, September 1, 1895; patient walked into Harlem Hospital on the afternoon of September 1st, complaining of pain, which had appeared suddenly, a short time before, in the epigastric region. He was very weak, and in a state of shock. Temperature, 101°; pulse, 120; respiration, 26.

There was tenderness over the entire abdomen, but most marked in the region of the appendix.

He was operated upon at once, as he had come in during my visiting hour.

The usual oblique incision over the base of the

appendix was made, and the peritoneal cavity opened. Thin serum, filled with liquid feces and fibrin flakes, flowed out. This fluid was washed out from the regions of the liver, spleen, flanks, and pelvic cavity, by the decinormal salt solution and a long, large glass douche tube.

The appendix, which was perforated, was removed. After several free irrigations with the salt solution, an iodoform gauze drain was packed about the stump of the appendix, and the abdominal wall closed in layers about it.

The patient made an uneventful and rapid recovery, and was discharged cured, with a firm scar, September 28th.

This case gives us a clew to the time it may take the appendix to rupture.

The duration of the entire attack to the time of the operation was twenty hours. As near as we could judge, the appendix had ruptured three hours before the operation, or seventeen hours from the inception of the attack, yet with a perforation in the appendix and a general suppurative peritonitis this patient walked several blocks to enter the hospital. Another interesting fact is that this was the first attack of appendicitis the patient experienced.

II.—APPENDICITIS: PERFORATION; GENERAL SEPTIC PERITONITIS; DEATH.

James W., aged sixteen; case seen with Dr. Dunning, in Tremont.

The first attack of pain, in the right side, occurred August 10th to 12th, 1895.

The second, in the middle of September, from which he recovered, with slight attacks of pain in the right iliac region at irregular intervals. His third attack began October 13, 1895, with pain in the region of the appendix, and moderate fever. On the 18th his bowels moved, and the patient seemed to be better.

But at 1 A. M. of the 19th severe pain began suddenly in the right iliac region, that gradually, under opiates, became less, but symptoms of more serious nature appeared, and the doctor sent for me at 7 A. M.

I saw the boy at 9 A. M., and noted these symptoms: Temperature, $102^{4}/_{5}°$; pulse, 126, thready and weak. Respiration, costal and rapid. Tongue very thickly furred, face drawn and anxious, mind clear, no pain to speak of in the right iliac fossa, but the abdomen, which was distended and tympanitic, was tender all over, with the greatest tenderness over the site of the appendix.

Normal liver dulness, replaced partially by a tympanitic note.

The diagnosis was rupture of the appendix, with a general septic peritonitis. Immediate operation was advised, and although the chance of recovery was very slight, operation was accepted, and performed as soon as possible. The incision gave exit to a large quantity of thin, yellowish, fecal-smelling fluid. It filled the entire abdominal cavity, which was thoroughly irrigated with sterilized water.

The perforated appendix was removed. An incision was made in the left iliac region, and both iliac and lumbar regions, and the pelvic cavity, drained with iodoform guaze wicks.

The wounds were partially closen *en masse*.

Rectal irrigation, with hot sterilized water and free stimulation, were used.

October 20th, at 4 P. M., I saw the patient again. He had rallied from the operation, but was too severely poisoned to recover, and died that evening.

Remarks.—An interval operation, or an earlier one during this last attack, would probably have been successful.

III.—APPENDICITIS: PERFORATION; GENERAL PERITONEAL INFECTION; RECOVERY.

Harry T., aged twenty-four; admitted to Harlem Hospital July 15, 1896.

Past history negative. No previous attacks of appendicitis.

July 12, 1896, he went bathing, while overheated. Soon afterwards he was attacked with vomiting and abdominal pain, which, at first general, became more severe in the right iliac region.

July 15th he walked into the hospital, in a state of great prostration; temperature 102°, pulse 92. He was operated upon after not more than an hour's delay.

His abdomen was tympanitic, fully distended, and exquisitely tender to the slightest touch all over.

The abdominal muscles were in the most marked state of reflex contraction I have ever seen, and throughout the whole operation, while deeply anesthetized, they maintained this intense contraction and added considerably to the difficulties of the manipulation.

On opening the abdomen, over the appendix, purulent fluid escaped at once. The intestines crowded out through the incision, and were replaced with difficulty. The parietal and visceral peritoneum seen was very dusky-red in color. The blood-vessels stood out as if injected with a color mass.

A perforated appendix was found and removed, the peroxide of hydrogen was used about the stump of the appendix, and washed out with normal salt solution, which was introduced to all parts of the peritoneal cavity, in large quantities.

The wound was closed up to a gauze drain, packed about the cecum, and carried down into the pelvic cavity.

The patient reacted remarkably well, his recovery was perfect, and he was discharged, cured, August 3d (nineteen days).

As near as I could determine, the appendix ruptured about three hours before the operation. In that time developed symptoms of severe shock, and grave abdominal infection.

IV.—APPENDICITIS: PERFORATION; GENERAL SEPTIC PERITONITIS; RECOVERY.

Robert R., aged thirty-seven; druggist.

The patient had been in perfect health until June 30, 1898, when he felt moderate pain throughout the lower abdominal region. July 1st he consulted his physician, who made a diagnosis of appendicitis, and referred him to me.

The patient rode from Harlem to my office, where I saw him about 10 A. M. Temperature, 100°; pulse, 90. There was distinct resistance in the abdominal muscles, over the appendix, which was moderately tender to pressure. The patient was instructed to go home, and to bed, and apply an ice-bag to the abdomen.

About 3 P. M. I received an urgent call to come to the patient's house at once, as he was crazy with pain, and threatened to jump out of the window. The nearest doctor was called in, and administered a hypodermic injection of morphine, before I arrived. I found him in great pain and shock, perspiration standing on his forehead, pulse weak and rapid. Sighing respiration. Abdomen showed some distention, was tympanitic, and very tender, especially in the appendicular region. He was conveyed, with as little delay as possible, to the Harlem Hospital, and operated upon at 7 P. M.

As soon as the peritoneum was divided a purulent fluid, with a fecal odor, gushed out.

The peritoneum was dusky-red, and the vessels of the intestines distended with venous-colored blood. There were no adhesions anywhere. No time had been given for their formation.

The entire peritoneal cavity was flushed out with the usual saline solution, and especially in the regions of the flanks, liver, spleen, and pelvic cavity. A ruptured appendix was removed. An iodoform wick drain was placed, and the parietal wound closed up to the drain.

Recovery was slow, but satisfactory, the intestines being sluggish to act at first.

It took about six weeks before the wound finally cicatrized. Inspection a year later showed that the muscles gaped, and there was a slight bulging in the scar.

The duration of this attack was about twenty-four hours. He had never had a previous one. He rode in the cars, and walked to him home about 11 A. M., without much inconvenience, and four hours later the appendix ruptured.

CASE V.—APPENDICITIS: PERFORATION; GENERAL SEPTIC PERITONITIS; RECOVERY. (PREVIOUSLY REPORTED IN THE *Archives of Pediatrics.*)

Stella M., eleven years of age.

History.—July 19, 1896, taken sick with pain and tenderness in the right, lower abdominal region.

July 22d, I saw the case, with the family physician, Dr. A. J. Kuehn.

Examination.—The abdomen was slightly distended, and an ill-defined mass in the right iliac fossa. The right rectus and abdominal muscles were rigid. The entire abdomen was tender, but more marked in the region of the appendix. The temperature was 102°. pulse 160. Child's face had an anxious look.

Diagnosis.—Suppurative peritonitis, due to perforation of a diseased appendix. Immediate operation proposed.

Treatment.—Child taken to the Harlem Hospital, and operated upon as soon as the necessary preparations could be made. The usual incision was made. As soon as the peritoneal cavity was opened, thin, yellowish fluid, with whitish flakes, escaped with a rush. All parts of the abdominal cavity were thoroughly irrigated with hot saline solution, by means of a large-sized, intra-uterine glass douche-tube.

The appendix was freed from adhesions, and brought into the wound. It showed a perforation at its tip, and another one inch from the first. The mesentery was ligated, and divided. The base of the appendix was encircled with a silk suture, passed well in the coats of the cecum; the appendix was clamped and divided near the cecum, and the distal portion removed. The stump was now inverted into the cecum, and the previously introduced suture tied. This puckered the peritoneum nicely, and closed the orifice of inverted appendix. A second continuous silk suture was introduced for safety, burying the first. The omentum had attempted to cover over the appendix, but had not succeeded, and a thickened portion adherent to the appendix, about two inches square, was removed.

The abdominal cavity was treated to pure hydrogen peroxide, poured directly from the bottle into the wound. This was followed by the saline irrigation. A small iodoform-gauze wick was placed about the site of the appendix, and let out of the lower angle of the wound. The peritoneum and muscular layers were separately sutured with fine silk, and the skin with silkworm gut, as far as the drain. The aristo-collodion dressing applied.

On the second day the abdomen was distended; the note over the liver was tympanitic. The gauze wick was removed, as it was feared that the drainage was not good, although the temperature was normal. There was no retention of pus. A second small gauze drain was introduced; the remaining part of the wound was neatly closed with silkworm gut suture. The distension of the abdomen was caused by gas in the intestines, due to paralysis of their muscular coats from the peritoneal infection. An enema of hot saline solution, containing ten grains of quinine, given, Result was good; patient passed flatus and feces, and the abdominal distention disappeared. Strychnine had also been given from the very first.

Discharged August 22d, with a small sinus, which closed in a short time.

CASE VI.—APPENDICITIS: PERFORATION; GENERAL SEPTIC PERITONITIS; RECOVERY. (PREVIOUSLY REPORTED IN THE *Archives of Pediatrics.*)

Julia R., aged three years.

History.—Father died of phthisis. Mother was also infected, and died this year from tubercular laryngitis. Child has been weakly from birth, and subject to constipation. About September 14, 1896, child felt badly. Was temporarily relieved by castor oil. Vomiting, fever, and pain over the abdomen set in. She was examined by Dr. Sharp, the family physician, who pronounced the case one of appendicitis, and advised removal to the hospital. The child was admitted to the Harlem Hospital on the afternoon of September 21st. Temperature 102°, pulse 140, respirations 32. Face flushed, tenderness over the entire abdomen, very restless.

Treatment.—Enema administered, strychnine hypodermically, with whiskey. Operation conducted as previously outlined. Pus escaped as soon as the peritoneum was divided. The pus was not walled in, but was free in the abdominal cavity. It was thoroughly removed, by copious irrigation with saline solution; then peroxide of hydrogen, and with saline a second time.

The appendix was gangrenous; had ruptured in several places; was adherent to the intestines, and so soft that it had to be removed piecemeal. It offered no substance for application of a ligature, and as the opening into the cecum seemed to be firmly closed, none was applied. The base of the appendix, and the surrounding tissues, were thoroughly treated with pure peroxide of hydrogen, and the abdominal cavity again flushed with the hot saline solution. Drainage was applied by strips of iodoform gauze placed over the cecum, and left at the lower angle of the wound. The peritoneum, muscles and skin, were closed *en massé,* with through-and-through silkworm gut sutures.

September 22d: Temperature 101°, pulse 120, respiration 30. Beef-tea retained. Dressings changed. The gauze drain was removed on the 26th, and a fresh one inserted. Case made a fair convalescence. Discharged October 9th, with wound healed. Ten days later the wound reopened, and a slight discharge of pus followed. On the 20th, vomited and was restless. On the 21st, abdomen was tender on the left side. Bowels were freely moved by calomel, in divided doses. The sinus was enlarged, and a small abscess cavity drained with a rubber tube. This was retained until November. By December the sinus had healed. The scar was a weak one, however, on account of failure of close apposition of the peritoneum and the layers of the abdominal wall, and a hernia as large as a hen's egg had appeared. The child was readmitted to the hospital on January 5, 1897, and an operation performed for ventral hernia, the details of which I do not care to introduce here at this time; suffice to say that she was discharged, on January 22d, with a firm scar, which has remained perfect to this date.

CASE VII.—APPENDICITIS: PERFORATION; GENERAL SEPTIC PERITONITIS; DIED. (PREVIOUSLY REPORTED IN THE *Archives of Pediatrics.*)

Edward R., about fourteen years of age.

History.—Boy, an inmate of the House of Refuge. Was confined to the bed with abdominal pain, tenderness, and fever, for several days. The tenderness was not typical in its location, being in or near the median line. The case was in the service of Dr. Van Santvoord, who transferred him to the Harlem Hospital, January 16, 1897.

Examination on Entrance.—Temperature 102.8°, pulse 122, respirations 24. Marked pain all over the entire abdomen, but greatest in the right iliac region. The abdominal muscles were very rigid, especially on the right side. Face drawn, anxious and dusky.

Operation.—On opening the abdomen by the usual incision, pus and fluid at once flowed from the wound. The entire abdominal cavity was filled with a thin, yellowish fluid. Saline solution, peroxide and saline irrigation freely used to remove it. The perforated, gangrenous appendix was removed as quickly as possible, by simply ligating it close to the cecum. The stump was cauterized with pure carbolic acid. Abdominal cavity again irrigated, iodoform gauze drain inserted, so as to drain pelvic cavity, and the region about the ascending colon and cecum. The abdominal wall was closed, in separated layers, as far as the drain. During the operation whiskey and strychnine were freely given. After removal to the bed, an enema of half a pint of saline solution, with ten minims of tincture digitalis and two ounces of whiskey, was given. In spite of free drainage and full stimulation, the boy died on the 18th.

CASE VIII.—APPENDICITIS: PERFORATION; GENERAL SEPTIC PERITONITIS; RECOVERY.

Minnie E. M., twenty-two years; February 27, 1899. Case of Dr. Bird.

February 24th ate a lunch of ham and figs, and in the evening drank porter.

Through the night vomited, and had diffused abdominal pain.

Examination.—Entire abdomen tender, increased sensitiveness at McBurney's point. Temperature 100°, bowels loose, probably from castor oil, taken previously.

February 25th, diarrhea, pain diffused, but tenderness local. February 26th, pain increased, marked local tenderness, some tympanitis, temperature 101°, pulse 114, A. M.: evening, temperature 101.4°, pulse 116. Considerable tenderness over right half of abdomen.

February 27th, morning, only the local tenderness remains; pulse 108, temperature 100°.

At 1.30 the pulse was 98, and temperature 99.8°. At 8 P. M. the pulse was 105, and temperature 101°. Pain had returned, and was severe, with more local tenderness. I saw the patient the same evening. The symptoms of appendicitis, with probable perforation, were present. Operation was advised, accepted, and performed the same night. The appendix was found ruptured. There was pus about the cecum, appendix, and in Douglas' pouch. The intestines were reddened, and moderately distended. The abdomen was flushed out, the appendix removed, the pelvic cavity and iliac fossa drained by iodoform wicks, through the lower angle of the wound, and this was sutured up to the drain. Result: The patient made a slow, but steady recovery.

CASE IX.—ABORTION: GENERAL SEPTIC PERITONITIS; DEATH.

Bombarda, S,; aged thirty.

Admitted to Harlem Hospital June 8, 1896, with a history of having aborted one month previously. The period of pregnancy not given.

There was a foul discharge from the uterus, and she was curetted, by the visiting physician. June 12th she was transposed to the surgical ward. The abdomen was distended, tympanitic, and tender. The pulse was weak, and 140 per minute. Temperature high, degree not stated.

A median celiotomy was performed the same day. The pelvic cavity and iliac fossæ were full of thick pus, and the upper abdominal cavity only partially walled off by lymph adhesions. The abdominal cavity was thoroughly irrigated with hot saline solution, the flakes of lymph mopped off, as far as possible. The abdomen was drained by iodoform gauze, through Douglas' pouch, into the vagina and through the lower angle of the ventral incision, which was partially closed.

The patient rallied somewhat the same night. The wound was redressed June 13th, and a free serous discharge found present. The tympanitis had slightly diminished.

The patient continued to grow weaker, and died the same day.

Possibly a complete hysterectomy earlier in the disease might have saved her, but she was in too precarious a condition to attempt more than drainage of the abdominal cavity at the time of the operation.

CASE X.—CARCINOMA OF SPLENIC FLEXURE OF COLON; RUPTURE; GENERAL SEPTIC PERITONITIS; DEATH.

J. C. T., age fifty-one; admitted to Harlem Hospital July 4, 1896.

Patient in shock when admitted. No previous history obtained. Abdomen was uniformly distended, and very painful to the touch. Normal liver dulness diminished, and replaced by a tympanitic note. Pulse 148, and very feeble. Temperature high, and collapse imminent.

There was evidently a general peritonitis present, and in the absence of other localizing symptoms the right iliac region was opened into, on the possibility of the cause being due to a ruptured appendix.

A large amount of purulent, foul-smelling fluid escaped as soon as the peritoneum was incised. Appendix was normal.

A second incision was made in the median line, three inches long, below the umbilicus. A large quantity of similar foul, pus-like fluid escaped. Hot saline irrigation used here. No attempt was made to localize the trouble, as the patient was *in extremis*. Hot saline solution was freely used in the abdomen, the incision drained by iodoform gauze, and the wounds partially closed.

The patient died 2.30, July 5th.

Autopsy revealed a carcinomatous growth, involving the splenic flexure of the colon, with a perforation, and general septic peritonitis.

The cancer had ulcerated from the inside so that it had not narrowed the canal of the intestine, and there was no history of obstruction.

CASE XI.—CONTUSION OF INTESTINE: INGUINAL OMENTAL HERNIA; GENERAL SEPTIC PERITONITIS; DEATH.

Bertha K., aged sixty-six; German; was admitted June 10, 1896, to the Harlem Hospital.

She stated that, on the day before, her daughter had kicked her in the abdomen.

Examination showed a large, fleshy woman, with a pendulous abdomen; not distended; only slightly tender to touch in the lower left zone. There was a left inguinal hernia, of small size, which was painful and tender.

She was vomiting a thin, blackish fluid, at short intervals.

A herniotomy was performed June 11th, at 10.30 A. M.

The contents of the hernia were thickened and congested omentum. No intestine was present in the sac. Thinking that there might be some obstruction to the intestine, the incision was lengthened upward and the peritoneum freely opened. The adjacent coils of intestine were injected, and darker than usual in color, but no obstruction existed.

The wound was closed by silk-worm gut sutures over a small rubber-tube drain.

The patient rallied slightly, and lived until afternoon of the same day.

Autopsy revealed a general peritonitis, but no gangrene or perforation of the intestines. The source of the infection could not be determined.

CASE XII.—PERFORATING ULCER OF DUODENUM: GENERAL SEPTIC PERITONITIS; DEATH.

Ed. P., age twenty-two; sailor; admitted to Harlem Hospital June 15, 1897. Patient had never had typhoid fever.

Admitted he had contracted syphilis five years previous. Has suffered during past eighteen months with severe attacks of pain to the right of the umbilicus. These attacks would pass off in a day or two.

Five days previous to admission he had had such an attack, which disappeared. The three following days he was under the influence of alcohol—on a spree. January 14th, at 4 P. M., while still intoxicated, he was seized with a severe attack of pain in the region of the umbilicus, radiating to both sides, but especially towards the right iliac region. This continued to increase in severity, and a physician was called the following day, who diagnosed the case as one of perforative appendicitis, and called an ambulance from the hospital, which he reached at 3 P. M., June 15th. Temperature 103.8°, pulse 126, respiration 40, shallow. The abdomen was distended, tympanitic, and very tender everywhere, but more particularly in the right side. The muscles were firmly contracted, but seemed harder on the right side. He had vomited several times, but there was nothing characteristic about the material ejected.

He was cyanosed, skin mottled, and evidently had not long to live, but being a powerfully built young man he was operated upon, with the object of giving him a chance.

At 8 P. M. an incision was made, as for appendectomy, but a normal appendix found. Quantities of a thin, yellowish fluid, filled with flakes of lymph, flowed out.

A median incision above the umbilicus was made, gastric ulcer possibly being present. None was found, and as the patient was in extremely weak condition nothing furthere was done than to copiously wash out the abdominal cavity, drain freely with iodoform gauze, and partially close up the wounds.

The patient regained consciousness, but died at 2.30 A. M., January 16th.

Autopsy.—Showed a general purulent peritonitis, which was due to a rupture of a round ulcer in the posterior wall of the first part of the duodenum.

CASE XIII.—STAB WOUND OF ABDOMEN: GENERAL SUPPURATIVE PERITONITIS; DEATH.

John H., age thirty. Patient walked into the Harlem Hospital December 25, 1897, with a stab wound of the abdomen at the left and lower angle of the umbilical region, which he had received a short time before.

The omentum was protruding from the wound, but there was no hemorrhage.

Immediate operation was performed. The abdomen was opened by a median incision, and the omentum withdrawn from the wound, and excised. The intestines were inspected, but no wound of them found.

The wounds were closed without drainage.

December 26th, A. M., temperature 99.6°, pulse 140.

The patient grew steadily worse with symptoms of general peritonitis. By December 27th the temperature was 105°. The median wound was reopened. There was a general suppurative peritonitis present, but no perforation of gut anywhere. The abdomen was flushed repeatedly, and the wound closed over free drainage.

At 2 P. M., temperature 102°, pulse 140, respiration 32.

Pulse rate and temperature began to increase, and patient died on the 28th, at 7 A. M.

CASE XIV.—GUNSHOT WOUND OF ABDOMEN AND INTESTINES: GENERAL SUPPURATIVE PERITONITIS; DEATH.

Giacomo G,. age twenty-eight; plasterer.

Brought into the Harlem Hospital January 16, 1898, with a bullet wound of the abdomen, situated one and a half inches to the left of the umbilicus. The direction of the bullet through the muscles was upward, and to the left.

Immediate operation was performed. A median incision showed blood clots and fecal matter free in the abdominal cavity. These were rapidly irrigated out. Two perforations in the greater curvature of the stomach and one in the transverse colon were closed with Lembert sutures. The beginning of the jejunum was so badly torn that three inches of it was excised, and an end-to-end anastomosis effected with a Murphy button. No further wounds were found, and the abdomen was sutured with a gauze wick running to the resected portion of the gut.

The patient gradually became worse. Developed tympanitis, and abdomen became distended. He died January 18th, two days after the injury.

The autopsy showed a general suppurative peritonitis. There was a small abscess in the liver, and in the second portion of the duodenum were two other bullet wounds, which, on account of their position, had eluded search.

All the other wounds of the gut had firmly united.

CASE XV.—PYOSALPINX: RUPTURE; GENERAL SEPTIC PERITONITIS; RECOVERY.

M. H., twenty-four; married; admitted to Harlem Hospital November 3, 1900.

Two years ago patient gave birth to a child, which was delivered by a midwife. Not been well since. Has had constant pain in region of ovaries, intensified at her menstrual periods.

Three months ago was in a hospital for severe pelvic pain, but no operation was performed. Two weeks ago she entered another hospital, on account of excessive menstrual flow, where a curettage was performed.

November 1st, patient returned home, and began her housework. November 2d she was seized by sudden, sharp pain in the lower portion of her abdomen. Her symptoms increased in frequency, and she called in her family physician, who sent her to the hospital.

Examination.—Temperature 102°, pulse 122, respiration 50. Countenance pinched and drawn, Bowels constipated, abdomen very rigid, very tender to touch, more so in iliac fossæ. Abdomen tympanitic, but liver dulness not diminished.

Vaginal Examination.—Cervix hard, with a bilateral tear; pelvic floor hard and tender; moving uterus causes pain.

Diagnosis.—General septic peritonitis, due to ruptured appendix or tube. Median celiotomy performed; a thin fluid about the color and consistency of thin mucilage flowed on opening the peritoneum. It filled the entire abdominal cavity, flanks, among coils of intestines, but especially the pelvic cavity.

SUMMARY OF CASES.

No.	Sex.	Age.	Primary Disease or Injury.	Duration of Primary Disease or Injury to Peritoneal Infection.	Duration from Peritoneal Infection to Operation	Pulse and Temperature Before Operation		Termination
I.	M.	32	Perforative Appendicitis	17 hours	3 hours	120	101.8	Recovered
II.	M.	16	" "	7 days	10 hours	126	102.8	Died
III.	M.	24	" "	3 days	3 hours	92	102	Recovered
IV.	M.	37	" "	20 hours	4 hours	90	100	"
V.	F.	11	" "	4 days	About 4 hours	160	102	"
VI.	F.	3	" "	7 days	About 4 hours	140	102	"
VII.	M.	14	" "	Several days	More than 12 hours	122	102.8	Died
VIII.	F.	22	" "	4 days	About 6 hours	105	101	Recovered
IX.	F.	30	Abortion.	Not known	More than 24 hours	140	Not given	Died
X.	M.	51	Carcinoma Intestine	Not known	More than 24 hours	140	Not given	"
XI.	F.	66	Contusion Intestine—Omental Hernia	Uncertain	Uncertain	.....	.....	"
XII.	M.	22	Ulcer of Duodenum.	Several months	28 hours	126	103.8	"
XIII.	M.	30	Stab Wound, Abdominal Wall	Immediate	Several hours	.....	.....	"
XIV.	M.	28	Gun-shot Wound, Intestines	Immediate	About 3 hours	.....	.....	"
XV.	F.	24	Rupture of Pus Tube	Several weeks.	About 24 hours	122	102	Recovered

The right tube was found enlarged, collapsed, the fimbrated end closed, and a small perforation at the apex of a small, thin-walled elevation.

The right ovary was cystic, and, with the tube, was removed. The appendix was normal, and not touched.

The entire abdominal cavity was thoroughly washed out with decinormal salt solution. An iodoform gauze wick, surrounded with rubber tissue, was introduced to the bottom of Douglas' pouch, and the parietal wound sutured, in layers, up to the drain. Usual after-treatment.

November 14th, primary union in wound, except small opening, now drained by rubber tube.

Patient is making a slow convalescence. Temperature 99-100°, pulse 100-120. (The patient fully recovered.)

Intubation in Diphtheria.

Korfon believes that one is justified in intubating when there is dyspnea with dry, stridulous, embarrassing, suffocating cough, or when the cough becomes suppressed; also, when dyspnea is not relieved by previously administered antitoxin and whenever it is increasing in intensity; when the dyspnea is accompanied by an irregular, rapid, easily compressible pulse, or when the pulse becomes imperceptible; when restlessness is increasing, even if dyspnea is not alarming; if spasmodic attacks of dyspnea occur, and if cyanosis occurs. If we have a combination of these symptoms, the operation becomes imperative and no delay should be tolerated. He notices some of the opinions in regard to the comparative value of tracheotomy, and maintains that intubation has a great advantage over the latter in that there are usually few objections on the part of the parents to intubation, while there would be many to tracheotomy.—*Cleve. Med. Gaz.*

Clay Dressings.

Wallis has for six years employed wet clay as a dressing in skin diseases. It has the mechanical property of holding water, thereby assisting osmosis, and he attributes to it also certain therapeutic effects from the mineral salts contained. It is preferable to sterilize it by baking in the oven for several hours before using. He applies it in the form of paste under several layers of gauze, which must be kept constantly wet by covering with a wet towel several times a day. Clay dressing should be removed every forty-eight hours. The most forms of inflammatory skin diseases do well under this treatment; he notices especially the rapidity of healing in ulceration. It admits of many forms of modification and medication, and he suggests the use of bichlorid of mercury, phenol, boric acid, and soluble alkalies and glycerin. —*Med. Bulletin.*

The New York State Journal of Medicine.

Published Monthly by The New York State Medical Association.

THE NEW YORK STATE JOURNAL OF MEDICINE is published on the first day of each month by The New York State Medical Association. It supersedes the annual volume of *Transactions* formerly issued by the Association. It aims to be a direct medium of communication between the members of the Association, and to widely disseminate Association news. Scientific Articles, Clinical Memoranda, and News Items of interest are solicited for publication. Communications should be typewritten. Reprints of Original Articles will be furnished at cost price, provided a request therefor accompanies the manuscript. Price-list on application. The Committee on Publication does not hold itself responsible for individual views of correspondents.

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VOL. I. AUGUST, 1901. No. 8.

MEDICAL ORGANIZATION.—If there is any one lesson that history teaches with certainty, it is that victory belongs in the end, not to numbers, but to organization and discipline, and that, if there is any one thing which can partly make up for lack of these, it is enthusiasm and self abnegation.

It is through lack, not of any one, but of all these that the medical profession has failed of that influence in the community to which it is entitled by its numbers and its public spirit. Absorbed in the daily round of duties, the physician has noted with a careless eye the various changes which, while they might menace the profession as a whole, seemed unlikely to affect him personally. Suddenly he finds himself confronting a serious situation.

Always, on the average, poorly paid, and with incomes constantly growing less from competition within the ranks, the profession finds itself threatened with the legalized competition of a host of new opponents, osteopaths, christian scientists and others.

Well organized, numerous, and plausible, they are supported by venal politicians and by a mass of people who are perfectly honest, but whose good intentions outrun their intelligence. Worse than this, they have the support of a section of the public press.

For several years there have been evidences that the profession in this State was becoming aroused, as evidenced by the phenomenal growth of the New York State Medical Association. Other States are following along the same lines. Strong State organizations based on strong county organizations are required. As the *St. Louis Courier of Medicine* well says:

"The profession must look to its State organization for the devising of means and the execution of plans for the purpose of securing relief from illtoward conditions. But the inertia of the profession in regard to matters of self-interest has been one of its fatal shortcomings. It appears to be unconscious of its latent power and of its possibilities. The profession is numerically strong enough to demand a consideration of its wants instead of having to beg for such as a favor, as is now too often the case. A strong, compact organization with unity of purpose will not have to ask in vain.

"In order to accomplish results the profession must organize its members into an active, aggressive body which will take an active part in the affairs of the body politic when such may be necessary to protect its own interests. At all times the public must be made to recognize its dominant force and accord to it a recognition worthy of its position, instead of the scant courtesy with which it is now treated on all occasions of public honor. Closer union is the 'war-cry' of the profession throughout the United States. A more thorough organization has become necessary to its existence."

* * *

These changed conditions are not local, but press even harder on the profession in other countries. The London *Lancet* in a staff article says: "Certain economic circumstances have arisen, it cannot be precisely said on what day or what hour. They have been of slow growth, and even to-day their presence is but vaguely felt by some, and completely ignored by others. A small minority, however, has acquired a knowledge of the action of these economic forces, which are daily becoming more evident and more oppressive. This small minority has not been brought into existence by any one cause but by a multiplicity of causes; therefore, each individual understands better the phases which affect him personally. This uneven distribution of knowledge is a source of great weakness, because it tends to split the profession into different or-

ganizations instead of uniting it into one body." There, as here, one group of practitioners is keenly alive to the existences of hospital abuses; another appreciates the need of mutual help against blackmailers; to a third the chief danger is the competition of dispensaries and lodge physicians, to say nothing of illegal practitioners and quacks. Each group forms its own organization and insists that its grievance be righted first.

But, as the *Lancet* points out, all these are the results of economic changes which can be dealt with better by one organization than by many. Such an organization requires on the part of its leaders special knowledge and on the part of its followers patience and faith.

* * *

The New York State Association Meeting.—The attention of the members of the State Association is called to the next meeting of the association, which will be held in the Academy of Medicine, this city, October 21st to the 24th inclusive.

The committee has already secured about fifty papers for the literary program, which promises to be a very interesting one. The program will be published in full later.

The annual dinner of the association will be held at the Murray Hill Hotel on the evening of October 23rd. A departure is made this year in inviting members to bring their wives or other ladies of their households to the dinner, the committee fully believing that the presence of ladies on this occasion will add much to its enjoyment.

A circular letter explaining this feature and soliciting subscriptions has been sent to every member whose name appears on the official list. Replies have been received from a number, but it is very necessary for the committee to have a much larger number in order to complete all the arrangements beforehand. Members are therefore requested to forward to the undersigned AT ONCE, if they have not already done so, their subscription of $5.00 to the entertainment fund for each seat taken at the dinner.

Irving S. Haynes,
Chairman Com. on Arrangements.
1125 Madison Ave., New York.

* * *

Changes in the Medical Directory.—Manhattan: Dr. Joseph D. Bryant has removed to 32 West Forty-eighth street; Dr. John F. Erdmann has removed to 60 West Fifty-second street; Dr. Sherman K. Foote has removed to 841 West End avenue; Dr. W. P. Herrick has removed to 30 West Fifty-fourth street; Dr. R. H. Hawkes has removed to 42 East 112th street; Dr. Philip D. Kerrison has removed to 810 Park avenue; Dr. J. Riddle Goffe has removed to 61 West Forty-fifth street. Brooklyn: Dr. P. C. Jameson has removed to 105 Montague street.

* * *

The Onondaga County Medical Association was organized on Thursday evening, July 18th, at the house of Dr. Henry D. Didama of Syracuse, by the members of the Third District Branch residing in Onondaga County, a meeting having been called for that purpose. The following were elected to membership: Dr. F. J. Kaufman, Dr. T. B. Dwyer and Dr. M. B. Fairchild, all of Syracuse. By-laws were adopted and the following officers were elected, to serve until the annual meeting, which will be held on the third Monday in February: President, Henry D. Didama; Vice-President, Adelbert D. Head; Secretary, Bernard S. Moore; Treasurer, Alexander J. Campbell; Member of the Executive Committee, Amos S. Edwards; Fellow, William J. Ayling; Alternate Fellow, Charles B. Gay, all of Syracuse.

The next meeting of the association will be held on the third Monday in August, the time and place to be decided by the Executive Committee.

* * *

Third District Branch.—The Executive Committee has recently elected to membership Drs. Sylvester G. Pomeroy of West Oneonta and Frank L. Winsor of Laurens, both of Otsego County.

* * *

Wyoming County Medical Association.—A meeting was held at Warsaw, N. Y., Tuesday, July 9, 1901, which was largely attended, and the following officers were elected: President, Dr. Carl C. Mann, Warsaw; vice president, Dr. P. S. Goodwin, Perry; secretary and treasurer, Z. G. Truesdell, Warsaw. A resolution was also passed adopting by-laws in conformity with those of the New York State Medical Association. The following gentlemen were elected fellows: Z. J. Lusk, Warsaw; L. C. Broughton, Castile: A. C. Way, Perry Centre; W. B. Blackmer, Pike. Alternates, L. H. Humphrey, Silver Springs: G. S. Skiff, Gainesville; P. S. Goodwin, Perry; C. C. Mann, Warsaw. The next meeting will be held at the Walker House, Silver Lake, N. Y., on Tuesday, September 24, 1901.

* * *

Orange County Medical Association.—At the regular monthly meeting, held on Wednesday, July 17, 1901, Drs. Willis I. Purdy, Middletown, N. Y., and Lawrence G. Distler West Town, N. Y. were elected to membership.

* * *

Association Dues.—As there seems to have been a misunderstanding on the part of various treasurers of the local associations as to the meaning of Article X., Section 4, the Council has decided that the date on which the names shall be dropped from the roll of members of the association, of those who have not paid their association dues, shall be considered to be October 1st instead of as previously ruled, July 1st. It is earnestly requested that members of the association who have not yet paid their dues for 1901 should at once send their checks for $5.00, the amount of their dues for that year, to the treasurer of their county association, or, if they reside in counties which have no association, to the treasurer of their District Branch, without waiting for bills to be sent to

them. The addresses of these treasurers can be found on the inside of the front cover (advertising pages 2 and 3) of the JOURNAL.

* * *

CHAUTAUQUA COUNTY MEDICAL ASSOCIATION.—The next meeting will be held at Jamestown, September 17, 1901.

* * *

DEATH OF DR. TABOR B. REYNOLDS.—In the death of Dr. Tabor B. Reynolds, which occurred at his home in Saratoga in the early part of July, the medical profession has lost one of its oldest and most respected members. He was born in Wilton, N. Y., eighty years ago; graduated from Albany Medical College in 1842, and had been, up to a few years ago, continuously engaged in the practice of his profession. He was president of the Saratoga County Medical Society and a member of the New York State and the American Medical Associations. In addition to these professional distinctions, he had served his fellow citizens as Superintendent of Schools and member of the lower house at Albany, and as sheriff of his county.

* * *

DEATH OF DR. R. N. COOLEY.—We have learned with sincere regret of the recent death of Dr. R. N. Cooley, at his home in Hannibal, Oswego County, N. Y. Dr. Cooley had reached the age of seventy years and was one of the oldest members of the association.

* * *

INFECTION BY CURRENCY.—Dr. Douglas Ayres, of Fort Plain, N. Y., sends us the following communication:

"A few days since a man came into the office of the writer suffering from the primary lesions of syphilis. He was of that class who pay but slight attention to personal cleanliness, so little, in fact, that I spent some time in instructing him as to such particulars as regards the care of his person as would be necessary to prevent communicating the disease to others, and for the protection of himself. The fee that I received for services I threw into an antiseptic solution (as he paid me with silver), and the thought came into my mind of how many innocent persons might have suffered from this source; how many must suffer from similar sources. It is customary with many people in making change to hold money in their mouths. Imagine the possible result of so holding coins or paper, from such a source as I have mentioned, should there be an abraded surface!

"Children are frequently given a purse to amuse them, and the contents soon find their way to their mouths, introducing, perhaps, a poison that may show its evil effects for years to come, yes, even for a lifetime. The banker and those making change in commercial houses have learned to make use of the wet sponge to dampen the fingers in counting paper currency, but how many there are, in private life, whom we see putting the fingers upon the tongue for moisture every few minutes, while counting again and again the amount received or about to be paid out!

"When we stop to think of this matter fully and fairly the danger is evidently sufficiently great to demand earnest and careful instruction from every member of our profession to those who consult them for relief from this disease. Careful instruction should be given as to the care necessary to prevent the inoculaton of others, and especial instruction to those who are both filthy and ignorant. The sterilization of money, at stated intervals, by all banks, would be an ideal measure for general protection. Let us interest ourselves in this matter, and call the attention of all in the localities in which we reside to the importance of reasonable care in handling that which may be the medium of transmission of one of the gravest forms of disease."

Book Reviews.

A SYSTEM OF PHYSIOLOGIC THERAPEUTICS. A Practical Exposition of the Methods other than Drug-Giving, Useful in the Treatment of the Sick and in the Prevention of Disease. By American, English, French and German Authors. Edited by Solomon Solis-Cohen, Professor of Medicine and Therapeutics at Jefferson Medical College, Philadelphia, etc. Eleven octavo volumes, with many illustrations, maps and full-page plates. Volumes 1 and 2. ELECTROTHERAPY. By George W. Jacoby, M.D., Consulting Neurologist to the German Hospital, New York. 163 illustrations. Philadelphia: P. Blakiston's Son & Company, 1901.

The prospectus issued by the publishers of these volumes contains the following: "There is no similar set of volumes in the English language. The series is in many respects absolutely unique. While individual books have been issued on certain of the subjects, no attempt has been made to present auxiliary methods of treating disease in the same systematic manner with the like full, practical detailed directions for their use. The subjects, while of the greatest importance, are those least understood by the physician and which have to a large extent been neglected by the writers of the day. Germany, France, England, and the United States have each furnished their quota of writers. The series is international in character and scope, assimilating the best from all nations, the editor dominating the whole and bringing all into one harmonious plan."

If one may judge of forthcoming volumes by the two just issued, the claim of the publishers will be more than justified. Not only will the series be unique, but valuable to an exceptional degree. Dr. Jacoby has treated the subject of electrotherapy in a masterly manner. His explanations of involved technical matters relating to the electrical current and its application are clear, uninvolved, and forcefully expressed. His illustrations are simple and easily understood. Part I. of Volume I. is devoted to Electrophysics; Part II. to Apparatus Required for the Therapeutic and Diagnostic Use of Electricity. Volume II. is divided into Electrophysiology and Electropathology, Electrodiagnosis and Electroprognosis, and Electrotherapeutics.

It would be a pleasure to review more in detail the several subjects treated by this author. It is safe to say that no work has yet been placed before the medical profession that so satisfactory fulfils all requirements in the domain of which it treats. The editor is to be congratulated at having inaugurated his series under such auspices. The volumes before us are very attractive in appearance, the binding, paper and press work being far above the average. The price of the complete series, 11 volumes, is $22.00, net, payable as each volume is delivered. The publishers expect to complete the publication of the series by March, 1902.

Original Articles.

COCAINISM.

BY T. D. CROTHERS, M.D.
Hartford, Conn.

IT has been known for a long time to the natives of many of the South American States that the leaves of the erythroxylon coca plant contain some invigorating principle which overcomes fatigue and increases the power of endurance, but the fact that the alkaloid of this plant, cocain, is one of the most subtle and dangerous intoxicants is practically new to medical science. The general physiologic action of this drug as a local anesthetic was first described in 1866, but twenty years later Erlenmeyer gave the history of many cases of cocainism and pointed out this disease for the first time. Many quite eminent men denied that cocainism was a distinct disease and an addiction. They explained the intoxicating symptoms as due to other drugs and conditions of the body. One physician asserted that he had used cocain in large doses personally and in his practice without any poisonous symptoms. Another claimed that there was no danger from its use, if not complicated with other drugs. A third, an author, urged that it be given as a tonic for muscular and mental fatigue and exhaustion, and cited cases to sustain his counsel. Two of these physicians died from diseases directly following the use of cocain.

The cheapening of this drug has greatly increased its use and popularity in prescriptions where pain and irritation are to be overcome. Used by the needle for local anesthesia it has become prominent by the absence of any unpleasant after-symptoms, and the conviction of its safety has increased. Whenever it has become an addiction, the victim is always possessed with the idea that it is possible to use it moderately and safely. There are many reasons for believing that the strictly medical use of cocain has not increased very rapidly, owing to its variable effects. Dentists, throat, nose, and eye specialists, and surgeons, use it most freely. It enters very largely into many popular prescriptions and proprietary combinations of drugs, but there are no reliable statistics which indicate the extent of its use. The custom-house reports indicate an enormous encrease in the importations of cocain every year, and while the price is falling the demand is greater and increasing quantities are called for. Inquiries in the large cities show that only a small percentage of cocain is consumed legitimately. In Philadelphia less than 4 per cent. of the cocain sold went to physicians, dentists, specialists and hospitals. In New York, Boston, Chicago, St. Louis and other cities from 3 to 8 per cent. only could be accounted for in legitimate ways. As there are no restrictions or laws regulating its sale in most towns and cities it is difficult to trace its final consumption. Statistics of drug-store sales bring out many curious facts. Thus, in the lowest sections of large cities cocain is in great demand, in both drug- and grocery-stores. Tramp peddlers carry cocain and morphin to sell to the lowest class. Cocain is sold openly and is eagerly sought for; the quiet, dreamy satisfaction which it brings makes it very fascinating. When these pauper classes are unable to procure the drug they become thieves and criminals to secure the means to buy it. When put in jail and deprived of the drug they are delirious and difficult to manage. Usually they are delusionally excited, not combative, but full of delicious exaltation, with dread of injury and suffering. They are very talkative and boisterous in manner. The drug-stores in the wealthy sections sell large quantities of cocain, both with and without prescription. Formulas containing cocain in large amounts are popular and in great demand. The preparations most commonly sold are called "cold" and "catarrhal" remedies, which contain practically nothing but cocain. In a Connecticut village, where many of the people work in a dusty factory, a physician's prescription of cocain for catarrh became very poplar. At one time more than a hundred people were using it. Then its contents became known and its use was restricted. At least three of these persons became addicted to its use.

Cocainism seems limited to persons in early and middle life, and is most commonly seen among neurotics and brain workers. To sensitive, highly developed organizations cocain brings most soothing relief. To the stupid, dull, imbecile brain it is a revelation of comfort and rest that is very fascinating. To the worn out and nerve-exhausted man it gives temporary fictitious strength and vigor which is very impressive. To the sufferer and the care-worn it brings calm and peace. Cocainism is a new disease of civilization, falling most heavily on the extremes of society, the wealthy and pauper classes, and also on the highly intellectual and the dull and stupid.

Probably the largest number of persons who use this drug have previously taken alcohol or some form of opium or other drugs. From the effects of these, general disturbances and derangements of the body follow, and cocain is used with most pleasing results for a short time. The morphinist finds cocain a perfect substitute for the depression which follows from the use of the opium. The alcoholist is charmed with the relief which comes from cocain and the new sensations and feeling of rest which it brings. For a time cocain is taken alternately with spirits and other drugs. When its effects are unpleasant it is abandoned for some other narcotic. In this way many cocainists are heroic drug-takers, using first one and then another, and always exhibiting a great variety of most complex mental and physical symptoms. A second and smaller class begin the use of cocain for the relief of pain,

irritation and discomfort. Its effects are so pleasing that they never abandon it. Catarrhal states are checked by the local anesthesia which it produces. Snuffing the powder and solutions is a very common way of using it. Local neuralgias are checked at once by needle injections of a solution of the drug. This is continued, and the drug is then taken in other disturbances of like character. States of exhaustion and intense depression are temporarily overcome by solutions of cocain. Insomnia and anxiety pass away from the anesthetic action of the drug. Cocainism has followed from its first use for catarrh, for gastritis, and for all forms of local and general neuralgia. It has been given for its anesthetic effects in injuries and in operations, and used ever after. Physicians have used it for states of exhaustion and anemia, and contracted the addiction. In brief, almost every condition of pain, irritation, exhaustion, and discomfort has been the starting-point of cocainism. A few persons have become addicted from the first use of cocain as a mere experiment to test its effects. The pleasing action made so profound an impression that it could not be given up. Neurotics and psychopaths, both from inheritance and by neglect of the laws of life and living are common victims. After them come the worn-out and the crowded-out, and the nerve and brain disturbed victims of modern life.

Cocainism appears in two forms, the periodic and the continuous. The periodic form is marked by distinct and free intervals, in which all desire for the drug is lost for a time. Then a state of unrest and psychical pain comes on, and cocain is used again for several days or weeks and then abandoned. In the free interval the mental impression of the pleasing effects of the drug continue and are seldom overcome by fears of its danger. The person will assert that he will never use it again, but when the paroxysm returns will reason that there is little risk in using it for present relief. Many of these periodic persons suffer from neurotic nerve storms which precede the use of cocain. In one case an attack of asthma, in another painful insomnia, in a third disturbances of the stomach and palpitation of the heart, preceded the use of cocain. The menstrual period in women, and digestive headaches in men, are also common conditions.

The continued use of cocain is seen in neurotics and exhausted persons, who frequently conceal its use and show great ingenuity in explaining any unusual conduct which may follow indulgence as due to other than the real cause. After a time nearly all cocain-takers are continuous users of the drug. Then in the efforts to conceal its effects other narcotics are employed. In this way morphin, spirits, chloral, and many other drugs are taken, and the symptoms become complex and confusing. All these take the drug when they can get it, and always substitute some other drug if it is difficult to get cocain. They want relief from some source, and any drug will answer their purpose which quiets the nervous system. The cocainomaniacs are different; they become literally crazy until they can procure the drug. Nothing will take its place. They suffer from an irresistible impulse for it, and their minds are filled with delirious thoughts of the pleasing effects which will ensue from its use. In the examination of a delirious lunatic, who required three men to restrain him, he whispered to me, "Get me five grains of cocain and I am sane." It was given him, and all the wild delirium subsided. He was transformed into a quiet, self-possessed man. He went to the asylum, and there was some doubt of his insanity by those who did not know his real condition.

The action of cocain is to increase the rapidity of the heart action, and in large doses the respiration. After a poisonous dose the temperature is raised, and after a period of excitement collapse follows. The principal action is that of exhilaration and a feeling of increased mental and muscular strength. The brain is stimulated and the sense of physical and mental well-being is exaggerated. Pain and discomfort disappear. When given by the needle the nerves in the vicinity are anesthetized and all sense of local pain disappears. Its local paralyzing action is always marked, and in some instances this paralysis extends to all parts of the body as a feeling of comfort. A peculiar exaltation of the brain activity is a characteristic of cocainism. In this exaltation the patient soon develops delusions of superior strength and vigor and perfect command of himself. Later, hallucinations of voices appear, and then delusions of persecution and fears of personal injury fill the mind. The cocainist in the early stages is always self-possessed, serene, and buoyant. Nothing disturbs him. He is very active, and talks freely and enjoys everything. Later, when the effects of the drug wear off, he becomes morose, excitable, and suspicious; he cannot sleep at night, and worries at the prospect of trouble and danger. When the drug is taken the former good feeling returns. If he is a professional or business man occasions for the return of this stimulation increase; and soon cocain is taken regularly whenever reactionary symptoms come on. Finally, intoxication stages appear, in which marked volubility and prolixity are common manifestations. The sense of good feeling creates an intense desire to talk about anything, without any definite purpose or object. If the cocainist is a lawyer, clergyman, political speaker or lecturer, and the drug is taken immediately before appearing in public, great volubility will result. His thoughts will flow on in a continuous current. There will be no pauses and no dividing lines, but one steady, connected flow of words, involved and without point, direction, or end. A noted clergyman with a good voice incurred the displeasure of his people by the length and prolixity of his sermons. Later he was found to be a cocainist. An eminent medical lecturer suddenly became oblivious of

time and place in his lectures. He would widen his topic to such an extent as to be lost in its details, talking on without point or purpose, and never coming to a logical conclusion. He was a cocain user, of which this was an unmistakable symptom. A lawyer's plea before a jury in a recent trial bore the same marks. Many political speeches and newspaper articles bring out this special form of prolixity and diffuseness. This differs widely from the broken, jarring sentences of alcoholists, morphinists, and other mental defectives. The style of the cocainist is a smooth, continuous, involved flow of words, leading in no direction and never ending coherently. This delusionary state may be protracted for a long time, and can be seen in works of fiction, in poetry, and even in medical journals. A common manifestation of this condition is in letter-writing. A cocainist will think to convey to some one an abstract truth or belief, and after the first sentence or paragraph the original purpose of the letter is forgotten. A cocainist wrote from four to ten letters a day to his wife about the care of his library and office. The closing of each letter suggested some new phase of the subject not written of before; and so it went on. A cocainist who proposed to come under my care wrote me daily for several months from four to six letters containing opinions, reflections and suggestions covering nearly all topics of history, social science, and life generally.

In some instances this mania for letter-writing has taken on a slanderous aspect, but curiously, the absence of bitter, sharp words and distinct charges indicate the cocain origin. Such letters usually contain slanders so involved and mixed that their meaning is only clear from inference. Amatory letters in the same diffuse style are common. Many letters in famous divorce trials show cocain-taking. The vagueness and obscurity of the word-grouping indicate this origin. This form of exaltation has been considered symptomatic of paresis. A noted man was placed in an asylum as a paretic. After a delusional mania, with much exhaustion, he recovered. His mental state was due to cocain, which was not discovered at the time.

This first stage of mental exaltation after a time is followed by hallucinations of sight and hearing. Insomnia will come on, with muscular agitation and restlessness. Suspicious characters will appear to watch him, and voices will be heard plotting to do him some injury. Then he will begin to take unusual precautions, buy revolvers and knives and have them ready for defense. Nearly all the cocainists I have seen carried revolvers and explained that attempts had been or would be made on their lives; so they were justified in preparing for it. When they reach this stage other drugs are taken, generally morphin and spirits, and the cocainism is concealed. The mental exaltation in the latter stages is very brief, and long periods of restlessness and stupor follow, with disturbed states that are very apparent.

The diagnosis of these cases is often very difficult. In a suspected case sometimes the only change noticed is in increased capacity for mental and intellectual work, with an unusual satisfaction in all the conditions of life and living. Close study will show a slight falling off in the character of the work and the degree of judgment displayed. If a physician, defects of judgment and diminished recognition of ethical duties appear. If a clergyman or lawyer, his sense of the propriety and the relations of things suffers. His work is less exact. If an active business man, his former caution and candor are less prominent. Thus, in many ways there are mental changes, diminished capacities, and slight failures of the higher brain relations. A careful study of the symptoms will show a disappearance of the buoyancy at short intervals and a disposition to go off alone for a time, with a return of self-confidence and elation. The cocainist differs from the alcoholist by his solitary habits, and from the morphinist by delusions of persecution in the later stages. Later, when insomnia and extreme nervousness come on, unless morphin or other narcotics are taken to conceal them, the diagnosis can be made by exclusion. General elation and solitary habits, with great buoyancy of spirits, are significant symptoms.

When cocain is used to lessen the pain and disturbance caused by spirits or opium, the peculiar mental symptoms of cocainism are wanting, and restlessness with insomnia follows. If cocain is the leading drug taken short exalted periods occur, with distinct delusions of persecution. The latter symptom is present in nearly all cases, whether cocain has been the primary or secondary drug taken. The feeling of insects crawling over the skin comes in the later stages and is a very significant symptom. The appetite fails and anemia appears, particularly when other drugs or spirits are taken alternately. The disposition to follow any consecutive work grows less and less with the continuous drug-taking. With this comes a general failure of ambition and will power, and reckless, aimless thought and work.

No other narcotic known up to this time produces such a pleasing physiologic impression on the brain. The new world of strength and physical happiness which it opens to the victim is never effaced by any ensuing pain and suffering. He has gone into a new land and experienced the bliss of perfect peace with the world, with complete command of his brain and enjoyment of active work. Ever after, when in trouble or suffering the memory of this comes back, and with it the desire to live again the experience and pleasure which it brought. In morphinism the rest and oblivion which the drug brings is a dark door of escape from the existing trouble. In cocainism the blissful satisfaction which comes

from this drug is a foretaste of an ideal life. Hence the difficulty to overcome this impression by any profound temporary aversion growing out of the sufferings and pain from the reaction of the drug. The cocainist will deplore his condition and apparently make every effort to overcome the diseased impulse, and yet relapse under any circumstances, though he may see clearly the peril of his condition. If cocain is taken after alcohol or opium inebriety has begun the impression is less vivid; the physiologic action is more anesthetic and less stimulating. In fatigue, in distress and suffering, the sudden, rapid and complete change following from the effects of cocain is never forgotten. When morphin or spirits are taken after the cocain addiction the injury to the brain centers is intensified and both mania and dementia follow. Complex insanities of all forms appear.

The prognosis of these cases is always grave. While recovery does sometimes take place it is only from long insistent care and treatment. Cases complicated with alcohol and opium are improved, but the danger of relapse is always very great. The higher sensory neurons become permanently altered and the power of control is lost; the sense centers are damaged and broken up. Sight, hearing, taste, smell and sensation, are seriously impaired.

In treating a cocainist the removal of cocain is called for at once. Substitutes may be used to lessen the irritation and withdrawal symptoms. These should be vegetable narcotics, of which valerian, hyoscyamus, and others of this class may be used. The bromides are often useful in large doses for a brief time. Chloral, alcoholics and opium are unsafe. The insomnia must be treated largely by foods and baths, and the various functional disturbances of the body by appropriate remedies, as called for in each case. The conditions are largely starvation and cell poisoning, and absolute change of surroundings and conditions of life and living are essential. The patient should be sent to an asylum and be kept under the care of a specialist until the acute symptoms pass away. Then the care of the family physician for a long time is necessary, and exact lines of hygiene and medical treatment must be followed. The gravity of the case, and its recognition by both the physician and patient, should be fully understood. The conditions which provoked the first use of cocain should be avoided. The giving up of the drug is only a small part of the treatment. A study of the causes and conditions which led up to its use, and their prevention and removal, are the central objects of correct treatment. In cocainism the patient does not always coöperate with the physician, but through fear and pride conceals his real condition. Often the treatment must be based on shrewd observation and inductive reasoning. The mind and body are seriously impaired and require joint treatment. This must follow well recognized principles, and be based on the condition of each case and its special necessities.

The fatal cases in which cocain is given for its anesthetic effects are widely reported in medical literature, but cocainism, one of the most dangerous of drug addictions, has attracted little attention, and its literature is very brief and regarded with doubt and skepticism. There can be no doubt that cocainism is increasing. A variety of unmistakable symptoms sustain this assertion. The indiscriminate sale of cocain without restrictions in all drug-stores is one cause. Its reckless use by physicians, who accept the theories of teachers and others without practical experience, is another. The widespread credulity of its harmlessness in all cases within certain limits is another active cause. Its safe, legitimate use in medical practice is clearly limited; it should be given with great caution, and the nature of the drug always concealed from the patient. As a narcotic or substitute for other narcotics it is an exceedingly dangerous drug. The law should restrict its sale as a veritable poison, and its continuous use should be recognized as insanity demanding prompt interference and control. Its use in proprietary medicines is a source of peril of greater magnitude than that of any form of opium. There is only one way of escape for these poor drug-victims, and that is to give up everything and make a supreme effort for recovery. With the assistance of some trusted physician, in changed conditions and surroundings and the most favorable circumstances possible, the prospect of permanent cure and restoration is most favorable.

THE DIAGNOSIS OF LEUKEMIA FROM THE STANDPOINT OF THE BLOOD CHANGES.

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IN the time allotted for this paper it would be impossible to present thoroughly every feature of the subject; therefore I have chosen only the blood picture in leukemia, and will endeavor to show from the different blood findings the distinct types of this disease, the difficulties in diagnosis that may arise from certain known causes, and, finally, the value of this laboratory method, in making the clinical diagnosis.

By the study of the blood, cases of leukemia, from the microscopist's standpoint, may be divided into two great groups:

1. Splenomyelogenous leukemia.
2. Lymphatic leukemia, or lymphemia.

The blood pictures in these two forms of the disease are usually sharply defined, though cases have been reported where one has bordered on the other.

Splenomyelogenous leukemia is characterized:

I. By an anemia, which is probably secondary

and progressive in type. This anemia is both qualitative and quantitative.

It is qualitative in so far that all forms of red-cell degeneration may be seen. Under this head may be studied:

1. Poikilocytosis, in which the red cell is changed in size and shape. This change is usually marked and progresses as the case advances, though not so pronounced as is seen in severe cases of so-called progressive pernicious anemia.

2. Polychromatophilia, a condition in which the normal acidophilic and monochromatic red cell takes up a combination of stains which may be either acid or basic in character, or a combination of these two. This qualitative change is to be seen only in stained preparations, and in these specimens it chiefly affects the larger red cells and the nucleated red cells, especially the megaloblasts.

3. Basic or granular degeneration, a condition in which the normal monochromatic red cell, or a slightly polychromatic one presents fine or coarse basic staining granules, or a mixture of both distributed through its protoplasm.

4. Nucleated red cells. These cells are usually present in all cases of splenomyelogenous leukemia, though their number may vary from a few hundred or less to as many as 70,000 cells per cubic millimeter. (Taylor.) The nucleated red cells are usually normoblasts, yet megalobasts and poikiloblasts are found.

The nuclei of these cells often show evidence of marked degeneration. The degeneration most often met is either pyknosis, a condensation or clumping of the nuclear chromatin; or karyolysis, in which the nucleus dissolves in the surrounding protoplasm; or karyorrhexis, a fragmentation of the nucleus; or the nucleus may show one to several vacuoles.

Basic degeneration of the protoplasm may affect these nucleated red cells, either with or without associated nuclear degeneration.

Evidences of cellular regeneration may be present in these cells and the nuclei show all the changes in the cycle of karyomytosis, from the stage of the resting nucleus to complete division of the nucleus and cell.

Under quantitative changes in the anemia may be considered:

1. Oligocythemia, a reduction of red cells. This may be noticeable in apparently beginning cases. It progresses with the advance of the disease, and may reach such a degree as to show only 1,000,000 cells, or even less, per cubic millimeter. Cases have been reported where the red cells numbered less than the leukocytes.

This decrease in the number of red cells is usually persistent even in amelioration of the disease or in apparent cures (Taylor).

2. Decrease in the amount of hemoglobin. This is noted in the estimation by the usual clinical methods (here errors may occur, from the interference of the great numbers of leukocytes causing clouding of the mixtures) and, also from stained specimens, showing increase of the central depression and lack of stain in the cell.

In addition to the anemia, the splenomyelogenous leukemia is further characterized by a leukocytosis. This leukocytosis in many cases is the most characteristic symptom of the disease. It may reach enormous proportions, cases having been reported where there were over one million leukocytes to the cubic millimeter, and rarely in a typical case do we find under one hundred thousand cells per cubic millimeter. This leukocytosis is due to an increase in the normal circulating leukocytes—which are: The polymorphonuclear or neutrophile, the transitional, the mononuclear or large lymphocyte, the lymphocyte, or small lymphocyte, the polymorphous eosinophile and the basophile—and is, therefore, polymorphous. Together with the increase in these normal cells we find two foreign cells, usually occurring in large numbers. They are the neutrophilic myelocyte, the myelocyte of Ehrlich or marrow cell, and the eosinophilic myelocyte or coarse granulated cell of Mosler.

The neutrophilic myelocyte, the myelocyte of Ehrlich or marrow cell, is a cell usually measuring between 15 and 30 μ in diameter, though undoubtedly much smaller sizes are found. Its nucleus is a rounded or oval body, staining faintly and showing a very slight chromatin net work. The nucleus may be situated at the side or in the central part of the cell. The protoplasm surrounding it is characterized by the presence of fine granules similar to those found in the polymorphonuclear neutrophile of the normal blood, and staining in a similar manner, neutrophilic with Ehrlich's triacid staining mixture.

This cell is found in health only in the bone-marrow, never in the circulating blood (Hoch and Schleisinger claim to have seen it in apparently healthy infants until the third day). Its presence in the blood always points to a pathological state, and occurs only when the bone-marrow is involved. It was at one time thought to be diagnostic of leukemia, when found in the peripheral circulation, regardless of the number present. This view is no longer tenable, as further study has shown its undoubted presence in a number of diseases. Thus it has been found by Reinbach in lymphosarcoma with bone metastasis; Lazarus, in post-hemorrhagic anemia; Beck, in mercurial poisoning; Loos, in many diseases of childhood; Taylor, in carcinoma of stomach, and in malaria without marked anemia; Morse, C. S. Engle, Türk, in infectious diseases (here it constitutes a bad prognostic sign when found in increasing numbers, especially in pneumonia and in diphtheria); Cabot, in pernicious anemia, carcinoma, sarcoma, burns, osteomyelitis, malaria with anemia, cystitis and inanition, sepsis, bone tuberculosis, rickets, Hodgkin's and Addison's disease. I have seen it in cases of malaria, malignant endocarditis, early phthisis, biliary calculi, and in post-operative leukocytosis. This

is by no means a complete list of diseases in which myelocytes have been found.

In these conditions the myelocytes rarely reach above 4 per cent. of the circulating leukocytes (Türk, in one case of pneumonia, an exceptional case, observed 12 per cent.), and they have no significance, as far as is known, excepting as mentioned above.

In leukemia these cells may form a very large percentage of the circulating leukocytes, reaching 50,000 to 100,000 per cubic millimeter, or even higher, as in one of Taylor's cases, where they numbered 352,250 cells per cubic millimeter. Cabot states that they rarely constitute below 25 per cent. of the circulating cells.

While these cells form, in the majority of the cases of splenomyelogenous leukemia, the greater part of the leukocytosis, yet cases do occur in which they play quite an inconspicuous rôle. Especially to be noted here are those cases which are under the influence of arsenic, and in cases during the course of an intercurrent disease. Here the myelocytes may fall to very low percentages or may entirely disappear.

The acidophilic myelocyte, or eosinophilic myelocyte, is usually a larger cell than the normal eosinophile, though not so large as the Ehrlich myelocyte. The nucleus is rounded or oval, staining rather faintly, and may be situated either in the center or at the periphery of the cell. The protoplasm is characterized by the presence in it of large acidophilic granules. This cell may be found in other diseases, though to a less extent than the Ehrlich myelocyte, and has about the same diagnostic value.

Degenerations in the leukocytes are seen; as vaculation, sacculation of the cells—especially in the lymphocyte, shadow corpuscles, disappearance of the protoplasm and irregular staining, both of the nucleus and protoplasm. Broken cells in the plasma are often met; of these broken cells, the acidophilic cells particularly attract attention. The granules from one of these cells may be distributed over several fields. Free granules are often met, but have no significance.

Lymphatic leukemia is characterized by an anemia, which is not so pronounced in type and shows less degenerated cells, and by a less marked leukocytosis. This leukocytosis consists chiefly of an increase in the lymphocytes, though the other types of cells may also, to a certain degree, take part.

The division of this form of leukemia into chronic and acute varieties is more from a clinical than from a hematological standpoint. However, the chronic form of lymphatic leukemia is usually associated with the increase of the small lymphocytes, while the acute form commonly shows the larger type of cell. This is not invariable, as both types have been found in each form.

The neutrophilic myelocyte and the eosinophilic myelocyte are not so constantly found in this variety of leukemia as they are in the splenomyelogenous form. When present they are in small numbers, the former being more often found than the latter. Nucleated red cells are only occasionally observed.

Résumé.—Splenomyelogenous leukemia, on the one hand, is characterized by the presence in the circulating blood of a progressive pernicious anemia, of secondary origin, this anemia being accompanied by all the forms of red-cell degeneration, and, by a leukocytosis polymorphous ,in type and associated with the presence of foreign cells and leukocytic degenerations.

On the other hand, lymphatic leukemia is associated with a less marked anemia and less evidence of red-cell degeneration, by a less pronounced leukocytosis, which is formed by an increase chiefly of lymphocytes, and, to a less extent than the former, by foreign cells.

The diagnosis of leukemia, be it splenomyelogenous or lymphatic in type, rarely offers many difficulties when the blood picture is associated with clinical findings. However, when a leukemia is combined with an intercurrent disease, or is reacting to treatment, the blood picture and clinical symptoms may be so changed as to make the diagnosis nearly or quite impossible.

The change may be quantitative or qualitative in character, or both. These changes are of interest to us only in so far as they affect the leukocytes. The picture may be changed by the leukocytosis of an ordinary infection, which has been added to the already leukemic condition, on the one hand; on the other, from the infectious nature of the intercurrent disease, the blood may present a normal appearance, as in Eisenlohr's case. "During the height of the fever no diagnosis of leukemia could have been made from the blood."

Three theories have been offered in explanation of these changes: (1) Müller, "in consequence of the infection, the blood picture changes." (2) Fränkel, "the infection causes destruction of the leukocytes." (3) Ehrlich, "the change is brought about by chemotaxis." The red cells show, under these processes, scarcely a change to be noted, excepting in the very severe cases.

To show the effects of an intercurrent disease, I will give rather full abstracts of two cases:

Case of Körmöczi.—A man had shown evidences of splenomyelogenous leukemia for three years. When he came under observation the last time the blood count showed: Red cells, 1,200,000; leukocytes, 100,000 per cubic millimeter; stained specimens presented nucleated red cells, few eosinophiles, many polymorphonuclear cells, and many myelocytes. While under observation, a septic condition of the nasal cavities and accessory sinuses developed. The blood examination showed at this time: Hemoglobin, 20 per cent; red cells, 1,000,000; leukocytes, 7,300 per cubic millimeter. In spreads taken at this time only slight poikilocytosis was present. Many microcytes were seen, but no polychromatophilia was

present, while the differential count showed: Polymorphonuclear leukocytes, 75 per cent.; lymphocytes (small), 25 per cent.; mononuclear cells, 5 per cent.; eosinophiles, basophiles and myelocytes were sought, but none found. At the time this examination was made the patient had fever of 39° C., continuous nose-bleed, and was semi-conscious. These symptoms persisted, the temperature falling until death, five days later. The spleen, liver and glands were scarcely palpable on the day of death. The last blood count, the day the patient died, gave: Hemoglobin, 10 per cent.; red cells, 377,272; leukocytes, 3,000. The only change in the stained preparations was an increase in the small lymphocytes to 30 per cent. at the cost of the polymorphonuclear cells. The blood taken post-mortem from the larger vessels and from the capillaries did not show an increase in the leukocytes.

Case of Marischler.—Lymphatic leukemia or lymphemia. When the case first came under observation the blood examination showed: Hemoglobin, 50 per cent.; red cells, 3,450,000; leukocytes, 96,000 per cubic millimeter. Differential count; mononuclear cells 82.30 per cent.; polymorphonuclear cells, 15.60 per cent.; transitional cells, .51 per cent.; eosinophiles (poly-), .18 per cent.; splenocytes, 1.30 per cent. While the patient was under observation, a Grawitz tumor of the right kidney developed, which became malignant and gave widespread metastasis.

A blood examination made four months subsequent to the first showed: Hemoglobin, 30 per cent.; red cells, 2,496,000; leukocytes, 48,000 per cubic millimeter. The differential count at this time gave: Mononuclear cells, 57.10 per cent.; polymorphonuclear cells, 45.70 per cent.; transitional cells, 2.40 per cent.; splenocytes, .5 per cent.; myelocytes, .15 per cent.

A differential count ten days later showed the mononuclear cells to have decreased to 40 per cent., while the polymorphonuclear cells had increased to 57.50 per cent.; myelocytes, .16 per cent. Ten days later, the day the patient died, the leukocytosis had increased one hour before death to 72,000, and the polymorphonuclear cells had more pronouncedly increased over the mononuclear cells.

The autopsy in this case is of interest in showing two conditions side by side: The Grawitz tumor of the right kidney, with extension to the ureter and metastases to the liver, lungs and vertebræ; while the spleen, mesenteric, axillary, inguinal and submaxillary glands were leukemic. Microscopical examination of the tissues confirmed the gross findings.

These two cases show very clearly the effects of complicating affections in leukemic subjects; one a septic condition superimposed upon a splenomyelogenous leukemia of three years' standing; the other a malignant tumor developing in the course of a well-marked case of lymphatic leukemia.

In the former the blood changes were partly qualitative, but more markedly quantitative in type, while in the latter qualitative changes were more pronounced. Other cases showing similar changes were: Eisenlohr's, with fever simulating typhoid; Quincke, miliary tuberculosis; Stintzing, chronic tuberculosis; Mosler, icterus; Freudenstein, erysipelas; Heuck, purulent pleuritis—a later complication of articular rheumatism gave no change; Fröhlich, Müller, Fränkel (A.), Cabot, sepsis; Koracs, influenza; Thorsch, pneumonia; Zappart, Lichtheim, tubercular infection.

Changes in the blood, due to medicinal influences, can practically all be included under those associated with the use of increasing doses of arsenic. Here, as in the cases complicated by an intercurrent disease, the blood changes have been both quantitative and qualitative in character.

Taylor mentions three cases—XI., XIII., XV., of his series—and writes the following concerning them: "All relapsed twice and two relapsed three times, following which the leukocytosis in none of the cases rose above normal. Up to the very last day of the leukocytosis the qualitative changes were present, but when the circulating leukocytosis had for some time remained below 6,000 cells per cubic millimeter, the qualitative changes gradually disappeared." McCrea reports a case of similar character to these three of Taylor's, and says: "Twice during the space of twelve months the patient showed typical features of splenomyelogenous leukemia, and twice was his condition a normal one." Osler, Stengel and Rensselaer each report similar cases.

Strattmann and Huesner each report a case where the abdomen was opened in leukemic patients, after which the blood picture returned to normal; in the latter's case the patient relapsed. These cases are somewhat doubtful, as no careful examinations were recorded.

Further, the blood picture has changed in some cases of leukemia in the terminal stages, so that an entirely different picture has been presented. These changes are probably due to terminal infections or to circulatory disturbances.

From the foregoing it is to be seen that the blood picture in the majority of cases of leukemia presents characteristic features, and these features, when combined with the results of clinical examinations, make the diagnosis of leukemia certain.

From a clinical standpoint alone, cases of leukemia are often indistinguishable from pseudoleukemia; splenic anemia from chronic splenic tumors, enlarged glands and tumors of the left hypochondriac region.

The blood changes in leukemia often present the most characteristic feature of the disease, but this is not invariably the case, as the effects of treatment and the occurrence of intercurrent affections may so change the usual findings as to totally mislead the observer. Consequently blood examinations—and the same is true of all laboratory observations—are of value only in so far as they are weighed with careful clinical data.

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TO CONTROL HIGH TEMPERATURES.

Dr. C. C. Booth suggests the following method of reducing a high temperature: "The patient is stripped entirely of all clothing, placed upon rubber sheet and covered with one thickness of a piece of cheesecloth, two yards long and the usual width, one end having been so split that each leg will be covered separately. A nurse is directed to squeeze water about the temperature of the body from a sponge over the entire anterior surface of the body, and to wet the gauze freely as often as necessary to supply water for evaporation. All that is claimed for this method is that it is more convenient, more easily applied, less dangerous, cheaper and pleasanter to the patient than by any other method. The gauze is to be kept wet until the temperature is reduced to normal."—*Philadelphia Medical Journal.*

THE TREATMENT OF PULMONARY TUBERCULOSIS, WITH AN ADDITIONAL NOTE ON CLIMATE.

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THERE are very few cases of pulmonary tuberculosis that cannot be benefited by proper treatment; the disease either cured or life prolonged. In our present state of knowledge there is no specific cure for phthisis. The physician who employs one of the many specific remedies at present before the profession is sacrificing his patients' interest and doing his own reputation no benefit. We have reasonable ground for hoping that some day a specific remedy will be discovered which will successfully combat the disease. But it will not be discovered by the newspapers, and it will not require commercial methods to enable the profession to recognize its value. In the treatment of phthisis, as in that of most diseases, medicine must be the handmaiden of Nature, a position no less important because it is subordinate.

The two primary objects of treatment in phthisis are to assist the economy in: (*a*) Prevention of reinfection. (*b*) Increasing of resistance.

The writer strongly advocates the importance of the prevention of reinfection in the treatment of phthisis, and it is desirable always to keep it foremost in the mind. Reinfection may come either from the patient's own sputum in the form of dust particles in the atmosphere, or from other infected dust particles, which are a more or less constant constituent of the atmosphere in all populous communities. The attempt will be made further on to show that the tendency to the prevention of reinfection is the common point possessed by all climatic conditions beneficial to phthisis.

The prevention of reinfection and the increase of resistance depend much less upon therapeutic remedies than upon other agencies. The following classification of measures may be borne in mind in the treatment of phthisis:

(1) Sanitation.
(2) Physical Regimen.
(3) Diet.
(4) Therapeutic Measures.
(5) Climate.

Sanitation.—The care of the sputum should be the first consideration. There is not only the danger of infecting others, but the patient's resistance being diminished there is greater danger of reinfecting himself. The sputum should be expectorated into one of the cardboard cups manufactured for the purpose and the cup afterward burned. A fresh cup should be used once in twenty-four hours at least. Or a china sputum cup should be used which is about half full of 1-500 bichloride solution. The patient should be instructed to expectorate directly into the solution, so that no sputum may remain on the side of the cup and dry there. At least two cups should be in use, and when one is emptied the best way to sterilize it is to boil it for an hour. The practice

of expectorating into a piece of cloth to be afterward burned is not to be recommended unless it is used but once and invariably burned immediately. On no account should the sputum be permitted to be swallowed. The use of spittoons or larger receptacles is not desirable, as the sides are more liable to become soiled and they are much harder to disinfect properly. Where there are indications of intestinal tubercular ulcers careful measures of disinfecting the stools should be adopted. The sterilization by boiling of knives, forks, spoons and cups out of which the patient drinks should not be neglected.

If it is possible to make a choice, the house in which he lives should have a dry cellar and be built on sand or gravel soil rather than clay. His sleeping-room should have a southeastern exposure, and the access of the sun to it should be unobstructed. It should have at least two windows, and one window should be wide open day and night, summer and winter. This advice will often be received with misgivings, but the patient will find that under this arrangement he catches cold much less easily than before.

In the daytime he should be in the open air and preferably in the sunlight all the time. In inclement weather a protected veranda is indispensable. A slate foot-warmer will be found to be of inestimable comfort to patients sitting out in cold weather.

There is no doubt of the great value of sunlight in the treatment of phthisis. We know that tubercle bacilli die when exposed to it. It also increases the number of red corpuscles and the percentage of hemoglobin. No doubt it increases directly or indirectly the vitality of the leucocytes. Sunlight, therefore, serves the double purpose of restraining infection and increasing resistance.

Physical Regimen.—The patient should wear woolen underclothing and footwear the year round, a thinner weight being used in summer. It is also desirable for him to sleep between woolen blankets if he can do so with comfort. This conserves the body heat and renders the skin much less liable to sudden chilling. The physical conduct must be regulated entirely by the patient's condition. If the patient's temperature is 100° or over at any time in the day, he should be in bed all the time until the daily maximum falls below 100°. This staying in bed will not only diminish temperature, cough and expectoration, but with proper diet the patient will gain strength and flesh and a weak rapid heart will improve in tone. Consumption is well named. It is a consumption of tissue, and, as long as the consumption of tissue exceeds the repair, exertion, which also consumes tissue, should be avoided. The surest road to disaster for a phthisical patient is to be undertaking exertions while he is having fever and losing flesh. A close record of the temperature should be kept, and it should be taken four times a day; *e. g.*, at eight, twelve, four and eight. Rectal temperatures are most reliable. When the patient's daily maximum is under 100° he can begin to sit up with caution. The morning when there is no fever is the best time, and an hour or two is quite sufficient to start with. If the temperature is not accelerated this can be gradually increased until he is up all day; but if the temperature goes up again he should go back to bed and stay there for a longer period than before. But, even while he is at rest in bed, his bed should, if possible, be wheeled into the open air and kept there the greater part of the day. Pursuing this plan one may meet with success in permanently reducing the temperature on the third or fourth occasion after failing previously. More is to be hoped for from this plan when the fever is due to inflammatory action occurring early in the disease than when due to septic absorption later on. But absolute rest is the only course open as long as there is fever, and we cannot hope to make much progress until fever is put behind us. The fever being gone, the patient can sit in the open air all day, or, in extreme weather, in a warm room where a window is wide open. But the time spent indoors should be just as little as possible. With a protected veranda, a foot-warmer and plenty of wrapping, there will be very few days that the patient cannot be out most of the day. He will grow very fond of the open air, and in time will not need to be urged to go out.

A coryza, a tracheitis, or anything in the nature of a "cold," however slight, should receive the promptest attention. The patient should be put to bed immediately and stay there until all fever and increase in cough is gone. It is most important that the patient should understand the need of immediate medical care in such occurrences. The benefit of months can be lost in a very short time through a neglected cold. The resistance being so poor it will deprive him of strength and flesh and often permit the tuberculosis to take a fresh start. The keeping in bed during one of these attacks saves the strength and tends to prevent the extension of the trouble. As a rule, if this course is pursued promptly the patient will suffer very little injury.

It is an error for a phthisical patient to ride horseback, drive or take exercise until he has approximately regained his normal weight and is practically free from cough and expectoration. The first two retard his gain in strength and flesh, and they all tend to increase cough, expectoration and temperature. When softening appears to have ceased and the weight is normal, or thereabouts, exercise can be begun very gradually. But until that time arrives rest is Nature's remedy for the conservation of strength. The same rule applies to chest exercises as to exercise in general. Exercises to increase the capacity of the respiratory apparatus are positively injurious while there is fever and softening. In an incipient phthisis which has not gone

as far as softening, chest exercises are invaluable. In an arrested case, after softening has ceased, they do much toward clearing up the lungs.

It is always inadvisable for a phthisical patient to marry. Child-bearing is often disastrous to the female, and with the male sexual intercourse interferes greatly with the arrest of the disease. Marriage will sometimes light up the disease after it has been once arrested. If the patient is married rare intervals of indulgence should be enjoined. Complete interdiction will generally alienate the patient.

The questions arising in regard to the children of tubercular parents, although not strictly germane to the present subject, are most important. The physician who makes a practice of examining the tonsils and cervical glands of the children in a tubercular household will gain an idea of how often the latent infection finds lodgment in early childhood. In spite of all precautions to prevent infection, it seems most unjust to children that they should be permitted to remain at all in a house where tuberculosis is present.

Diet.—Fothergill recognized many years ago that assimilation was the cardinal point in the treatment of tuberculosis. If the repair can be made to exceed the waste, a long step toward recovery is made. The preponderating constituents of the diet should be meat, eggs and milk. Potatoes and starchy vegetables should be used sparingly. Raw tomatoes, strawberries and pastries should be forbidden. Bread should always be stale, and dry toast is still more preferable. Junket made by the action of rennet on milk is too seldom used in this country. People with whom milk disagrees will find much to their surprise that junket agrees with them perfectly. Much is to be said in favor of calf's-foot jellies flavored with wine or fruit juice. Some physiological chemists maintain that gelatine has absolutely no nutritive value. Dr. Graham Lusk tells me that notwithstanding this fact the administration of gelatine causes a marked diminution of the proteid wastes. Aside from academic discussions, clinical evidence is much in favor of calf's-foot jellies. They are distinctly beneficial, where there is fever, in diminishing the proteid wastes and make a very agreeable dessert when the patient is on full diet. The patient should be literally stuffed. He should be instructed to eat *twice as much* as a well person, and the physician should satisfy himself that it is being done. He should eat double quantities at his regular meals, drinking plenty of milk along with them. He should have two or three glasses of milk about eleven o'clock, again about four, and again at bedtime. The physician should not rest until his patient is taking at least three quarts of milk a day, and four or five is still more desirable. In order to attain the maximum quantity, milk should be the only fluid drunk at meal times and at all times. It is desirable that the milk should come from cows that have been shown to be free from tuberculosis by the tuberculin test. In case this is impossible the physician should make a personal investigation and satisfy himself as best he may that the cows are healthy. Of course this maximum feeding must be reached more or less gradually. The better the patient's digestion and assimilation, the more rapidly it can be attained. From time to time the stools should be examined by washing for undigested food and milk curds, particularly so when there is any tendency to diarrhea. When diarrhea occurs the quantity of food should be diminished, especially the solids, until it ceases and undigested foods disappear from the stools. Very often when one takes a case of phthisis in hand the nutrition is poor and there is extreme anorexia, constant diarrhea, and, it need hardly be added, fever. Confinement to bed for a week with an exclusive milk diet will often dissipate these symptoms. The tongue will clear, the diarrhea will cease, and the patient will have an appetite for solid food, perhaps for the first time in weeks. The more persistent the diarrhea, the more probability of tubercular ulceration of the intestines, and the less favorable the prospect for increasing the nutrition. The diarrhea is the slowing down signal, and, in the absence of this, solid food should be crowded on to the extreme capacity of the patient.

The digestion once on a firm basis, this process of superfeeding should not only be continued until the patient exceeds his normal weight, but for an indefinite period—two years at least. The regulations of a college training-table afford an excellent model for cases of arrested phthisis to follow. Perfect assimilation and nutrition are the greatest safeguards of all people, and especially of cases of arrested phthisis, against a cold. And we all know how disastrously a cold may result to a phthisical subject months and even years after the arrest of the active process.

Therapeutic Measures.—There is at present no known therapeutic agent that can be introduced into the system in such a manner as to exert a positive germicidal effect on the tubercle bacillus. Not only the public but the profession have seemed particularly susceptible to fetiches in the treatment of phthisis. The numerous ones which have been put forward and discredited need not be enumerated. Serums have been especially pushed by their proprietors. I have yet to see a case that improved as the result of administering a serum after the usual measures had failed. This is the only test that would prove any positive value in a specific remedy. It is misapplied zeal to resort to injections of a serum as a forlorn hope and add to the miseries of a patient's last days. Creosote is of benefit to the gastro-intestinal catarrh so often present in phthisis, and no doubt favorably modifies the cough, but its specific effect is theoretical. Cod-liver oil has an undoubted food value and contains organic compounds which enter into the composition of nuclein, thus notably aiding cellular nutrition. It is of great benefit if three or four ounces per day

can be administered without digestive disturbance; otherwise it is better to rely upon other means of increasing nutrition. While cod-liver oil is by no means essential to the cure of phthisis, the statement that it is of no more benefit than an equal quantity of cream or any other fat is not quite accurate. When a patient says he cannot take cod-liver oil it is best to take his word for it; likewise creosote.

While the specific treatment is not a promising field, much can be done in the way of symptomatic treatment. It should at the same time be remembered that, except where directly indicated, the less medication the less we will interfere with assimilation. There is also the tendency, more or less marked, to gastro-intestinal catarrh, and considering how much depends upon nutrition this is of paramount importance. The catarrhal condition is no doubt due to the poor quality of blood, and the consequent poor nutrition of the gastro-intestinal mucous membrane and muscular tunic. Unless the digestive disturbance is very pronounced the attempt should be made to correct it by simply putting the patient on a fluid or semi-fluid diet and keeping him quiet for several days, allowing the digestive function to regain its tone by rest. Pepsin is not quite as fashionable as formerly, but it is a very useful remedy, as the gastric juice is often poor in that respect. It is generally indicated where there is epigastric distress after meals. It is best administered in the form of the wine before eating. This is preferable to peptonizing food outside of the stomach. The stomach is the natural place for the food to come in contact with the pepsin, and there is a repugnance to peptonized foods that exists from the beginning or is soon established. Nux vomica is another remedy which is very often indicated to increase the tone of the gastro-intestinal muscular coat. There is sometimes a deficiency of hydrochloric acid, but there is more often a condition where the hydrochloric is normal, and there is hyperacidity due to formation of butyric and lactic acid, accompanied by flatulence, eructation and heartburn. An alkaline and bitter mixture, such as the Mistura Rhei et Sodii, will benefit this condition. If the hydrochloric itself is deficient it should be administered in combination with a bitter. If the gastric mucous membrane is irritable, the diluted hydrocyanic acid alone or in combination will be of much benefit. If there is vomiting, the same agent in minim doses every hour is one of the best remedies. Remedies designed to act directly on the stomach are best administered before meals. Rumblings of gas, colicky twinges and diarrhœa several hours after eating point to intestinal dyspepsia, in which event subgallate of bismuth, beta naphthol or creosote in kaolin-coated pills will be useful. A headache two or three hours after eating is an indication for pancreatin. Where there is indication of hepatic catarrh, which there very often is, calomel should be given in small divided doses. The sputum is often more or less blood stained for days at a time. This is usually due to passive congestion from an overloaded portal circulation. A full dose of blue pill will relieve it immediately, and subsequent measures should be taken to keep the liver moderately active. Where there has been constant spitting of blood for several days I have seen an efficient cholagogue put an immediate stop to it.

Diarrhea due simply to food passing the bowel undigested is easily controlled by reducing the amount of food and putting the patient on liquid diet for several days or a week. The less easily it is controlled the more probably it is due to tubercular ulceration. Tender spots over the intestine make this very probable. This is a treacherous element in the condition. Sudden and profuse diarrhea is liable to occur without warning, and make the condition immediately serious. The urgent demand is to stop the diarrhea promptly. As profuse diarrhea is usually due to ulcers of the large intestine, this can best be done by rectal injections of hydrated starch and laudanum. The patient should be kept as quiet as he would be after hemorrhage from typhoid ulcers, heat applied to the abdomen and only fluids permitted. The starch water and laudanum often loses its efficiency after a day or two, and can be succeeded by injections of solutions of the sulphate or sulpho-carbolate of zinc. Full doses of lead and opium pill may be given by mouth, or copper sulphate with opium, if the diarrhea is severe. The aromatic sulphuric acid is often of service. The diarrhea once stopped, full diet may be very cautiously resumed, and bismuth with salol or beta-naphthol given until the full ability of the digestive apparatus is regained.

Pain in the chest is a most frequent symptom, and is due to the pleurisy which is always present or to the strain of coughing. The local application of the tincture of iodine, as much and as often as the skin will bear it, is the best remedy for the pleuritic pain, and the belladonna liniment is an excellent remedy for the muscular pain. If the pleurisy is acute, strapping is good, as in an ordinary acute attack.

The heart is very often rapid in phthisis. This may be found where the nutrition is poor, where there is extensive consolidation, where there is much emphysema; and there are some cases where there is tachycardia, which is not explained by any of the above conditions or satisfactorily by any other, as far as I know. While a rapid heart is not incompatible with improvement, it detracts therefrom. Strychnine in full doses (gr. $^1/_{30}$ or gr. $^1/_{20}$) is certainly of much benefit. Occasionally this cardiac erythism is so serious that it of itself threatens to end the life of the patient. Strychnine should be used to the toxic limit, and, while the relief may be but temporary, the end may be deferred for months.

There are a number of remedies advocated for

the night-sweating, and sometimes all may be tried, one after the other, without relief. There are four causes that may operate at various times, in various degrees, to cause this. These are indigestion, general exhaustion, nightly remissions of the fever, and septic absorption. The first is easily remedied. Food at bedtime will often stop sweating from the second. A five-grain powder of gallic acid at bedtime is one of the best medicinal remedies. It is as often efficient as the other remedies, and has no disagreeable effect. The drying of the throat produced by atropine is very annoying to some patients. It is not desirable, when avoidable, to give a drug that has a confessed disagreeable effect. Patients are only too ready to credit bad effects to remedies that are given them. Quinine combined with digitalis, sulphuric acid, picrotoxin, pilocarpine nitrate (gr. $^1/_{20}$), zinc oxide and agaracin are all useful at times.

The fever of phthisis can best be treated by absolute rest. If it is at all high, sponging with tepid water will contribute to the patient's comfort. Patients will not, as a rule, bear the water cold, no doubt because of their emaciation. Coal-tar derivatives are unquestionably detrimental. Alcohol is more useful while there is fever than at any other time. It should be given in the physiological quantity, not to exceed three or four ounces of whiskey, or its equivalent, per day. These small quantities are easily assimilated, and do much toward repairing the waste of fever. In a like quantity it is beneficial as a food throughout the disease. Larger quantities, which produce the effect of stimulation, are, in my experience, detrimental. A patient who, either before or since the access of his disease, has been in the habit of taking considerable alcohol, is a poor subject for increasing nutrition. Increase of nutrition being our only hope, anything detrimental to that should be avoided. It should be borne in mind that in phthisis the condition is different from an ordinary acute infection, where, a crisis being tided over by a stimulant, the nutrition will subsequently take care of itself.

The cough of phthisis only demands palliative measures. Vomiting as an accompaniment of coughing is sometimes troublesome. It is due to the effort required to raise tough, adherent mucus, and usually occurs early in the morning or on retiring. A cup or two of hot milk, or hot water, before rising or before the usual time of occurrence, will often make the expectoration more free, and prevent the vomiting. This failing, the administration of Stokes' expectorant mixture, or some other, for several days, will be found to be of much service in liquefying the sputum. A cough which is racking is always diminished by complete rest. If cough prevents sleep, one is warranted in giving an opiate, always giving the smallest quantity which will be efficacious. Codeine is much affected, but one-quarter of the quantity of morphia is more efficient and no more disturbing in remote effects. The most useful agent in the treatment of the cough of phthisis is an apparatus which permits the patient to inhale hot air containing medicaments in a volatile state. Such agents as menthol, eucalyptol, pinus sylvestris, thymol, and creosote may be used. The hot air itself is of benefit, and the drugs in a volatile state have a local effect on the bronchial mucous membrane obtained in no other way. The patient may use the apparatus for ten or twenty minutes, once or twice a day. The use just before retiring will soothe a cough, which otherwise would prevent sleep. The temperature of the hot air, and the agents used, should be varied to fit the case. The cough from bronchial irritation will be minimized by this means. The cough and expectoration consequent on the tubercular process demand no remedy, but will diminish as the disease improves.

The leakage of blood from a congested bronchial mucous membrane consequent on an overloaded portal circulation is not to be confounded with hemorrhage consequent on a pulmonary aneurism or the ulceration and rupture of a blood-vessel. The latter may be slight or profuse, owing to the size of the vessel. There is some question as to the efficiency of ergot, but there is no question as to the utility of a prompt and full dose of morphia hypodermically. There is also a question as to the utility of ice to the chest, and by mouth. The most rational treatment would seem to be to maintain complete rest, to lower blood pressure by a brisk cholagogue (Calomel and Pulv. Jalap Co.), and to make efforts to increase the coagulability of the blood by stopping all fluids for a time and by the administration of iodide of potassium. Stimulants are contraindicated, as it is undesirable to increase the force of the heart. Patients often improve more rapidly after a hemorrhage.

The foregoing methods of treatment can be carried out anywhere, and especially well in a country practice. The great majority of phthisical patients have not the means to seek climatic benefit, but good results may very often be obtained if the case is of the subacute variety, and has not reached an advanced stage.

Having discussed the treatment of the *disease,* a few words concerning the treatment of the *patient* may not be amiss. Sir James Paget said that no disease ever gets entirely well. This is in a sense true, but many diseases get well enough for all practical purposes. In phthisis which has been arrested there is a permanent impairment of the respiratory function, and an established susceptibility to the tubercle bacillus. A case which has been arrested, or which has been pronounced cured, should, therefore, always be regarded much in the same light as a case of renal disease which is quiescent,or one of valvular disease, in which compensation is maintained. It is much better for the patient's welfare for him to regard his disease as *arrested,* rather than cured. In a case whose course is favorable there are, clinically speaking, three stages in his

progress. The first, in which there are active signs of disease and the nutrition has not reached par; the second, where nutrition is good and weight approximately normal, but where there is still cough and expectoration, and signs in the chest that cicatrization is not complete; the third, where nutrition is good, cough and expectoration have disappeared, and where there remains only a little dullness and harsh respiration in the chest. The patient is usually amenable to discipline in the first stage. The second is his most dangerous time, for, exultant in his improved condition and renewed hope, he is only too apt to abuse it. He cannot be made to realize that each successive recrudescence of the disease is the more and more difficult to react from, and progressively detracts from his chance of permanent arrest. Even in the third stage he should be more or less under the surveillance of the physician, and should promptly consult him for the slightest deviation from complete health. *Strict obedience* should be the motto of the patient, and *infinite care* that of the physician. The physician should bear in mind in the treatment of phthisis the aphorism of Ruskin, that: "Perfection consists in little things, and perfection is no little thing."

Climate.—It should not be necessary to defend the climatic treatment of phthisis. Unfortunately of late, from high quarters in Germany, the declaration has gone forth that climatic treatment is of no value, and with some of us anything emanating from Germany is considered *ex cathedra*. Let it be remembered that a few years ago practically the only cases of phthisis that received any benefit were those which resorted to a suitable climate. Many of these entirely regained their health. If better methods of treatment have improved our results under ordinary conditions, it is only rational to hold that these better methods will be still more efficacious in a climate which is highly beneficial of itself. This is a most important question. *If* climate *is* of benefit, the physician is making a serious error in not giving his patient the advantage of it.

The writer is of the opinion that the principal point possessed in common by climatic conditions beneficial to phthisis is the discouragement of germ life, and thereby the prevention of reinfection. The following conditions found in various climates may be enumerated as discouraging to germ life:

(*a*) High percentage and volume of sunlight.
(*b*) Temperature of sun sufficiently high to promote sterilization.
(*c*) Dryness of atmosphere.
(*d*) Porousness of soil.
(*e*) Constant freezing temperature.
(*f*) Infrequency of habitation.
(*g*) Unfavorable conditions for the formation of dust.

Without a detailed analysis it will be found that all climatic conditions beneficial to phthisis possess several of these qualities. The high percentage and volume of sunlight and the dryness of the atmosphere are undoubtedly the qualities of the greatest importance. The greater extent to which these are possessed by a climate, the greater its curative value.

A high altitude has been held to be of benefit. There is a question if this belief is not founded on a false theory, and that patients improve in a high altitude because of the sunlight and dry atmosphere, and in spite of the altitude rather than because of it. In many cases the heart action is greatly overtaxed by a high altitude. It certainly increases the tendency to hemorrhage, and a patient who recovers in a high altitude usually finds it necessary to remain there the rest of his life.

In the opinion of the writer the climate of the low altitudes of Arizona possesses more favorable, and fewer unfavorable, conditions for the benefit of phthisis than any other available. In configuration Arizona slopes from northeast to southwest. The altitude at Flagstaff is 6,900 feet, at Prescott, 5,400 feet, at Tucson 2,400 feet, and at Phœnix 1,100 feet. The Territory is protected on all sides by mountain ranges 10,000 feet high, and is not subject to the continental waves of temperature change.

The low altitudes are exemplified in the extensive valleys of the Gila and Salt Rivers. This combination of low altitude and excessive aridity is not found elsewhere on this continent. Here the altitude is under 1,500 feet. The low altitude not only serves to make the temperature mild, but the configuration of the country and the peculiar influence of the Gulf of California make it one of the mildest climates in winter, as well as one of the hottest in summer. In the months of June, July, August, and September the heat is intense, though comparatively easy to bear, on account of the very low humidity. Many cases of phthisis make great improvement in these months. There are others who do not stand it well and these can best spend the summer months farther north, or in higher altitudes where it is cooler. From October 1st to June 1st no more favorable climatic conditions for phthisical patients can be found. In December and January the nights are a little cool, but in the daytime the temperature in the shade at midday is seldom under 60°, and in the sun 40° to 60° higher. There is practically not a day in the winter that the patient cannot sit in the open air for six hours or more with perfect comfort and pleasure. Patients who have gained during the winter months make especially rapid improvement during the spring months. The percentage of sunshine is not only very high, but, what is especially beneficial, its volume is very great. This is not only evident to the eye, but is well shown in photographic work, where the exposure to light required is less than half of that under ordinary conditions. The sun, furthermore, throughout the greater part of the year, exerts a sterilizing effect by its heat. In the winter months the heat

in the sun is over 120° almost daily, and in the summer a thermometer placed in dust in the sunlight will go from 170° to 200°.

There is less wind than in any part of the United States. This is a most grateful circumstance to a patient who has very little subcutaneous fat.

The most distinctive feature of this country, and the respect in which it exceeds all others, is its aridity. It is a desert, not because the soil is not fertile, but because very little rain falls, and that is almost immediately evaporated by the strong sunlight. There is so little moisture in the air that dew is unknown. The annual mean relative humidity of Phœnix is 36 per cent., the lowest recorded in the United States. That of New York is 75 per cent. Relative humidity as low as 3 per cent. has been observed, and an afternoon record of 5 per cent. or 6 per cent., is common. The lowest relative humidity recorded in New York, in 1899, was 40 per cent. It will thus be seen that the dryest single observation in New York is not as dry as the annual average in Arizona. It is proper to note just here that where there is great dryness of the atmosphere the change of temperature between day and night is very rapid. This is necessarily so, because there is so little moisture in the air to retain the heat of the sun. This is of no consequence to the patient in the morning, when the atmosphere is getting warmer, but in the winter months, when, in the afternoon as the sun's rays become less vertical the atmosphere gets rapidly cooler, it is very easy to catch a cold.

This is due not only to the rapidly falling temperature, but to the rapid evaporation from the skin, occasioned by the dryness of the atmosphere. Patients are especially vulnerable just after taking exercise. This mishap can be easily guarded against if patients are properly advised and follow instructions.

It is an important question what cases to send to this climate, and what cases not to send. Of the ordinary cases of subacute or fibrocaseous phthisis, practically all improve who have not reached the cavernous stage. Cases with small cavities often have their disease arrested, but their complete recovery takes a very much longer time. Where there are large cavities, and especially where there is bronchiectasis, cases do not seem to do as well as in a mild maritime climate. In fact, the very dry air and the diurnal temperature range seem to unduly aggravate the sensitive bronchial mucous membrane in these cases. Cases of acute or galloping phthisis, as manifested by a high remitting temperature, do not do well anywhere unless they become transformed into the subacute variety. It is reasonable to believe that a favorable climate will increase the possibility of this transformation in these cases. The physician is warranted in advising them to seek climatic benefit, providing they or their friends clearly understand that it is more or less of a forlorn hope. Cases of acute general tuberculosis seem altogether hopeless. The wise physician, in sending a patient to a beneficial climate, will not give him definite assurances as to when he can leave it with safety. To tell a patient that he will be well after six months there, however slight and incipient his process, is a very indiscreet procedure. While patients often look and feel aparently well after six months in a favorable climate, the chest seldom shows complete arrest of the process, and relapses on returning to their former homes are only too common. A prudent rule for a patient to follow is to live in a favorable climate until a year after his cough and expectoration have entirely ceased. In sending a patient away it is best to advise him that he will probably have to devote several years to the sole object of regaining his health, and that he will have to sacrifice every other consideration.

It is well, before sending a patient away, to make an attempt to improve the general nutrition to an extent that he may be strong enough to stand the journey. It is highly desirable that he should have a companion on his journey competent to save him from all care and extra exertion, and assist him to get settled when he reaches his destination. Many cases, favorable under ordinary circumstances, suffer a drain on their strength too great to react from, owing to their having to provide for their own necessities during a long journey.

The management and treatment of a case of tuberculosis is just the same in a beneficial climate as in one that is not so beneficial. The natural conditions being more favorable, a larger percentage of cases improve, and the improvement is much more rapid. Some cases will get well by modern methods of treatment without climate, others by climate without treatment, but modern methods of climate and treatment together will save many cases that would otherwise succumb.

Potassium Permanganate in Lupus.

Four patients were treated with potassium permanganate applied as a dry powder or in a 2 per cent. solution. The lupus was rapidly improved and the lesions healed. Hallopeau believes that besides the caustic action, the permanganate has also something of a specific effect on lupus. He suggests that it might be advisable as a preliminary measure to phototherapy, but Finsen has stated that phototherapy has much better chances of success when the lupus has not been treated before with other measures. Leredde believes that the better the results from th treatments which merely "improve" without effecting a radical cure, the more dangerous for the patient, as in the case of carcinoma.—*Ann. de Dermatol.*

THE PRESENT STATUS OF JONNESCO'S OPERATION.

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IF it is desired to obtain an understanding of the effects to be expected by resection of the cervical sympatic* we must recur to the physiology of this important nerve. Pre-eminently we must not forget that all results of physiological research in animals have to be transferred unto man with caution. The location of the nerve is different according to the species, and late effects have been well nigh neglected by physiologists. Here Jonnesco's labors have shed considerable light already, and he and his followers will obtain more; while the previous observations of accidental lesions have taught us some things.

Presuming that the essentials are fresh in the mind of the reader, let me recite some rarer observations. Bidder says that, after cutting the trunk, the salivary gland atrophies. Gad says that electric irritation of the upper end of the severed trunk, while it remains in connection with the head, produces general contraction of the blood vessels of the head, except on the mucous membrane of cheeks, lips and gums, where redness appears. Seeligmueller says that traumatic paralysis was noted eight times 'till 1876; but, that only twice, redness and raised temperature of cheek and ear were reported, and twice flattening and reduction of the substance of the corresponding half of the face. Brown-Séquard saw, eighteen months after section of both sympatics on the neck of the guinea pig, distinct atrophy of the brain, after one-sided section, atrophy of the brain of the same side only, whereas Vulpian only once succeeded in seeing the same result. Wagner seems to have been the first man who found (1865) that hypotony of the eyeball follows section of the ganglion supremum, while the myosis was well known. Panas has shown though, that this hypotony does not last. Abadie says that while Hippel and Gruenhagen have shown that irritating the trigeminus within the skull produces glaucoma, this is due to the sympatic fibers accompanying it. Thus he explains the glaucoma fugax appearing in the sound eye after iridectomy on the diseased side, by reflex irritation of the sympatic fibers of the good eye, similarly as the reddening of the sound side by irritating the central stump of the severed sympatic on the other side in Dastre's and Morat's experiment. If we follow the literature of all the symptoms ascribed to section of the sympatic on the neck the only constant one seems to be narrowing of the pupil. The latest peculiar observation is by Neuschueler (Jan. 26, '99), who found microscopically hemorrhages in the subarachnoidal space and in the ciliary body of cats and rabbits after section of the cervical sympatic resp. of the ganglion supremum. After glancing at these physiological reminiscences let me approach our subject proper. Although Jaboulay made the first intended sympaticotomy on both sides on Sept. 2, 1895, and although Baracz had already proposed the full neurectomy of the cervical sympatic in 1893, Jonnesco was the man who not only did the first full neurectomy on both sides in 1896, but up to this date did more operations than all other surgeons together. He is, at the same time, the man who greatly widened the field of indications. He kept his labors constantly before the eyes of the medical world beginning in the *Comptes rendus du dixieme Congres de Chirurgie, 1896.* His description of the operation itself, which I herewith present, may be called classic already. For extirpation of the ganglion supremum alone he proceeds differently. Let us not forget Abadie, who seems to have established the indication for extirpating the ganglion supremum for glaucoma.

The original purpose of Jaboulay was the cure of epilepsy. The time at my disposal was too short to ascertain who had been the first man to elaborate the theory that exophthalmic goiter is caused by an irritation in the cervical sympatics. This theory certainly covers the field of phenomena better than any other and clearly indicates the neurectomy of the whole chain of three cervical ganglia. An irritation of the cervical sympatics ought to produce bulging of the eyes, as removal of the upper ganglia causes retraction of the bulbi. An irritation of the lower ganglia accelerates the heart and consequently a section of the same slows the heart beats. There are, however, accelerating fibers in the upper two thoracic ganglia and here may be an explanation, if the operation should fail of slowing the heart. Ir the last four cases Jonnesco included the first thoracic in the extirpation. We know little of the influence upon the thyroid gland, but, inasmuch as sympatic fibers accompany the thyroid arteries, we can at least construe an influence as little as we really know of the kind of influence. Let us not forget that this theory does not explain all; for example, why the affection is mostly on both sides or why there are *formes frustes* where the swelling of the thyroid is wanting or where the bulging of the eye is absent. Let us not forget that Filehne has made the meritorious discovery that exophthalmic goiter can be produced by section of the corpora restiformia if lesion of the fourth ventricle is avoided; that other phenomena are accompanying exophthalmic goiter, as the tremor and nervousness which point to the central nervous system itself; that the extirpation of the goiter alone has often cured the disease, and that thus failures by neurectomy of the sympatic may occur. But the results thus far are very gratifying, and last but not least, of all surgical means the neurectomy is almost devoid of danger (thus far only two deaths are recorded) while the extirpation of the goiter is very hazardous, as well as the tying of 3 or 4 thyroids, not

* Author's abbreviation of "sympathetic."

better in its final effects than the neurectomy, while not meeting the theory half as well.

The theory upon which Jonnesco attempted the cure of essential epilepsy is much less substantial. He thought simply by producing hyperemia of the brain to increase its nutrition and thereby to possibly cure inveterate cases, and it may be he thought of the experiments of Kussmaul and Tanner, which show that anemia of the brain produces an epileptic fit. The exasperating character of many cases of epilepsy and the well-known failure of any number of methods, the surgical included, must have led to the attempts at neurectomy, while the physiological atrophy of the brain mentioned heretofore may have escaped his calculation. At any rate, the results have not been unfavorable as a whole, though not as gratifying as with Graves' disease and glaucoma; while the ultimate effects are, considering the novelty of the procedure (4 years), unknown to-day in man.

The final results as far as ascertained respectively published to-day* are:

Jonnesco: for epilepsy, 97 cases; 12 cases cured; some improved.

For exophthalmic goiter 15 cases: 11 recovered; 4 improved. In one case of unilateral resection, unilateral improvement followed. Shortest observation, four months post operationem. For glaucoma 12 cases. Where vision was not lost, each time improvement, particularly in the glaucoma chronicum simplex where iridectomy is useless. Here he removed the uppermost ganglia, only, except in one case where exophthalmic goiter was present also. A grand record, indeed, for four years of assiduous labor, a result entitling Thomas Jonnesco to a place in the firmament of medical stars, and the operation to carry his name, Baracz and Jaboulay notwithstanding, although the latter's first case may have inspired Jonnesco.

Only the cool judgment of the whole medical profession can finally establish the merits or demerits of an operation. In the Société de Biologie, Déjerine criticized sharply the results obtained in epilepsy, particularly Chipault's, who, according to Schober's report, could not refute the statement that in Paris not a single cure has been obtained. Yet Prof. Dupuy had to acknowledge this also; Paris having been the nidus of this operation, it does not speak well for its effect in epilepsy.

In glaucoma mostly, cases were submitted where vision was almost lost and iridectomy had been done in vain; still, improvements were generally noted where vision was not lost. Mohr had improvement from vision $^{5}/_{15}$ to $^{5}/_{9}$; Field, 5° to 10°; Dayreux saw a failure of Abadie's; Demicheri, in Montevideo, obtained in three cases very decided improvements.

Panas and Jaboulay saw the hypotonia vanish in three months, and assumed, theoretically, that the nervous influence travels afterwards through the vagus and trigeminus. Abadie saw in a case of two years' standing V. increase after months from $^{1}/_{10}$ left to $\frac{1}{3}$, and on the right from $\frac{1}{2}$ to $\frac{2}{3}$; the pupils retained normal conditions, but, after a year, the vision deteriorated again in another case.

Dr. T. M. Ball, in St. Louis, America, had two improvements; in a case of atrophy of the optic the result was nil. In exophthalmic goiter the most gratifying results were obtained by others as well as by Jonnesco.

Jaboulay's first case, where he only removed the middle of the trunk of the sympatic, had a partial improvement; a second case of his improved rapidly after removal of the ganglion supremum alone, but died after ten days from congestion of the lung.

Combemarle and Gaudier report a case where the exophthalmos diminished; the pulse went down from 200 to 100, the precordial pain vanished; the goiter remained. Gerard Marchant saw the exophthalmos vastly improve. Chauffard and Quenu saw no effect. We must not forget that Jonnesco himself did not extirpate the whole chain of ganglia at first and that everywhere some intended operations remain technically incomplete on account of the great difficulty of removing the cardiac fibers. Further some cases of Graves' disease are not primary, but the tachycardia is secondary to the pressure of a very large thyroid; here only the removal of the thyroid can cure, being probably a mechanical effect by stretching and thus diminishing the influence of the vagus. You see the number of cases I could gather in the literature accessible to me is very small, and probably so in the present inaccessible; after we know more of the very late physiological effects in man we will know better how much risk is involved for the future well being of a man deprived of both cervical sympatics, and considering the statement of Brown-Séquard about the atrophy of the brain in the animal I do not wonder that the profession follows Jonnesco slowly. My impression as a whole is, that the operation will come to stay, after all that could be feared of late sequelæ. The horrible cases of incessant epileptic fits should be operated first in larger numbers, as those pitiable conditions permit us to decline no risk which holds out a prospect so great. Here the American surgeons ought to study the late effects first; in almost blind glaucomas next, and in true exophthalmic goiter lastly. If the corpora restiformia are the center of the affection, Jonnesco's operation interrupts the telegraph line and this is the most complete theoretical basis of operation in Graves' disease. Aside from Filehene's experiment I have struck a post mortem report which is in entire keeping with the experiment; while it is well known that changes in the sympatic are just as often missed as found post mortem in Graves' disease, and here, I think, Jonnesco will come to stay if atrophy of the brain should *not* follow.

Thus far nothing approaching such sequelæ

*Aug. 3rd, Paris; International Congress.

has been reported in cases submitted to Jonnesco's operation.

Chipault, of Paris, reported at the Congress August 3d 40 cases, 23 for epilepsy with 3 cures, 2 for exophthalmic goiter, both cured; 7 glaucomas with 6 improvements; 1 megrim with transient effect; 3 cases of facial neuralgia with cure lasting three and four months; thus far very gratifying is his statement that he never observed any trophic disturbances or cachexia to follow. Dr. F. Curtis, of New York, had one case of exophthalmic goiter with remarkable improvement. Concerning the physiology of the sympatic in man, Jonnesco made some electric experiments in vivo during operation which confirm the findings in animals. In Buffalo Dr. Meyer, myself assisting, extirpated the ganglia suprema sympatici in a case of epilepsy with most frequent spells, great improvement following. Whereas the seizures were for years of daily occurrence, since the operation the patient had only a few spells.

The research demonstrated that stimulation of the superior stump of the sympatic after resection produces the same effects as stimulation of the intact nerve. The vasoconstrictive action of the sympatic on the brain was also demonstrated, and the fact that weak stimulation has the opposite effect, *i. e.,* the smaller vessels are dilated, similar to the influence of the same nerve on the superficial circulation. When the heart has been accelerated by stimulation of the sympatic, it is not retarded by the section of the nerve. Injection of pilocarpin induces sweating on the sound side, but not on the operated side after section of the sympatic and subsequent degeneration of the sweat fibers. The most important result of the research is the demonstration that no appreciable nutritional modifications occur in the regions innervated by the resected nerve. This latter statement needs confirmation. Surgeons should take special pains to follow their patients after sympathectomy to note whether there is deterioration in the functional activity of the brain and ocular apparatus.

THE TECHNIQUE OF BLOODLESS WORK.

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THE older a surgeon becomes, the greater his respect for a drop of blood. All cutting operations upon the extremities should be bloodless ones; and all elsewhere as nearly so as possible. Every drop of blood saved is a safeguard against shock; and bloodless work permits the same speed and facility of dissection that one could employ upon the dead body.

At one time Petit's tourniquet, or some other, similar in principle, was the chief means for accomplishing this end. In emergency a Spanish windless is equally effective—made by knotting about the limb, loosely, a towel or other strong piece of cloth, and then twisting a stick in it until all circulation ceases. Later came the use of the Esmarch rubber bandage; and until within the past few years this was in regular use in our hospitals. With this the blood was entirely stripped from the limb. Beginning at the foot—for example—it was carried, each turn drawn very firmly, and slightly overlapping the last, up the leg, to a point well upon the thigh; where it was fastened. Then it was unwound from below up to the final turn, leaving the limb white and exsanguinated.

This method is now little used. It had its advantages, but they were outweighed by certain objections. One of these is the fact that vessels subjected to such an extreme emptying and stripping process are irritated thereby. Their vasotonic nerves are temporarily paralyzed; and when the blood is again permitted to enter the limb, there is distinctly more oozing from temporarily dilated capillaries and arterioles than would otherwise be the case. Elevation of the limb or the stump, and firm pressure for an hour or longer upon the site of the wound to be sure, minimize this oozing; but there is nevertheless commonly a clot formed therefrom within the wound. And all surgeons know that a wound left quite dry—cut flesh against cut flesh—always heals best and most quickly.

Again, in amputation, the operator, if he be a general practitioner, may have become a bit rusty in his anatomical knowledge, and fail to locate the chief vessels. In the leg we have Holden's rule: "One inch below the knee, one great artery to find; two inches, two great arteries." If the operator, because of their retraction, or because of a bit of fat or muscle falling over the open mouths, fails to find and control all of these—and several minor ones—there is likely to be an ugly hemorrhage within a few hours. Here comes in an advantage of the present method in general use.

This consists in stripping—"milking"—by the fingers, for some minutes, the blood out of the elevated limb; the operator massaging alone the course of the chief veins. Then at the desired point is applied the constriction, which is either an ordinary stout rubber bandage, or a very large rubber tube. In the former case this is ended by slipping what is left of the roll (after encircling the limb tightly a few times) beneath the final turn, the roll lying preferably over the chief vessels. Should a rubber tube be the choice, the larger in caliber it is the better, for it is the less apt to injure the muscles and nerves beneath, by its pressure; preferably a tube of pure black gum one and a half inches in diameter, and long enough to encircle the thigh twice or thrice when unstretched. This is fastened very simply. We tie together the crossed ends, while still tense, with a short piece of wet bandage, using a single loop knot. Being wet, it will not slip. Avoid tying a hard knot; for if, in cutting it, the tense

rubber tube be pricked, it will be weakened thereby and the cut liable to enlarge and to give way when least desired. To remove, draw upon the tube ends first, thus making them once more small in calibre; whereupon the wet bandage loop can be untied with ease.

In consequence of the simple "milking" a small amount of blood remains in every vessel. These are not paralyzed, as is the case where the Esmarch bandage has been used, hence there is small tendency to oozing in the wound; and when the operator has any trouble in finding all the vessels, he strips sharply down the chief artery—the popliteal for instance—whereupon every unsecured artery and arteriole will spurt, and be located thereby with ease.

Should the operation be one above the foot, or the hand, many operators think it best to tighten the constricting rubber bandage or tube upon the proximal limb rather than the distal, believing that, because the two bones in the latter case protect the arteries between them, a greater degree of constriction is needed than if the thigh or the upper arm be chosen. But upon the two proximal limbs there is a choice of situations; we should *select* the middle of the thigh, we should *avoid* the middle of the arm. The upper third of the thigh is so great in circumference as not to be desirable for constriction unless under compulsion, and in the lower third the external popliteal nerve lies nearly enough to the surface, when approaching the outer hamstring, to have occasionally been paralyzed from undue pressure.

You have just listened to an able paper and interesting discussion of Wyeth's bloodless method at the hip, which is certainly our best, and must help to immortalize his name. Time forbids a further comment upon it here.

Our bloodless work is not wholly limited to the limbs. The scalp may for instance be included in this field by use of a tube carried tightly about the head. This rests in front in the depression between the frontal eminences and the superciliary ridges; at the sides, runs just above the ears; and behind is fastened just below the inion (ext. occip. protuberance). Similarly, in amputation of the female breast, or excision of tumors of it, for other reasons than malignancy, the work may be made almost bloodless by cording the breast at the body—first passing, crosswise, a pair of long mattress needles, to insure against the rubber tube slipping off.

About the bladder, perineum and genitals, both male and female, Trendelenburg's posture secures by gravity a degree of anemia which constitutes a great safeguard, in addition to other advantages resulting from this position. And in work about the face, and mouth, and upper part of the neck—a peculiarly bloody field—a ligation of one or both linguals, if a tongue excision, or of the external carotids, in other cases, makes a wonderful difference in the ease and safety of the work.

The production of a degree of anemia of the trunk and head by cording of the extremities was a suggestion of Dr. David Webster, in the *N. Y. Med. Journal* during 1887, his idea being to make use of this plan for the safety of the patient when the operator has reason to fear collapse from the anesthetic. At first the constricting bands are only placed tightly enough to cause the limbs to swell, and then the arterial flow also is shut off. Some quarts are thus accumulated in the extremities, maintaining a reserve guard of pure blood. If during the operation the patient suddenly develops signs of excessive narcosis, by removing the bands and holding up the limbs the pure blood at once is mingled with the anesthetized—and almost instantly the patient wakes up. The method is little used, but is certainly ingenious.

This same idea of constricting the extremities enables one to do comparatively bloodless surgical work upon the trunk, face, neck, or brain, and is worthy of more frequent usage than at present. It also is unquestionably the best, indeed the only reliable method of treating *medical* hemorrhages—as distinct from *surgical* ones. By a medical hemorrhage I mean one where direct mechanical control is out of the question: hemoptysis, hematemesis, and apoplexy, for example. It is a curious fact that this best of all methods—and a very old one—has been completely lost sight of by most practitioners.

Some years ago I wrote a paper for the *Medical Record*,* entitled "Medical Hemorrhage Surgically Treated" and therein discussed this matter. At that time Dr. William Gilman Thompson wrote me that he entirely agreed with me that it was the most reliable way of treating ugly hemoptysis; that he had so found it in his service in the New York Hospital. Nevertheless Loomis' "Practice" does not even indicate by so much as a word that he ever had heard of the method; nor do I now remember any other work upon practice which discusses it.

As to drugs, Loomis was a pessimist. He advised the use of morphine, simply to quiet the patient and slow the breathing; but nothing else did he think of value, except aconite, if the heart were pumping too vigorously. Now, we know that one of the old names for aconite (besides monkshood and wolfsbane) is "the Vegetable Lancet"—bleeding a patient into his own veins.

What aconite can do in a very feeble and slow way, cording the extremities does effectively and promptly. Three limbs are so corded close to the trunk that they swell visibly. This swelling continues until from cardiac and brain anemia the patient is made somewhat faint—and consequently there is less vigorous pumping of blood out of the broken vessels, and there is a better chance for a firm clot to form there, opposing fresh bleeding when, after two or three hours, the circulation is slowly allowed to resume its ordinary course. The reason *three* limbs, not four, are to be corded, is to insure their safety.

* *Med. Record*, Jan. 2, 1892.

After a half hour we cord the fourth limb, and let up on the first one—and so on, in regular order.

Obviously the same method is the proper one in apoplexy, where there is a ruddy face, hard pulse, and stertorous breathing. If the patient be plethoric bleeding is best; but otherwise is not so, for he would need that blood later on. A *temporary* bleeding into his own vessels is the thing.

Given a case where atheromatous vessels, too much eating and drinking, and occasional attacks of dizziness or semi-unconsciousness, point toward the probable ending of the story, we should tell the relatives that if this patient be found unconscious and snoring, with a red face, the first thing to do should be to apply Spanish windlasses—even before sending for the doctor; and they should be shown how to make and use them. In this way, what might otherwise prove a fatal apoplexy would very likely be reduced to a comparatively small one, if taken promptly.

Applying the bloodless method to the surgery of acute injuries, let me discuss for a minute a plan which I got many years ago from Dr. Gerster. Suppose we are dealing with a fresh but obscure injury at the elbow. It may be a fracture or several of them, or a dislocation, or both. Because of the swelling an exact diagnosis is impossible; and yet the doctor's reputation may in that case well depend upon his accurate diagnosis, for upon that alone can his treatment be based.

If you wrap the elbow of a skeleton in a pillow and then endeavor to recognize the bony prominences through it you will approximate the situation. Here comes the point in question, which I have never seen in any work upon surgery, but which I have used with satisfaction repeatedly.

Anesthetize the patient; then apply the rubber bandage, slowly but firmly, from fingers to shoulder. Leave it on for, say, fifteen or twenty minutes; then undo it from below, but leave the final turn or two in place. Upon examining the elbow the swelling will be found to have disappeared; all the congestion, and all the edema, are gone; and you can make your diagnosis as prettily as upon the other arm. If there is a fracture, you set it; if a dislocation, reduce it; then let the swelling return. You know the facts, can state the probable prognosis, and have protected your reputation.

Time only permits a momentary allusion to certain additional interesting fields which could properly be studied under the head now being discussed. In snake-bites, for instance, perhaps the most important point, *plus* venom antitoxin, is to make a free incision at the bite, and having corded the extremity high up, milk out every drop of blood, from *both* directions—preferably with the rubber bandage—stripping *toward* the cut in both instances. And then *fight the enemy in detachments.* That is, when the patient is a little stronger, let up on the tourniquet a moment thus admitting a little blood to keep alive the limb, and also inevitably giving entrance into the general circulation to a little of the poison which presumably still remains in spite of the stripping. When the heart has withstood the shock of this, again fight another small squad of the enemy by letting up a moment; and so on.

We are all interested in tonsillotomy—and all do it, at times. I should like very much to have you try the bloodless method on which I have written two or three papers.* Done *before* the cutting, and by aid of eucaine, it is easy to pass, with a stout semicircular needle and holder, the purse-string suture as advocated by the writer; and after tightening this, the biggest and ugliest tonsillar stump cannot bleed a drop when severed. I have heard it said that the method must be difficult of accomplishment; but those who said so have not tried it. It is upon adults, chiefly, that tonsillar hemorrhage is dangerous; and nothing can be simpler than this plan, used upon the adult. I believe that it will come into regular use, in time.

Under eucain the vessels are not contracted at all—a good point in tonsillotomy, because cocain so shrivels the mass that it is difficult not to have a large stump, which protrudes, after the effect of the drug has worn off.

But this power of cocain—and to an even greater degree, and a somewhat more lasting one, that of suprarenal extract—is of the utmost value prior to certain operations, for example, within the nose. It is a good plan to use the extract first; and when the mucous membrane has become pale, almost bloodless, then cocain in almost any strength can safely be applied, because it can hardly be absorbed; and the operation will be devoid of hemorrhage.

Similarly, solutions of suprarenal extract, and of cocain, are of great advantage when applied by aid of gauze packed into the rectum, vagina, or bladder, before cutting for the removal of growths, or for other purposes, in these very vascular fields.

I regret that bloodless work as applied to starving malignant growths supplied by the external carotids cannot be studied to-day. It is too large a topic. The writer has now cut out the entire external carotid, tying off all its branches as reached, about thirty times in the past five years; and it has also been done by Drs. Keen and Da Costa, in Philadelphia; by Drs. Brewer, Blake, W. Meyer, and Lilienthal in New York, and by Dr. Nicholson in Atlanta, Ga.; and from all of these instances only three or four deaths have resulted from the operation, these being all in cachectic patients suffering from malignant growths, a rather unexpectedly low mortality. The operation must, to be of use, be performed upon both sides; but not at one sitting, of course. When the writer's paper on this topic was read before the Surgical

* See *Med. News*, May 20 and June 10, 1899.

Section last spring five patients were shown with starved and shrunken malignant growths—cancer and sarcomata—two of which dated back nearly five and one four years. It really seems to offer, as a method, when performed upon both sides, a clear ray of hope to the otherwise hopeless; for nothing can be more pathetic and desolate than the outlook for a patient with cancer of the tongue or floor of the mouth, for example, which has advanced beyond reach of the knife.

THE PATHOLOGY, DIAGNOSIS, SPECIAL PROPHYLAXIS AND TREATMENT OF TUBERCULOSIS OF THE MIDDLE EAR.*

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IN the comparatively small space of the cavum tympani, rendered still less by the ossicles and many reduplications of the lining mucosa, the extension of tuberculosis to the antrum and adjacent cavities is facilitated to the highest extent. In the majority of cases the infective material is carried to the middle ear by way of the Eustachian tube. The resultant primary morbid changes are characterized by the development of the tubercle in the mucous membrane.

When the tubercles are limited in number and scattered, the intervening tissue is apparently normal, while, should they be confluent, the area between the cell aggregations is obliterated, or is composed of granulation tissue insufficiently supplied with nutrient vessels and there develops an inflammatory fibrous hyperplasia of a low grade. Under these circumstances the mucosa is but slightly mamillated and presents the appearance of a compact, uniformly diseased surface. Primarily the tuberculous nodule, as seen on the promontory or in the immediate vicinity of the tubal opening, is red in color and slightly elevated above the surface. The mucous membrane is pale gray from leucocyte infiltration.

As the morbid changes enumerated are usually not productive of symptoms sufficient to attract the attention of the patient, the otologist rarely sees the infection in this stage, unless the tympanic membrane is also involved and there is a coincident myringitis. When this occurs, the drumhead still remaining intact, there develops the small millet seed projections, not differing from those of miliary tuberculosis in other organs. Kretchmann has found the membrane studded with miliary tubercles which ulcerate early and produce the more or less characteristic sieve-like perforations seen in this disease. In three cases I have observed isolated tubercles break down and but one or two perforations resulted, but more frequently and especially when the disease is consecutive to pulmonary tuberculosis, caseation is rapid and the drumhead is destroyed in its entirety. When otorrhea is first noticed by the patient the infected tissues have begun to break down, and yellowish, opaque areas of cheesy degeneration are seen scattered over the promontory.

Unlike simple granulation tissue, there is a constant tendency to retrogressive changes and the newly formed tissue occupying the tympanic area shows no tendency in the majority of cases towards cicatrization, but the development ceases at the fibroblast stage. The nutrition, always feeble, is rendered more so, and degeneration, accompanied by secondary infection with pus organisms, is a constant feature. It should also be taken into consideration that ulceration of the mucous surfaces inevitably occurs from the breaking down and disintegration of the tuberculous mass and then the base and edges of the ulcer are also carious. Invasion of adjacent tissues is highly probably; the infection spreading from the original area into the surrounding structures at the same time the central focus disintegrates, as in a case reported by Haenel, in which tubercular caries of the bone was followed by rupture of both labyrinthine windows. Illustrating the centrifugal extension of the limited tympanic infection is a case recorded by Piffl, in which there were secondary growths extending from the middle ear into the cranial cavity. The mastoid cells were replaced by a mass of tubercular tissue, the ossicles were destroyed, the anvil was lying loose in the granulation tissue and the bulb of the jugular vein was thrombotic.

The membrana tympani may become studded with tubercles, later undergoing caseation, or it may present localized areas of hyperemia with a moderate degree of round cell infiltration, most marked in the postero-superior quadrant. Following this condition, which however may remain stationary for a considerable period, the regenerative power is lost and the membrane rapidly melts away. Scheibe saw six cases in which this feature was well marked, the affection being characterized by extensive destruction of the tympanic membrane. Again, the drum may appear normal or but slightly clouded until late in the disease; in these cases the infection remaining for a long time localized to the promontory or near the tubal opening, or as pointed out by Winkler, there may be an old perforation, due to a non-specific otorrhea, through which the parts become infected by the tubercle bacilli.

The ossicles, especially the malleus and incus, are usually subjected to the brunt of the disease, and in my experience it is not infrequent to have them exfoliated in the later stages. But recently I saw a case of grave pulmonary phthisis, in which the right tympanum was extensively involved and the patient found the entire ossicular chain adhering to a pledget of cotton, which he had been using to remove the discharge. While the tubercular inflammation of necessity involves the bony boundaries of the tympanic cavity, the ossicles become necrosed before this occurs and are occasionally found in the detritus. The stapes

*Fourth paper read in the Symposium on Tuberculosis at the Seventeenth Annual Meeting of the New York State Medical Association.

is not as frequently affected as the malleus and incus, but in the later stages even the foot plate of the stirrup may become disintegrated, thus opening an avenue of infection by which the inner ear may become involved. Liaras reports a case in which the stapes was freed from the oval window, while Schutz in one case found the tympanum completely filled with small gray tubercles, which had dislocated the ossicles and the new growth had extended into the external canal. Instead of necrosis, as shown by Bezold, there may be hyperplasia of the foot plate of the stapes, the hearing being greatly impaired when this occurs.

When necrosis of the bony walls takes place, the promontory is usually the first point involved, extending to other portions of the osseous tissue, tubercular changes taking place in the facial nerve, and as pointed out by Randall the destruction may be so great as to involve the carotid artery and cause death by hemorrhage, seven deaths having been reported from this cause. The necrosis upon the inner wall of the tympanum may readily be detected both by visual examination and the probe, but in a class of cases to which Kretchmann has called attention, it resembles to a marked degree a mass of fibrinous deposit, under which is denuded bone, usually surrounded by granulation tissue.

The diagnosis of aural tuberculosis is of serious import, as upon the early recognition of the disease, will depend to a great extent the future issue of the case. It seems best to study this aspect of the subject under three headings: First, the recognition of aural tuberculosis in a subject without general evidences of the disease, but in whom for obvious causes the middle ear affection is suspected to be of a tubercular nature; secondly, the recognition in an individual suffering from pulmonary tuberculosis, of involvement of the middle ear, and under this same heading, the diagnosis of the cause of an otorrhea existing before the pulmonary affection developed. In the third class we have the differential diagnosis of a tubercular otorrhea from that occurring in conjunction with syphilis, lupus, diabetes and new growths.

In the first class of patients referred to there is usually a slight watery discharge from one ear, which has existed for several months, appearing without the knowledge of the patient, and at no time has there been the slightest evidence of pain. Physical examination of the respiratory organs shows nothing suspicious; the patient may be of good physique, but usually is somewhat under weight, anemic, and in addition will give a history of pulmonary tuberculosis in near or distant blood relatives. Hearing is but slightly impaired, and on examination the membrana tympani will present several small perforations, round in contour, with the edges thick and everted, and instead of the congested appearance seen in ordinary otorrhea the drum will be of a blue white color, presenting somewhat the appearance of ground glass with the addition of an edematous element. Under these circumstances, the insidious development of the discharge and the absence of pain should immediately direct the attention of the otologist to the nature of the case. Strong emphasis is placed upon this point by Oaks, who says that although the otorrhea is of recent date, if there is no pain or other manifest symptoms except the discharge, a tubercular etiology is suggested. The importance of a prompt diagnosis in the incipiency of the disease cannot be emphasized too strongly, as these are the cases that present the most favorable outlook as regards treatment.

Of the greatest importance and the crucial factor in the diagnosis of tuberculosis of the middle ear, is the recognition of the tubercle bacilli in the aural discharge. When the organisms are numerous they can readily be recognized by any of the usual stains, but occasionally it is necessary to use what Milligan calls the best and most reliable means of establishing the diagnosis, properly conducted inoculation experiments. As the bacilli are found more frequently in the residual pus in the tympanum than in the canal, it is essential that the material used for examination be obtained from the deepest part of the chamber. A negative diagnosis cannot be made by the absence of organisms in a single examination. Frequently the material obtained from the ear must be repeatedly examined before the bacillus is found; especially is this necessary in the later stages, when there is profuse purulent discharge due to secondary infection from streptococci.

In the patient with pulmonary or other forms of tuberculosis and with subsequent otorrhea, the diagnosis is greatly facilitated and no serious difficulty will be apprehended in estimating the true nature of the case. A difficulty, however, arises in cases of purulent otorrhea with profuse discharge and extensive tissue disintegration, in which general tuberculosis develops at a later stage, it being ofttimes difficult to detect the bacilli, as the usual pus organisms present prevent the recognition of the tubercular element. Under such conditions the characteristic local features are absent and pain may be present, as in a case reported by Collins, in which during the course of acute miliary tuberculosis, the patient presented the ordinary symptoms of an acute otitis media, the diagnosis in these cases being made by the general condition of the patient, the presence of laryngeal or naso-pharyngeal tuberculosis and various local manifestations suggestive of this affection, as the rapid development of facial paralysis, the intolerance of the middle ear to local applications and, as suggested by Milligan, the enlargement of the periauricular ganglions.

The differential diagnosis from syphilis can be determined by the history of the case, the presence or absence of syphilitic stigmata elsewhere, the absence of the tubercle bacilli in the aural discharge, and the rapid disintegration and ulceration, not only of the middle ear, but also of the

external canal in the specific affection. When otorrhea develops during the course of both syphilis and tuberculosis, as in a case reported by Bonnier of a tubercular and syphilitic patient, it may be extremely difficult to ascertain the real nature of the aural lesion. Careful bacteriological investigation will, however, clear up the diagnosis. Lupus involving the middle ear is rare, and as it only occurs in conjunction with the manifestations of the disease upon the auricle and face, it will require no further mention here. Tubercular otorrhea must sometimes be differentiated from that occurring during the course of diabetes. I have seen one case of this nature in which the urine contained a large amount of sugar and there was also evidence of beginning pulmonary tuberculosis, the otorrhea, however, in this instance not being tubercular in nature. When granulation tissue is abundant and extends into the auditory canal in tubercular otorrhea, the question will occasionally have to be determined as to its relation to other new formations. Visual examination will be of little value, and it is necessary to remove some of the tissue for microscopical examination, and the presence or absence of the tubercle bacilli must also be determined.

As the natural history of aural tuberculosis is such that extensive alterations may and usually do take place before attention is called to it, the usual prophylactic measures adapted to the prevention of the affection in other parts are rarely applicable. When a tubercular individual, however, has had at any time acute or chronic suppurative otitis media, it is always advisable to exercise special prophylactic measures directed to the avoidance of aural infection, and especially so when the naso-pharynx or tonsils are involved. Even in laryngeal tuberculosis without aural disease, great care should be taken to prevent infection through the Eustachian tube.

It is unnecessary here to more than mention the general prophylactic measures, such as change of climate, environment, nourishing food, etc. Of special prophylactic importance in this connection is attention to any abnormalities or morbid changes in the nose or throat, whether tubercular or otherwise, and prompt attention should be given to attacks of myringitis or acute otitis media. The nose and throat should be carefully cleansed with the alkaline antiseptic solution, and all tendencies towards forcing infected mucus through the tubes, as by the Valsalvian method of autoinflation, must be expressly prohibited. By observing these rules much can be done to prevent infection of the middle ear on the part of the patient, and following out the same indications, it should be the duty of the physician to absolutely avoid, under all circumstances, the use of the Politzer air douche. I firmly believe that the middle ear is infected in this manner more often than generally thought, by the endeavors of the physician to relieve an intercurrent simple salpingitis in a tubercular individual.

As I have emphasized in a previous article, the treatment of aural tuberculosis is essentially that of the treatment of the tubercular disease elsewhere. The signal note of success, if success is to be had at all, is by the use of such general constitutional remedies as seem best suited to the individual conditions; the hypophosphites, strychnia, creosote and its congeners are indicative of the general remedies to be used. Nourishing food, change of climate and environment, are just as necessary in aural tuberculosis as in the pulmonary form, Buck, reporting a case of early tuberculosis, in which local treatment was not used at all, and the disease was arrested by sending the patient for a long stay in the Adirondack mountains. Tuberculin has been used by Lucas, Bezold and others, but as in other forms of tuberculosis, no appreciable benefit seemed to be derived from its use, and in some cases there appeared to be considerable harm attending its administration.

Locally, the treatment may be considered under two headings, surgical and medicinal, and the choice will depend upon the extent of the aural involvement, the presence or absence of tuberculosis elsewhere and the general physical condition of the patient. Usually surgical measures are contra-indicated except in those very few cases in which there is no ascertainable tubercular focus elsewhere, and where the area of aural infection is limited. When the condition of the patient is such that operation is justifiable, it is essential that every portion of diseased tissue be removed and a free open wound be allowed to remain. Even if the patient be in fair condition physically, it is of great value to place him upon general constitutional remedies and a nourishing diet for several weeks before recourse is had to operative measures, much better results being obtained in this manner than when the diseased tissue is immediately removed without special constitutional preparation.

The local treatment may be summed up in the axiom, keep the parts clean and meet indications as they arise. The middle ear should be thoroughly cleansed with hydrogen peroxide, all pus and débris removed and granulation tissue should be snared away or kept down by chromic acid. A non-irritating antiseptic powder may then be lightly dusted over the parts, or what is still better and has given the best results in my hands has been the local application of a thin film of iodoform and the use of iodoform gauze packing extending well into the middle ear. Free drainage is favored by this method, and if the parts are kept thoroughly clean, quite favorable results are obtained. Buck douches the ear with tepid water and then applies a non-irritating antiseptic powder.

Following the successful results obtained from the use of lactic acid in laryngeal tuberculosis, it may be used here in the same strength and manner, preliminary cocainization, however, being necessary before any such applications are made.

Any of the remedies used in non-tubercular otorrhea may prove of service, such as chloride of zinc, balsam of Peru, creosote in alcohol and glycerine, absolute alcohol and carbolic acid, but it should always be kept in mind that whatever form of local treatment is adopted, general constitutional measures are absolutely imperative.

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Hiccoughing.

Noir reports an immediate cure of an attack of hiccoughing by means of continuous traction on the tongue for one and a half minutes. The patient, a nervous child, had been hiccoughing almost uninterruptedly for six hours. She had failed to respond to the various remedies applied, and was greatly exhausted. There was no recurrence.—*Med. Times.*

OPHTHALMIA NEONATORUM; ITS PATHOLOGY. PROPHYLAXIS AND TREATMENT.*

BY JOHN E. WEEKS, M.D,
New York.

THE term "ophthalmia neonatorum," as generally applied, includes all of those cases of muco-purulent or purulent discharge from the eyes that occur from the first two to four weeks of the life of the child, and the general inference is that the infectious material enters the conjunctival sacs during or immediately after the birth of the child. This general impression may be slightly modified when we recognize the fact that infection sometimes occurs antepartum, and that in those cases which develop later than three days after birth the infection is almost always from a source other than the genitals of the mother. There may be also a purulent secretion in the conjunctival sac, during the first month of infant life, not due to inflammation of the conjunctiva, but due to an inflammation of the tear sac dependent on an impervious lachrymal canal.

Symptoms.—The symptoms of ophthalmia neonatorum are too well known to require minute description here. The attention of the attendant is first called to the eyes of the infant, usually on the morning of the third or fourth day, by the appearance of muco-purulent formation at the margin of the lids, by some redness and slight swelling of the lids and by slight restlessness of the child. The disease pursues a mild or severe course, as the case may be, and recovery takes place with or without damage to the eyes.

Cause.—Cases in which the discharge appears before the end of the fourth day after birth are almost invariably due to the gonococcus of Neisser. This is true whether the case be a mild or a severe one. I am compelled to this belief by the large number of examinations of secretion that I have made, and my position is abundantly supported by the observations of others. In July, 1886, (*Med. Record,* 1886, p. 90), I reported the examination of secretion from the eyes of seventeen infants suffering from ophthalmia neonatorum. In fifteen of these cases the gonococci were found. The two cases that did not possess the gonococci developed about two weeks after birth. Since 1886 I have examined secretion from very many cases of ophthalmia neonatorum with similar results. Francisco (*N. Y. Eye and Ear Infirmary Reports,* 1895), reports forty cases of ophthalmia neonatorum in which a bacteriological examination was made. In those cases in which the discharge appeared on or before the fourth day, thirty in number, all were due to the gonococcus; those cases which developed later were not gonorrheal. In regard to the severity of the cases, Francisco says that "all of the severe cases were gonorrheal, but that many of the gonorrheal cases were of a mild type and could only be distinguished from the others by the bacterio-

*Fifth paper read in the Symposium on Obstetrics at the Seventeenth Annual Meeting of the New York State Medical Association.

logical examination." Confirmation of these views may be had by consulting the paper of Zweifel *(Arch. f. Gynak,* vol. xxii.; p. 318); Widmark *(Hygien,* 1884, p. 404), Welander *(Nords Med. Arkiv.,* Bd. xvi., No. 2); Leopold and Wessel *(Arch. f. Gynak.,* vol. xxiv., p. 89); Kraus *(Centralbl. f. Augenheilk.,* May, 1882, p. 134), and others.

If it were necessary that an attack of gonorrhea in the female must shortly precede the birth of the child it would be difficult to explain the appearance of ophthalmia neonatorum in many cases, but the chronicity of gonorrhea in the female is a well established fact (see the papers of Bockhart) *(Vierteljahresschriftf. Derm. u. Syph.,* 1889, vol. 1, p. 8): Currier (*N. Y. Med. Journal,* Oct. 17, 1885), and the persistent nature of the affection in males, as noted in the discharge of gleet, is recognized, hence the appearance of ophthalmia in the new born of mothers who became pregnant years after they suffered from the attack of gonorrhea, and the transmission of gonorrhea to wives by husbands who had long since recovered from the acute attack.

Micro-organisms that have been found in the secretion from the conjunctiva of infants, other that the gonococcus, are the pneumococcus, the bacillus of acute contagious conjunctivitis (Weeks' bacillus) and the Klebs-Loeffler bacillus. It is also certain that some of the mild cases show no specific micro-organism, but are probably excited by the entrance of irritating substances into the conjunctival sacs during the care of the infant.

Prophylaxis,—The prevention of ophthalmia neonatorum is of the greatest importance. Reference to a few statistics in connection with prevention will serve to emphasize this statement. In a paper published in the *Medical Record* of 1886, p. 90, the writer gives the percentage of blind caused by ophthalmia neonatorum as reported by seven foreign investigators. The number of blind examined reached into the thousands. The average per cent. caused by ophthalmia neonatorum, reported by these writers was 17.09. In the various countries in which the research was made the percentages ranged from 4.3 per cent. to 33 per cent. At the meeting of the American Ophthalmological Society in 1898, the report of the majority of the Committee on Resolutions relating to the purulent ophthalmia of infancy stated among other things that "out of about fifty thousand blind persons in the United States a little over five thousand have lost their sight from the ophthalmia of infancy." Before the adoption of effective prophylactic measures, statistics regarding the frequency of ophthalmia neonatorum were made at a number of lying-in institutions abroad. These statistics were collected by Lucian Howe of Buffalo and appear in the volume of transactions of the American Ophthalmological Society, 1897, p. 53. I take the liberty of giving the totals. Of 17,767 births without prophylactic measures, 9.24 per cent. of the infants developed ophthalmia.

In 1880 Credé, of Leipsic, began the systematic employment of prophylactic measures in the lying-in asylum in that city for the prevention of ophthalmia neonatorum. His method was as follows: A drop of a 2-per-cent.-solution of nitrate of silver was instilled into the conjunctiva sacs of the infant from the end of a glass rod, immediately after its first bath. In some cases quite severe reaction followed, necessitating cold applications to the lids, but no serious complications occurred. Of the solutions employed by others a 1 per cent. solution of silver nitrate has been used by V. Hecker, of Munich; carbolic solutions by Konigstein, of Vienna; sublimate solutions, 1-1,000 and 1-10,000, by Stratz, of Berlin. Sterilized water has been used by Abegg, of Danzig; Korn, of Dresden, and others. The average percentage of ophthalmia neonatorum that developed in 24.727 cases after Credé's method was 0.655 per cent.; 1,223 cases using 1 per cent. nitrate of silver, 2.422 per cent.; 2,361 cases using sublimate solutions, 0.47 per cent.; 1,623 cases using carbolic acid solutions, 7.7 per cent.; 5,823 cases using sterilized water, 3.122 per cent. It will thus be seen that the sublimate solution and 2 per cent. silver nitrate, used according to Credé's method, have given the best results as prophylactic measures. These remedies are effective because of their germicidal properties. The nitrate of silver in 2 per cent. solution destroys the staphylococcus aureus in exposures of eight to twelve seconds and it undoubtedly has a like effect on the gonococcus. Sublimate in solution of 1 to 1,000 destroys the pus germ in exposures of 45 seconds. The introduction of these remedies into the conjunctival sac of the infant should be made shortly after birth, a convenient time being after the first bath. No solution for controlling the effect of the silver or sublimate need be employed, unless the quantity instilled exceeds one fair sized drop, when some normal saline solution may be employed to wash the conjunctival sacs from one-half to one minute after the silver has been instilled. The sublimate in the solution and quantity advised will do no harm. If the lids should become swollen and red after silver or sublimate have been used, cold applications may be made, and the eyes bathed in a solution of boric acid three or four times a day. The reaction will soon subside. When we realize the fact that without proper prophylactic measures about eighteen infants suffer from ophthalmia neonatorum, where one suffers when prophylactic measures are employed, and remember that blindness is not a very infrequent result of this disease, the value of prophylactic measures becomes apparent. As the obstetrician is seldom in position to know whether the gonococcus is present in the vaginal secretion of a parturient woman or not, it is advisable for him to employ prophylaxis in all cases. In all cases the attend-

ants should be cautioned as to the contagious nature of the disease and all appliances used in the care of the infant's eyes should be kept apart, sterilized from time to time and used for the patient only. Dressings from the eyes should be destroyed. If but one eye is affected the other must be protected by frequent, careful cleansing and by endeavoring to prevent the secretion being carried from the affected to the sound eye. Protective shields are not satisfactory when employed on infants.

Treatment.—The rationalé of the treatment of ophthalmia neonatorum will be better understood if a few facts are born in mind: *a.* The lachrymal fluid is secreted but little during the first month of the life of the child, hence does not serve to mechanically remove secretion from the conjunctival sac.

b. The conjunctiva of the lids is more severely affected in infants than the conjunctiva of the eye ball.

c. The gonococcus grows more rapidly at a temperature ranging from 96° to 110° F., but grows very slowly at a temperature of 92° F. The same rule applies to the growth of the bacillus of acute contagious conjunctivitis. The Klebs-Loeffler bacillus and the pneumococcus are not so sensitive.

d. The temperature of the conjunctival sac ranges from 97.5° F. (an approximately normal condition) to 102° F., according to the severity of the inflammatory process affecting the conjunctiva.

e. By making cold applications to the lids the temperature of the conjunctival sac can be reduced to 88° from 94° F., depending on the thickness of the lids.

f. The condition of the infant has a decided bearing on the results of the inflammation of the conjunctiva. A robust, well child is much more likely to recover without permanent injury to the organ of vision.

The treatment of ophthalmia neonatorum should be, first, mechanical. The conjunctival sac should be cleansed frequently, the more so because of the absence of tears. This should be effected by the employment of a non-irritating aseptic or mildly antiseptic solution Long experience has led many to choose a 3 per cent. solution of boric acid as the most desirable for this purpose. Sterile normal saline solution, or a solution of sublimate 1-15,000 to 1-20,000 may be employed. The solution should be warm or tepid and should be used freely to irrigate the conjunctival sacs sufficiently often to keep them free from secretion. With the child resting on the lap of an attendant and the head between the knees of the operator, the lids may be gently separated and the solution permitted to run into the eye from a piece of absorbent cotton or slowly from a pipette or undine. Care must be observed not to press on the eyeball or to abrade the surface of the cornea. Cleansing of the eyes at suitable intervals should be continued until they assume a normal condition. Second, the conditions for the development of the micro-organism should be made as unfavorable as possible; this can best be done by reducing the temperature of the conjunctiva. It is very difficult to raise the temperature of the conjunctiva above that (110° F.) at which the micro-organism develops rapidly, consequently heat is not so readily available. To reduce the temperature below the point of the rapid development of the germ without impairing the normal functions of the tissue cells is comparatively easy. In the acute stage the cold applications should be made continuously from one to four hours at a time, repeated three times daily. Pledgets of linen of three or four thicknesses or little pads of absorbent cotton moistened and laid on a cake of ice may be employed. The pads should not be heavy, as pressure may induce sloughing of the cornea. The pledgets should be changed as soon as warm, that is every one or two minutes. The treatment with cold should be discontinued when the swelling of the lids subsides. Third, The destruction of the micro-organism so far as is possible, by the application of a germicide to the surface of the conjunctiva. In the selection of remedies for this purpose there are some things to bear in mind. The remedy must not be so irritating that it will increase the inflammatory process. It should not destroy the tissue cells. There are numbers of remedies to choose from, nitrate of silver 0.5 per cent. to 2 per cent.; bichloride of mercury 1-5,000; protargol 20 to 40 per cent.; formalin 1-3,000. The experienced physician usually resorts to the use of the nitrate of silver, making the application once a day. It is my custom to employ a 1 per cent. solution and to apply it to the entire surface of the conjunctiva once a day, after having carefully removed all of the secretion from the conjunctiva. The use of the silver is begun as soon as the case comes under observation, unless the lid are so swollen and tense that they cannot be everted without using a great deal of force. The presence of a pseudo-membrane on the surface of the palpebral conjunctiva does not contra-indicate the use of the remedy. This application should be continued once daily until the discharge from the conjunctiva ceases. Should the cornea become involved the sulphate of atropia, 0.5 per cent. solution, may be instilled twice daily.

Fourth, constitutional treatment, which should be directed to the general improvement of the child's condition.

Treated in the manner outlined, ophthalmia neonatorum seldom produces impairment of vision. Of the cases that have come before him, the writer does not remember a single instance of loss of vision when the cornea was intact at the time that the patient was put under treatment. This is not the experience of all. There are undoubtedly some cases in which involvement of the cornea cannot be avoided, but they, fortunately, are few in number. Surgical measures are unnecessary.

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THE PROFESSIONAL RELATIONS OF PPYSICIANS.—In another column will be found a letter from a correspondent calling attention to a professional failing in which probably many of us have been the aggressors and most of us at times the victims. It is natural for the surgeon, seeing a patient long after an injury, aided by all the advantages which hindsight affords to the diagnostician, to think that his fellow practitioner who had the case in charge has erred in his diagnosis and treatment.

Possibly he knows his colleague for a man of brief experience, possibly he gives way to a feeling of self-congratulation that a professional rival whose skill he has hitherto secretly envied should be capable of such a palpable blunder. But he certainly can know little of the circumstances originally in the case, of the limited time for diagnosis and the limited facilities for treatment. Above all he can know nothing about the multitude of factors presented by the patient; of failure to grant the necessary observations or of ignorance and prejudice or half-way obedience of orders.

But one thing he can count on with certainty, and the more shame to us as a profession that it is so, and that is the widespread popular conception that the surest way to a doctor's interest is a skillful disparagement of his predecessor. How easy it is even by a lifted eyebrow and a discreet silence, to make a bid for that personal faith that we all covet from our patients.

It is not right nor does it pay. We ourselves may be the next sufferers. Many a physician in the small community takes no vacation lest he find his reputation in tatters on his return. This it is that leads to the cold bow of professional rivals and the readiness to believe the tattle retailed by partisan patients. Far be it from us to hint that patients should be made to suffer to suit our standards of professional courtesy, but before we criticise let us have more than hearsay knowledge and let us be certain that in our criticism there is no taint of self seeking.

* * *

The remedy for this spirit of professional antagonism and rivalry is to be found in the closer personal acquaintance of physicians especially in the smaller places. Perhaps the pleasantest part of the physician's life aside from the happiness which comes from the daily improvement of his patients comes from the daily intercourse with colleagues in the hospital and dispensary; the acquisition of knowledge from his elders, and the winning and yielding of the respect which always comes from honest and unselfish work. The same pleasure ought to be derived in small places from small societies meeting informally and often. In such an atmosphere distrust and suspicion do not thrive so readily and life would be much better worth the living.

* * *

NEW COUNTY ASSOCIATIONS.—The formation of such societies which may be noted in every number of the JOURNAL is to us one of the most encouraging things about the growth of the New York State Medical Association and the same tendency can be seen in medical journals all over this country.

"The Association met at the house of Dr. Blank." This is as it should be, and what is better yet we have several times noted the tendency to have the families of physicians brought into closer contact so that the meetings may have a social as well as professional atmosphere.

These associations cannot fail to make professional life in such places broader and pleasanter and its influence for the good of the community stronger and less open to suspicion.

* * *

MEDICAL UNIVERSITY EXTENSION.—Another

feature of the recent suggestion has seemed to us to promise great benefit and we expect to see it extensively adopted—a sort of a Medical University extension as it were. Prominent physicians announce to the Secretary of the State Association their readiness to deliver addresses on special subjects at meetings of the County and Branch Associations.

In this way it is possible for any society to have professional problems discussed before it by one or more men of perhaps national reputation and both young and old are stimulated by the personal contact. The meetings may be clinical, the members producing such patients as are willing to submit to examination and discussion. We notice in the columns of the *Pennsylvania Medical Journal* a long list of prominent names subject to such call and the number of such invitations should be a very good test of a man's standing in his profession.

We hope that such a list may be opened in this State this fall and are confident it would prove of great value.

* * *

Compulsory Vaccination.—At a meeting of the New York County Medical Association held last spring a committee was appointed "to secure compulsory vaccination in the State of New York." We understand that the committee contemplates making a report at the October meeting of the County Association with the idea that it be later laid before the State Medical Association for consideration. While no fixed plan of action has been decided on, the committee has begun an investigation of the character and working of compulsory vaccination laws in various foreign countries as well as the less arbitrary laws in force in various parts of our own. At the October meeting of the State Association the physicians of the State will be asked whether or not they favor a compulsory law and what the limitations of such a law should be.

* * *

Of course, no disinterested observer comparing the almost entire freedom from smallpox enjoyed by France and Germany under such laws, with the disgraceful condition of affairs in our own country during the past yyear, would hesitate to say that compulsory vaccination furnishes us with the only means of stamping out an epidemic which has been both widespread and long continued. Our own experience, too, shows without question the beneficial results of even such ineffectual ordinances as we now have, both as a means of protection to the community and in modifying the severity of the disease.

But after all the question before us as an association is not whether universal vaccination is desirable or not, for on that we are all agreed, but whether the medical profession either ought or can afford to be the sole champion of a measure which will be regarded by a very large minority of the community as an interference with personal liberty.

The position we occupy is a peculiar one. As individuals we have from time immemorial had the confidence of the great majority of the people, but of late years at least, our influence as a profession has certainly been on the wane.

Public confidence in our honesty as a class is the foundation of this influence and it should be one of the great aims of the profession to re-establish it by avoiding every act which can possibly be twisted into the appearance of self interest.

The profession, fighting Christian Science or Osteopathy on the ground that it has exclusive rights to all the emoluments of the healing art, is an object of unconcern if not of ridicule to the whole community. But if we base our opposition on grounds of public policy it is much more creditable to us as a profession and also much more likely to win public support.

* * *

And so in this matter of compulsory vaccination we must be careful of our stand or we shall still further injure our already damaged prestige in the community.

Our action should be purely an advisory one. We can fittingly call attention to the benefits of such an act on the health of the community, as proven both here and abroad, for on this our testimony is that of experts; but whether such legislation would or would not be an interference with personal liberty is not for us to presume to decide.

If such an act is passed on our initiative the profession will have won the enmity of a vast number who resent governmental interference, without making a single new friend. We shall have made a host of enemies in a cause in which we have no personal stake beyond that of good citizens and these enemies will surely rise to vex us on questions where our personal concern is greater.

The influence of the expert witness is in the inverse ratio of his appearance of partisanship and in this question we must appear as experts and not as partisans.

* * *

Syphilis Without a Chancre.—There has always been more or less discussion among syphilographers as to the exact time when syphilis cases to be local and becomes constitutional, and the general consensus of opinion has been that while the secretions from the initial lesion were dangerous at any period, the risk of contamination in other ways was to say the least a limited one till secondary lesions had attested the generalization of the disease. Furthermore it has always been held that in the acquired type the occurrence of secondary lesions was proof positive of the existence somewhere of a primary lesion at the seat of inoculation, though it may have been undiscovered. Dr. L. Jullien (*Medical Press*, July 3d), makes a report which sheds considerable light on these points. A surgeon and his assistant in operating on a woman

who, unknown to them, had a genital chancre but no secondaries, were both wounded in the forefinger by a needle used in closing an incision in the neighborhood of the breast. Nine days afterward the patient developed secondary lesions which led to the discovery of the chancre. Twenty-six days after the operation the surgeon had a chill and some temperature with evidences of inflammation in the infected finger and on the thirtieth day a macular eruption appeared, which was later followed by the other signs of secondary syphilis. The assistant showed signs of general infection about the thirtieth day followed by eruption in a few days. Neither one had any evidence of a chancre on the finger nor any enlargement of glands prior to the eruption. Jullien's conclusions are that these cases prove the presence of the virus in the blood of the woman at least nine days before her general eruption and that where the inoculation takes place into the blood itself, the development of the chancre and the lymphatic involvement which generally precedes systemic infection are not necessary. It is seldom that such complete testimony can be obtained as has here resulted from the accidental infection of two surgeons from the same subject and in the same location under the care of as astute an observer as Jullien.

* * *

Why Men Are Bald.—It would seem as though, with the lapse of time, the ingenuity of scientists trying to discover a satisfactory theory for masculine baldness would be exhausted, but evidently the end is not yet. Several years ago it was announced that men grew bald because their hats by pressure deprived the scalp of part of its blood supply. This not meeting all the conditions, another investigator announced that men by shaving their beards caused an increased growth there and that, as there was not enough hair-growing material to go around, the scalp suffered. Now comes Dr. Delos Parker in the *Record* of July 13th, and announces a new and ingenious solution. It seems that expired air contains organic matter which, if retained in the lungs and absorbed, is inimical to the growth of hair. This poison he calls trichotoxicon and he demonstrates its toxicity on numerous animals. Men, being abdominal breathers and not prone to empty their apical air cells, are especially subject to alopecia, while women, whose respiration is costal, develop little trichotoxicon and have luxuriant hair. The subjects of phthisis, in whose consolidated cells the contaminated air cannot stagnate, are said to be notably free from baldness, while in the adults of both sexes, as fixation of the ribs comes on, the tendency to alopecia increases in a direct proportion.

To show how original minds often reach the same result we append a clipping from the *London Mail*, boldly headed "Hope for the Bald."

"The use of gas to make the hair grow is one of the latest medical discoveries. The gas employed is oxygen. A large cap fits tightly round the head, and is supplied with oxygen from a bag which is slung over the patient's shoulders. It is worn for a few hours every day, and even in cases of absolute baldness is said to produce a more or less luxuriant crop of hair. The discovery was made at the Oxygen Hospital, Fitzroy Square, an institution of which the Princess Louise is patron."

* * *

Prof. Koch on Tuberculosis.—One of the most encouraging signs of the times is the widespread interest in medical topics among the laity as indicated by the amount of space devoted to them in the public press, and the increasing accuracy of the reports. Under such circumstances the recent declarations of Koch, at the British Congress on Tuberculosis, excited widespread interest. Briefly, his opinions, based on a rather short course of experiment, are these: That bovine tuberculosis and human tuberculosis are radically different diseases, and that cattle cannot be infected from human beings. Of the converse, that human beings cannot be infected from animals, he could of course produce no experimental proof, but he declared himself convinced, and cited in support of his conclusions a good many facts of common observation. Of course, if these views are correct all the money spent by the public to restrict the spread of animal tuberculosis has been largely wasted. It is a pity that a man whose opinion carries such public weight should make such definite statements without a far greater amount of experimental proof, and we are glad to see that this was the position taken by the conservative judgment of the congress. The proof of a negative proposition should always be subject to careful scrutiny. At the same time, we think that only good can come from the widespread publication of the fact so reiterated at the congress, that consumption is chiefly propagated through the sputum. We can also enjoy the many complimentary notices by Koch and others of the great advances made in this country in the public control of tuberculosis.

* * *

Kansas State Society.—Imitation is said to be the sincerest flattery, and we are much pleased to note that in its plan of reorganization the Kansas Society has seen fit to adopt, without any important modification, the one devised for our own State. Further than this it has decided to substitute for the annual volume of transactions the handsome *Journal of the Kansas State Medical Society*.

* * *

Westchester County Association.—A special meeting of this association was held in White Plains on August 1st. A resolution adopting by-laws in conformity with those of the New York State Association was passed, and it was further decided to hold five stated meetings during the year.

Dr. Edward S. Brush has been nominated by the Republican party for Mayor of Mount Vernon, N. Y. Dr. Brush was the first Mayor the city of Mount Vernon ever had. He was elected in 1892, and there has been a general demand for his renomination ever since, but he has always declined.

* * *

Fees in Life Insurance.—There has been a good deal of professional heart-burning of recent years over the tendency of even the leading life insurance companies to materially diminish the fees for medical examination. Less noticed, perhaps, have been the complaints of insurance officials, that medical examiners as a class utterly fail to repay their cost to the companies, since the death-rate of insured persons is just about the same as that of the community in which they live, and not materially less than that in the class which, by reason of various disabilities, is considered extra hazardous. The great change in the character of life insurance is responsible for this. There was a time when man insured his life to protect his family, and because he thought his prospect of life poorer than the average. The more serious his condition the more speedily he betook himself to life insurance, and the very solvency of the company depended on the ability of the examiner to weed out the bad risks. But now-a-days the bulk of people insure, not for protection, but for investment, with the not unfounded hope of living to enjoy the results of their investment after a definite period. As a result the majority of the insured are conscious of health and represent the average health of the community. Under such circumstances the utility of the medical examiner is greatly restricted, and, though his services can never be entirely dispensed with, it is certain to be much harder for him to make his value evident.

The most certain way of accomplishing this is by the more careful consideration of each risk by itself, not adjudging it good or bad by any fixed rule, but only after a careful weighing of circumstances. It seems too simple for argument that a man with a good heart stands a better chance of long life than one with endocarditis, and yet it not infrequently happens that the latter, conscious of his disability can, by extra care, more than offset the seeming advantage of the first.

And so with the whole of those classed as so-called "impaired lives." Some of them will prove better risks than healthy lives; as a class they are ready to insure, and the examiner who can convince his company of his ability to estimate the relative vitality of this class will have no occasion to complain of any lack of financial appreciation.

* * *

Women are to be admitted at the Rush Medical College, Chicago, after October 1st, for the first two years' work. This action is said to be due to the fact that the first two years of the medical work will be done hereafter at the University of Chicago, and the university insists that equal freedom be given to women and men. That women will be permitted to enter the last two years of the college work and receive a degree is said to be the next step which will be taken in the near future, or so soon as the women who now enter are ready for the two last years.

* * *

State Laboratory at Albany.—It is announced that the State Commissioner of Health has secured a building in Albany for the establishment of a State Laboratory, and that Dr. H. D. Pease, of the Sheffield Scientific School has been appointed director.

The laboratory is intended to supply to health officers throughou the State the same facilties for the investigation, diagnosis and treatment of disease, that are afforded by the Health Department of the city of New York. The various State institutions and municipalities will be supplied with the various antitoxins free of cost, and for the manufacture of these a commodious animal house with fifteen horses has been provided. We trust the expenditure of the State money may be as popular and profitable in the community as it has proven for the past two or three years, in the neighboring State of Vermont, where the efficiency of the local health officers has been notably increased by dissemination of scientific aid through the laboratory.

We fail to see any good reason why the laboratory should engage in the manufacture of medical supplies, for we believe it is an established fact that public business is always less economically managed than private, and that only well demonstrated necessity justifies competition on the part of the State. But we have no idea that the enterprise was established by our accomplished Commissioner of Health without a thorough canvass of its advantages.

* * *

Mississippi Valley Medical Association.—The next annual meeting of the Mississippi Valley Medical Association, under the presidency of Dr. A. H. Cordier of Kansas City, bids fair to eclipse all previous ones in attendance as well as scientific merit.

Unusual railroad rates have been obtained for this meeting—a one-fare rate by way of Cleveland, which will enable those taking advantage of these rates to obtain an extension of tickets to October 8th for attendance upon the Buffalo Exposition. A one-and-a-third fare rate on the certificate plan will be in effect, via Detroit, Sandusky, and Toledo, with extension of return limit for three days after the meeting.

Put-in-Bay is an ideal place of meeting, the Hotel Victory a magnificent meeting site.

The address in medicine will be made by Dr. Frank Billings of Chicago, the address in surgery by Dr. Reginald Sayre of New York City, and a program of interest has been prepared.

The annual banquet will be held on the evening of the first day, September 12th.

Correspondence.

ENCOURAGEMENT OF BLACKMAILERS.

To the Editor of the NEW YORK STATE JOURNAL OF MEDICINE:

DEAR SIR: I note under correspondence in the JOURNAL of July a letter entitled "Protection Against Blackmailers" by Dr. J. T. Lewis; and I wish to draw your attention, and if deemed of sufficient interest now that this subject is about to be brought to the consideration of the State Association at its next annual meeting in October, for your editorial remarks upon a phase of this subject *within* the profession not sufficiently taken into general consideration—and that is one of the reasons why blackmailers find incentives for their motives, viz.: the careless criticisms of men of standing, often in hospital clinics, of bad results from operations and treatments **without** the knowledge of the contributing factors wholly in the patients' hands which the physician in charge was powerless to control or prevent. These remarks made in the presence of the patients or friends are carried to "the impecunious and unscrupulous lawyer," and he urges a suit and hence the "blackmail." If we as charitable critics were less given to "envy, jealousy, and malice" towards our professional brethren, fewer of these things would happen. There is no moral law that is so persistently and ignominiously broken to-day, as our code of ethics by members of our profession one towards another. Mr. Editor, this is a field for true missionary work—domestic and not foreign missionary efforts more particularly. Yours truly,

July 14, 1901. S. W. S. TOMS.

THE STATE JOURNAL ABROAD.

New York, August 1st, 1901.

Editor NEW YORK STATE JOURNAL OF MEDICINE:

It may perhaps please you, even if you consider it only as a curiosity, to see that Athenian papers have mentioned my little correspondence published in Nos. 4 and 6 of the NEW YORK STATE JOURNAL OF MEDICINE.

The paragraph in the enclosed number of the καιροι translated, reads:

The Greek Language and Dr. Rose. The true friend of the Greeks, Dr. Rose, the New York physician, whose little daughter, who is studying now at the Arsakeion (and who passed her examination very successfully a few days ago) is working hard and with success for the purpose of introducing to the foreign medical onomatology many really pure Greek words instead of the Greco-Latin, or supposed Greek. Thus lately in the NEW YORK STATE JOURNAL OF MEDICINE he stigmatizes the abuse of foreign lexicographers who make use of words which are amphibious, or of dual nature or hermaphrodite or hybrid, makes a distinction between nosology and pathology, recommends the word ilithiotis, bothicomia, epipephycitis and many others in the interest of science.

It is with great satisfaction that I wish to inform you that in the *Deutsche Medicinische Presse,* 1901, No. 13, there appeared a correspondence of mine similar to the one of the NEW YORK STATE MEDICAL JOURNAL, in which I reproached the Germans in general for their wrongdoing towards the Greeks and their language. My satisfaction is great because this journal is published in *Berlin.*

The *Post-Graduate* of July brings the enumeration of attentions my modest labors have received here and abroad.

Now the question of Greek in our onomatology will, I am certain, be taken up seriously by some representative medical society. I am working constantly to accomplish this.

Some New York medical periodical will bring a selection of *supposed* Greek words like psychopathia, psychiatria and some really, thoroughly, silly juvenile words like anopheles. I am sorry Iagos and Medicus did not come out any more. Why don't they attack me?

Most sincerely yours, A. ROSE.

Original Articles.

THE TECHNIC OF ASEPTIC ABDOMINAL OPERATIONS.*

BY PARKER SYMS, M.D.,
New York.

ABOUT twenty years ago surgery in this country was being revolutionized by the introduction of antiseptic measures, and as a further step in evolution a great advance has been made by the employment of aseptic methods as distinguished from the antiseptic, but it is surprising how few operators actually employ the former. When one's work is so systematized, and the corps of assistants is so trained as to make it practicable, and successful, asepsis is the ideal method and the one which should always be employed in cases where infection does not already exist.

The employment of chemical disinfectants has a decidedly deleterious effect upon the tissues with which they come in contact, and they tend to weaken the power to resist infection, and also they greatly interfere with the process of healing. Chemical disinfectants also irritate the hands of the operator and his assistant, making the skin rough and uneven, so that it becomes, after a while, almost impossible to properly cleanse the hands, and when that is the case, it will be difficult to obtain asepsis unless one resorts to the use of rubber gloves.

After having a very thorough training under some of our masters in antiseptic surgery, it was the fortune of the author to have worked as assistant to Dr. Paul Outerbridge for ten years, in a very active hospital service. Dr. Outerbridge employed no antiseptics whatever, excepting green soap and alcohol, and the excellence of his results soon taught the author the superiority of this method as compared with the one more generally in vogue.

It is the author's conviction that asepsis should be employed in operating upon all aseptic cases, and that antiseptics should be employed only with the idea of disinfecting areas already invaded by pathogenic bacteria. There is no question that the utmost care must be employed in order to obtain success in this undertaking. If one's technique or method is faulty the results will be disastrous, and it is my rule to employ antiseptics when I am operating with strange assistants, or in any but the best conditions as far as environments, etc., are concerned.

Successful aseptic work depends upon having a well-trained corps of assistants, a thoroughly systematized method of procedure, with the requisite appliances and materials for the work. It means that the field of operation, the hands of the operator and assistants, the instruments and all materials which come in contact with the wound shall be so thoroughly sterilized as to be

*Read at the Seventeenth Annual Meeting of the Fifth District Branch Association, held at New York, May 7, 1901.

innocuous, and that from the time the operation is begun until it is completed no contamination shall take place. This can best be accomplished by the utmost simplicity of method; perhaps it will be best for the author to describe in detail his own manner of work in this particular.

Preparation of Operation Field.—The part to be operated upon is shaved and thoroughly washed with soap and water for at least five minutes. A so-called poultice of green soap paste is applied for twelve hours previous to the time of operation. At the time of operation this green soap poultice is removed, the skin is again thoroughly scrubbed with soap and water, and then with sterilized water, and finally with ether, to remove the remaining grease and to dry the skin. The region is surrounded by sterilized towels, and it is not to be touched except for some necessary purpose, and then as little as possible.

Preparation of the Hands.—The hands are first washed in the ordinary manner, after which the nails are thoroughly cleaned with a knife; then the hands are thoroughly washed with green soap and a sterilized scrubbing-brush, using repeated changes of water for this purpose, or constantly running water from the hot faucet. This washing must extend up to the elbow, and should be continued for five minutes by the clock. Finally the hands are rinsed in clear, sterilized water, and from then on they should touch absolutely nothing except for a definite purpose, and, of course, they should touch nothing that is not sterilized. An excellent habit for an operator to acquire is to hold one hand in the other while waiting; he should not put them on his lap on the theory that his gown is sterilized and can do no harm, nor should he put them on a towel, table or anywhere else, unless he has some purpose in so doing.

Sterilization of Towels.—The towels are boiled in small packages of not more than a dozen each, for one hour, and are then wrung out in bichloride solution, $^1/_{2000}$. The reason for using this bichloride solution is because, if you put a wet, sterilized towel on a table or blanket, or anything of that sort, which is not sterilized, it at once becomes contaminated; this is not true of the untouched side of a dry sterilized towel.

Sterilization of Sponges.—In this paper the name "sponge" is applied to gauze pads which are hemmed or folded so as to have no frayed edges. These sponges are put in packs of tens and are sterilized by steam at a temperature of 212° F., one hour each for three successive days, having previously been wrapped in a thick towel, and they are finally sterilized for one hour on the day of operation.

Sterilization of Dishes, Basins, etc.—They are thoroughly washed with soap and water to remove all apparent dirt, and then they are sterilized by boiling for at least one-half hour.

Sterilization of Instruments.—The instruments are placed in copper trays and boiled for ten minutes in a weak solution of carbonate of soda. They are not removed from these trays except as they are used. It is found advisable to properly sort the instruments and use several trays, so as to be able to get a desired instrument with as little handling as possible.

Method of Sponging.—No fluids should be employed in the wound; the sponging should be done with absolutely dry wipes; these must not be rubbed over the bleeding surface, but simply pressed down gently and held long enough to absorb the free blood, and then lifted directly from the surface. Rubbing irritates the tissues and stimulates the bleeding. Wet sponging increases bleeding by interfering with coagulation of the blood. A sponge should be discarded as soon as it is saturated with blood, and a fresh one used. It is important that there should be no oozing of blood when the wound is closed.

Avoid Handling.—This is perhaps one of the most important rules in operative surgery. The instruments, sponges, etc., should be handled as little as possible. Never use a sponge that has been handed to you by a nurse or an assistant; take it directly from its receptacle. Do not take up a sponge in your left hand and then pass it to your right hand for use. Do not allow your instruments to pass through the hands of several assistants. Have your sutures and ligatures held in forceps and not in fingers when they are being passed to you by the assistant. Keep your own fingers and those of your assistants out of the wound as much as possible. *Avoid the use of fluids.* Remember that we are now discussing an operation in an aseptic field, and that there is absolutely nothing to be gained by washing such a region. There is nothing deleterious to be washed out of it, but it is quite possible that fluid introduced may import some septic material. After having sutured the wound do not wash the skin surface over it. You can not wash anything out of a sutured wound, but you may wash something into it.

Method of Dressing.—After having closed the abdominal wound, apply flat pads of dry, sterilized gauze. Do not put on loose bunches of gauze, and do not use moist, antiseptic gauze. Fasten your gauze pads with ample adhesive plaster straps; this makes a firm dressing, acting as a sort of splint to keep the part at rest. Do not dress your wound until the eighth day, unless there is some good indication for so doing.

In closing, the author would say that he has employed essentially the method above described for the last ten years. During that time he has lost no patient from operation infection, and he has had very rarely even a stitch abscess.

Of course, when operating on infected cases the procedure must be modified, and when operating upon the intestine, gall bladder, stomach, etc., so that there might be contamination from their contents, the author makes free use of peroxide of hydrogen as a disinfectant.

50 West Forty-seventh street.

PROGRESSIVE PERNICIOUS ANEMIA.*

BY ALFRED STENGEL, M.D.,
Of Philadelphia;
Professor of Clinical Medicine in the University of Pennsylvania.

WITHIN the limits of this discussion, I cannot hope to consider in every detail the subject that has been assigned to me. Fortunately, there are certain aspects of this question which at the present day require no discussion, being so universally recognized as to be matters of common knowledge. For example, the symptomatology of the disease is so uniform that little has been added to the knowledge of it since the earliest descriptions of Addison. Practically the only exceptions of consequence are the minuter knowledge of the gastric manifestations, the recognition of certain intraocular signs and symptoms, and the group of nervous manifestations referable to the peripheral nerves and spinal cord that have been lately studied.

What shall be considered as a practical definition of this disease? Addison regarded it as a form of progressive anemia without definite cause, and Biermer practically agreed with him. At the present time the majority of observers are disposed to include in the category of pernicious anemia cases which are not progressive in character, but, on the contrary, are distinctly relapsing, and cases in which the etiology is more or less clear. Looking at the subject from another point of view, it may be recalled that some years ago the disease was described as primary when it was thought that the essential feature was a disturbance of the blood-making organs, as the result of which the integrity of the blood suffered deterioration. In view of the observations of Quincke, Hunter and others, this view is untenable, and the abnormal condition of the bone-marrow, first discovered by Pepper in 1872 and since regarded as the most constant lesion of the disease, is quite generally looked upon as secondary and not characteristic. It is known that in all forms of destruction of the blood, the bone-marrow and the other lymphadenoid tissues hypertrophy in the attempt to compensate for the loss of corpuscles. This leads to the production of new blood cells, more or less immature, and it has been the view of many that the processes in the bone-marrow in pernicious anemia, while perhaps more active and at the same time productive of less mature corpuscles, because more rapidly evolved, are otherwise identical with the processes that occur in all forms of cachexia in which the bone-marrow is called upon to increase its normal activity. Ehrlich and some of his pupils have maintained, on the contrary, that there is a distinct form of activity in the marrow in pernicious anemia to which he would give the term megaloblastic, and that this does not occur in other forms of anemia or cachexia. The only answer that can be made to this is that Ehrlich's view rests upon no scientific demonstration excepting that a certain form of nucleated red cell is common in pernicious anemia and rare in other forms of anemia or cachexia.

In the light of our present evidence, it is certain that the disease under discussion results from rapid destruction of red blood-corpuscles for which the blood-making functions do not suffice to compensate. Moreover, it is practically settled that the source of the hemolytic agents is the gastrointestinal tract. In the case of pernicious anemia resulting from the presence of *bothriocephalus latus* in the intestines or from invasion of this tract by other parasites, there is certainly little doubt of the operation of toxic agents; while in more obscure cases the discovery of atrophic conditions of the mucosa, ulcerations, or cancer, makes it seem likely that similar poisons are generated and occasion the blood-destruction that initiates the disease. If these considerations are admitted, and it may be said with little reservation that they are established, pernicious anemia is a secondary condition and not a disease. It remains, however, to note this important fact: Not every subject having *bothriocephalus* in his intestines develops pernicious anemia, and the disease does not invariably follow upon the grave gastrointestinal conditions alluded to. It is possible that in certain cases a special sort of infection may be superadded to the primary conditions or that the hemogenetic function of the bone-marrow in certain persons is deficient or perverted. The latter seems to me the more likely view because, in the first place, no definite proof of a coincident infection has been discovered, and, in the second place, the characters of the blood in pernicious anemia suggest a profound disturbance of hemogenesis.

There are still a few authorities who believe or assert that pernicious anemia is a primary disease and that there is no such thing as secondary pernicious anemia. The evidence in favor of this position is entirely negative and wholly inadequate A careful review of established facts warrants no other conclusion than that which I had occasion to state in a paper on the "Treatment of Pernicious Anemia" in 1896 in the following words: "As far as our knowledge of the disease extends to-day, it is but a symptomatic disorder of the blood and not a disease in the strict sense. It matters not whether a cause is discovered or not; whether there be gastrointestinal lesions, parasites in the intestines, pregnancy or parturition, or no discoverable cause, the resulting condition of the blood, the symptoms, the course and tendency to fatal termination, and the general post-mortem lesions are the same, and I can therefore see no justification for setting apart a group of cases as true Addisonian pernicious anemia, and calling all those in which causes are found severe secondary anemia." Practically, the same view is expressed by Ehrlich in his monograph published in 1900 (Ehrlich & Lazarus, Nothnagel's Series), in these words: "We must, however, always remember that we are not dealing with a disease *sui gen-*

* Third paper read at the Seventeenth Annual Meeting of the New York State Medical Association in the Symposium on the Blood.

cris, but with a frequently recurring symptom-complex which may accompany a variety of diseases." In consequence of these views it is necessary to look upon pernicious anemia as a secondary disorder with a characteristic clinical course and with certain peculiar blood changes.

I may not consume time by detailing the clinical features of the disease, but will refer only to a quotation from Addison's monograph to which Pepper first alluded in his important paper published in 1872. Addison says: "For a long period I had from time to time met with a very remarkable form of general anemia occurring without any discoverable cause whatever—cases in which there had been no previous loss of blood, no exhausting diarrhea, no chlorosis, no purpura, no renal, splenic, miasmatic, glandular, strumous or malignant disease." And further on: "It makes its approach in so slow and insidious a manner that the patient can hardly fix a date to the earliest feeling of that languor which is shortly to become so extreme. The countenance gets pale, the whites of the eyes become pearly, the general frame flabby rather than wasted, the pulse perhaps large, but remarkably soft and compressible, and occasionally with a slight jerk, especially under the slightest excitement. There is an increasing indisposition to exertion, with an uncomfortable feeling of faintness or breathlessness on attempting it; the heart is readily made to palpitate; the whole surface of the body presents a blanched, smooth and waxy appearance; the lips, tongue and gums seem bloodless, the flabbiness of the solids increases, the appetite fails, extreme languor and faintness supervene; breathlessness and palpitations are produced by the most trifling exertion or emotion; some slight edema is probably perceived about the ankles; the debility becomes extreme, the patient can no longer rise from bed, the mind occasionally wanders, he falls into a prostrate and half-torpid state, and at length expires; nevertheless, to the very last, and after a sickness of several months' duration, the bulkiness of the general frame and the amount of obesity often present a most striking contrast to the failure and exhaustion observable in every other respect." It must be added to this description that irregular and occasionally continued fever is a frequent symptom, that gastric and intestinal symptoms, such as vomiting and diarrhea, are common, and that ophthalmic examinations usually reveal hemorrhages in the retina. With these brief statements, I must leave the subject of symptomatology to proceed with that of the hematological features.

Examination of the blood discloses several more or less characteristic abnormalities: (1) The number of red blood-corpuscles is reduced below the number seen in any other condition; (2) the red corpuscles present varied and marked alterations of shape, size, character, and staining relations; (3) the hemoglobin, while greatly reduced in amount, is often in excess relatively to the number of the corpuscles and is very rarely diminished more than the corpuscles, the "globular richesse" of Hayem therefore being usually at par or plus and very rarely much below par; (4) the total number of leucocytes is usually reduced and the mononuclear elements, especially the smaller forms, are nearly always relatively more numerous than the polymorphous cells or, in other words, the total leucocytic reduction occurs at the expense of the polymorphous leucocytes.

Let me now refer in detail, but briefly, to some of these facts: The number of red corpuscles and the percentage of hemoglobin have been regarded as most essential factors in diagnosis by Hayem and Laache, while Ehrlich has sought to minimize their importance as compared with his own methods of morphological study of the cells. A strictly impartial student must admit that a continuation of the two methods is necessary to a certain diagnosis. I have seen a few cases in which a sole reliance upon the enumeration of the red cells and the estimation of the hemoglobin would have led to erroneous conclusions, and have, on the other hand, found some in which the morphological diagnosis would have been uncertain. As a result of my experience, I would conclude that there are very few cases, if any, of conditions other than pernicious anemia in which the number of corpuscles is below 1,500,000 and the hemoglobin approximately equal in percentage to that of the corpuscles. There are cases of cancerous cachexia and post-hemorrhagic anemia in which such profound reduction of the number of corpuscles does occur, but in these the amount of hemoglobin is reduced to even greater degrees. Looking at the other side of the question, we may regard as fairly established the following facts: (1) Poikilocytosis reaches its highest grades in pernicious anemia; (2) macrocytes and an average excess in size of the red corpuscles are more common in this than in any other disease; (3) polychromatophilia and macrocytosis are more striking in this disease than in any other; (4) megaloblasts are more abundant and more regularly present in pernicious anemia than in other forms of anemia; and (5) a combination of all these factors practically assures the diagnosis. It cannot, however, be asserted that any one of these conditions makes the diagnosis certain, and it is no longer regarded as proper to establish the diagnosis upon any one of these factors with the possible exception of the presence of megaloblasts. Ehrlich states that the "positive demonstration of undoubted megaloblasts in combination with the presence in abundance of megalocytes is indicative of pernicious anemia, since these conditions proclaim without question that the embryonal type of blood-formation has superseded the adult variety, even if but limited areas of the marrow are so affected." This statement is singularly elastic. Its acceptance requires agreement upon the question of what constitutes an "undoubted" (unzweifelhaft) megaloblast, and what must be regarded as "abundance" (reichlicherem Auftre-

ten) of megalocytes. Taking it, however, at its most rigid interpretation the statement is erroneous. I have seen two cases of leukemia which during an interval of a leucocytosis must have been regarded as instances of pernicious anemia according to Ehrlich's view, and several other cases of profound anemia in childhood would have been similarly diagnosed. Of course, I am prepared to admit that Ehrlich's statement may be accepted for the great majority of cases, but would insist that the exceptions be admitted and the statement be less dogmatic.

In less definite fashion, Ehrlich, and those who have followed him, would make it appear that a preponderance of large red corpuscles (megalocytes) and the predominance of megaloblasts, when there are both normoblasts and megaloblasts, are necessary conditions to establish the diagnosis of pernicious anemia. This view also seems to me unwarranted. I have seen cases of what in every other respect must have been regarded as progressive pernicious anemia (and one at least in which autopsy confirmed the diagnosis) in which during the entire clinical course of the disease repeated examinations had discovered abundant normoblasts with comparatively few megaloblasts. It must be remembered in connection with this statement that the definition of a megaloblast is uncertain and that the criterion by which Ehrlich has sought to classify the erythroblast, namely, the size and morphological properties of the nucleus, is not admitted by others. According to this mode of differentiation many of the cells which I have habitually regarded as normoblasts would naturally fall into Ehrlich's group of megaloblasts. It is difficult on this account to reach any practical conclusions as to the validity of his views, but it is certain that in the cases to which I have alluded normoblasts outnumbered megaloblasts, even with the strictest interpretation of Ehrlich's definition.

For my own part, I do not pretend to arrive at the diagnosis of this disease by any one condition or by any limited number of conditions. It is as necessary in the case of pernicious anemia as in that of any other systematic disorder to take into account the clinical course and history as well as the results of special laboratory investigations. There is a disposition in some quarters to withhold the diagnosis of pernicious anemia except in such cases as present the blood-count of a most extreme anemia, while, on the other hand, some others are inclined to make the diagnosis when the blood-count and the general condition of the patient are seemingly but slightly affected and when few large megalocytes and possibly megaloblasts have been discovered. Neither of these methods of diagnosis seems to me judicious. Pernicious anemia can undoubtedly be recognized at stages prior to the extreme reduction in the number of corpuscles and when the patient is still in a comparatively good state of health, and, in some instances, during intervals of apparent cure the blood-picture and the physical examination reveal sufficient evidence to justify the diagnosis, although the patient is then seen for the first time. While this is true, I believe that it is unwise to hazard the diagnosis in cases in which the blood-count is but slightly altered merely upon the discovery of a few abnormal cells, even of such cells as I have referred to—megaloblasts. I am inclined to stand upon the opinion I expressed in a paper on "Nature and Diagnosis of the Disease," read before the Philadelphia County Medical Society in May, 1894, and I would quote from that paper as follows:

"My own observation leads me to regard as pernicious anemia any case presenting suspicious clinical features in which the red corpuscles number less than 1,500,000 per cubic millimeter, and in which the hemoglobin shows about the same proportionate reduction. The diagnosis becomes certain in cases in which the hemoglobin is relatively in excess, and in which great alteration in the size and shape of the red corpuscles and the presence of large nucleated red corpuscles are observed. In addition to these characters of the blood, pernicious anemia presents a train of clinical manifestations scarcely to be mistaken when present in their typical form."

I cannot dwell further upon the matter of diagnosis and wish now to pass on to some considerations regarding prognosis. I have not seen a patient with pernicious anemia who has been cured. I doubt the diagnosis in the case of Hayem, the only one in the literature which may, according to Ehrlich, be looked upon as one of permanent cure of the disease. One of my cases has been under my observation since 1892 and is still in good health. Several other cases in my experience have remained in fair health for as much as four or five years, but I have never seen nor known of a case in which it could be reasonably supposed that the disease was cured.

When the prognosis *quoad vitam* is hopeless, the outlook *quoad valetudinem* is often quite hopeful. Many cases of pernicious anemia may improve spontaneously from time time, and the intervals of comparative freedom from discomfort may be as long as several months or even a year or more. Medicinal treatment unquestionably aids in securing this favorable outcome, and when a period of improvement has set in the continued use of proper remedies secures for the patient the continuance of his favorable condition.

No case of this disease is sufficiently serious to warrant a hopeless feeling regarding its treatment. I have several times seen temporary recovery take place when the patient was reduced to the last point of anemia, was comatose and unable to take or retain food.

I wish to say one word here regarding the alterations in the blood-count. I am aware that certain authors have reported remarkable, sudden improvements in the character of the blood. It is not reasonable to suppose that these are due

to sudden formation of large numbers of red corpuscles; on the contrary, the probable explanation is found in the assumption of an alteration in the distribution of the corpuscles or a reduction in the quantity of serum. Some have referred to the improvement in the blood after attacks of diarrhea. It is entirely conceivable that such increase in the number of the corpuscles may be the result of inspissation of the blood through a loss of serum. Even the character of the corpuscles may have changed and the cells may assume a more normal appearance. This, however, may also result from a thicker, more normal condition of the serum. Improvements in the character of the blood to fairly normal conditions may, however, actually occur from a restoration of the hemogenetic function, but such improvements are recognized as more settled by their persistent progressive character.

SOME REMARKS ON THE PATHOLOGY AND SURGICAL TREATMENT OF URINARY AND URO-GENITAL TUBERCULOSIS.*

BY SAMUEL ALEXANDER, A.M., M.D.,
of New York.
Professor of Genito-Urinary Diseases in the Cornell University Medical College; Surgeon to Bellevue Hospital.

TUBERCULOSIS of the male uro-genital tract does not differ essentially from tuberculosis in other organs of the body, except that it is, perhaps, more frequently complicated by some form of pus infection. The latter may either antedate the invasion of the tissues by the tubercle bacillus or follow this invasion. The pathological changes produced by these pus infections weaken the resistance of the tissues, intensify the symptoms due to the tuberculous process, frequently obscure the diagnosis of the latter, and render treatment in many cases much more difficult.

Tuberculosis of the uro-genital tract is met with clinically in two forms: First, as a secondary infection, the result of tuberculosis in some other portion of the body, as in the lungs, or it may occur as a manifestation of a generally tuberculous infection of the organism; and, secondly, as a seemingly primary infection affecting at the outset one part of the urinary or genital tract more or less extensively, usually chronic in type. It is this latter form of uro-genital tuberculosis that is of most interest to the surgeon.

It seems strange, notwithstanding the frequency with which tuberculosis is met with as an apparently primary lesion of the uro-genital tract, that so little attention has been given to the subject until within very recent years. A review of the literature of this subject, even during the past decade, is certain to be unsatisfactory to the student seeking positive information upon the subject. There is scarcely a single point, either in the pathology or treatment of uro-genital tuberculosis, which has not been the subject of discussion and yet in regard to which observers do not differ widely. Notwithstanding, however, the very contradictory statements which have been made, I think it will now be generally admitted by those who are entitled to speak with authority that seemingly primary tuberculous infection of the uro-genital tract does occur, and that it does occur with great frequency. I mean by this that tuberculous lesions are met with clinically in the uro-genital tract without tuberculous lesions being found in any other portion of the organism. It is of course possible that in these cases the primary infection may not have been in the uro-genital tract, but may have occurred in some other part of the organism, as, for example, in the pulmonary lymph nodes, the lesion being so slight as to escape detection. But, although this may be admitted, there are many questions which are far from being definitely settled; for example, it is by no means certain as to the manner in which the tubercle bacillus finds entrance into the genito-urinary tract; nor are we certain what is the original seat of the disease in any given case; nor what part of the genito-urinary apparatus is most frequently the seat of primary infection. Any one who is familiar with the clinical aspects of genito-urinary tuberculosis, and who has given any study to recent literature upon this subject, must be convinced that we need more positive knowledge before we shall be able to speak with anything like certainty upon these questions.

This is unfortunate, because of the importance of our having a definite answer to these questions from the standpoint of treatment. I venture to suggest that these questions will not be answered until a closer and more cordial relation has been established between those who are clinical observers and those who work in our pathological laboratories. The results of post-mortem examination and of pathological research alone are unquestionably of great value, but in order to reach sound conclusions from such observations it is necessary that the clinical histories of the cases which form the basis of the investigation should also be known. I believe that the necessity for this coöperation in the study of disease between clinicians and pathologists is now appreciated by the profession, and I have great hopes that owing to this our knowledge of these questions will be greatly increased in the near future.

But while we are waiting for this improvement in our methods of scientific investigation of disease, we cannot lose sight of the fact that we are daily confronted by patients suffering from tuberculosis of the uro-genital tract who demand immediate treatment. The pain and suffering which this form of tuberculosis often causes make it all the more imperative that we should use our utmost endeavors, so far as our knowledge goes, to relieve it. It is, therefore, necessary at the present time that as practical surgeons we should adopt, if only provisionally, a working hypothesis:

First, tubercle bacilli may be introduced into the urethra and other portions of the urinary ap-

*Fifth paper read at the Seventeenth Annual Meeting of the New York State Medical Association in the Symposium on Tuberculosis.

paratus may be involved subsequently by an ascending infection. I say this is possible. Clinical observation, however, does not support this view, and I know of no pathological observations to support it. It is certainly true that infection of the anterior portion of the urethra is of very rare occurrence, and when it does occur it is usually the result of the extension of a tuberculous process from the upper urinary tract.

Secondly, I think that it will also be generally admitted that primary tuberculous infection of the uro-genital tract is usually of hemic origin. It is probable that the tubercle bacilli are taken into the organism either through the respiratory or digestive tract, and are then carried by the blood current to some portion of the uro-genital apparatus, either directly or indirectly. It seems probable also that tubercle bacilli enter the urinary tract from the blood, most frequently through the kidney. By this I do not mean that the kidney is always the primary seat of genito-urinary tuberculosis—the kidney indeed may frequently escape infection, although the urine coming from it contain the tubercle bacillus. Such urine, containing tubercle bacilli and passing over the mucous membrane of the urinary tract, may cause disease of the bladder and prostate without any infection of the kidney, provided the resistance of these parts has been weakened, as is so frequently the case, by trauma or previous inflammation due to pus infection. This is analogous to the conditions found in ascending and descending pyogenic infections of the uro-genital tract. At the same time clinical observation would lead us to believe that in many if not the majority of cases of urinary tuberculosis the kidney itself sooner or later does not escape infection.

Tuberculous infection of the kidney is usually first met with in the renal pelvis and does not usually begin in the kidney substance. This cannot be stated as a definite rule to which there are no exceptions. I do not believe, however, that all cases of uro-genital tuberculosis are of renal origin. It is certainly possible that the tubercle bacilli may be carried directly by the blood-current to other portions of the urinary or genital tracts, and this undoubtedly does occur, because we find cases in which the disease seems at the start confined to the epididymis or to the prostatic urethra, and no evidence, either in the past or in the future history of such cases, makes it necessary for us to insist upon the renal origin of the infection.

Clinically speaking, the most common seat of so-called primary tuberculosis of the uro-genital tract would seem to be in the epididymis. This is always involved before the testicle proper; tuberculosis of the latter, I believe, only occurs as the direct result of extension of the tuberculous process from the epididymis.

Contrary to the view usually held, my own investigations have led me to believe that, although tuberculous epididymitis may occur alone, it is usually associated with more or less involvement of the prostate or prostatic portion of the urethra. It is impossible, however, to state this as a positive fact, and more study and better observation will be necessary before this can be done.

Again, while it is possible that tuberculosis of the bladder may occur as a primary affection, the clinical data are wanting to confirm such an opinion. It seems almost certain that tuberculosis of the bladder is always secondary to a primary tuberculosis of the kidney, the bladder becoming affected by descending infection, or is secondary to a primary tuberculosis of the lower uro-genital tract, beginning either in the epididymis or in the prostate; the bladder is then affected by an ascending infection.

Tuberculosis of the uro-genital tract is not caused alone by the introduction of the tubercle bacillus into the organism. There must be in addition a weakened cellular resistance of the part affected. The causes of this diminution in resistance in the uro-genital tract are as yet very imperfectly understood.

The object of operative treatment in primary tuberculosis in any portion of the urinary tract is in the first place curative; that is, we seek to remove as thoroughly as possible the entire focus of disease. When this can be done a cure is possible, but possible only in cases where the general tissue resistance of the patient can be increased and maintained. When the disease has advanced too far to permit of its entire removal, an operation may be justifiable for the purpose either of relieving suffering, or of prolonging life, and even in some of these latter cases a cure is possible if the general tissue resistance can be increased and maintained.

I do not think that we recognize sufficiently the fact that the removal of isolated tuberculous foci is not in itself curative. The experience of every hospital surgeon is convincing that, while the immediate effect of operative treatment upon uro-genital tuberculosis is good, the vast majority of these cases are only temporarily relieved and return sooner or later either with an extension of the original disease or with a new focus of infection in some other portion of the body. As this occurs in some cases where apparently the entire focus of disease has been removed, it is probable that the infection of the uro-genital tract was only apparently primary. The results of operation for tuberculosis are much more satisfactory in patients of the better class, who are able to procure a suitable environment after operation, so that their general health and powers of resistance may be increased.

The Importance of an Early Diagnosis.—The value of surgical intervention in the treatment of tuberculosis of the uro-genital tract depends upon the direct origin of the infection and upon the seat and extent of the disease. The more circumscribed the lesion, and the more recent the infection, the better chance is there for effecting a radical cure by operation. It follows, therefore, that it is of the utmost importance to make a diagnosis in every case at the earliest

possible moment. The methods of diagnosis have been much improved during the past few years, and it is along this line that the greatest progress has been made in the study of urinary tuberculosis. But our present methods of diagnosis, although a great improvement on those formerly used, are by no means perfect. But, notwithstanding their defects, it is to be greatly regretted that they are not more generally understood.

It cannot be denied by any one, looking fairly at the facts as they now exist, that the diagnosis of tuberculosis in any portion of the urogenital tract is usually not made until the disease is well advanced. For example, it frequently occurs that a patient with a beginning renal tuberculosis will complain of subjective symptoms referable to the bladder, *viz.*, frequent urination, pain and tenesmus at the end of the act, and yet have no vesical or prostatic lesion. The only objective symptom is a slight pyuria, with or without hematuria, and the latter is often overlooked. Such a case is treated for inflammatory disease of the posterior urethra, or for a cystitis—calculus is often suspected. The patient is subjected to frequent and often unnecessarily severe instrumentation for the purpose of reaching a diagnosis or in the course of treatment, and it is only after repeated examinations have failed to show any lesion of the bladder or of the prostate, and after local treatment has failed not only to relieve the patient's condition, but has made him worse, that the possibility of tuberculosis being present begins to be considered. Unfortunately for the patient, as the result of delay and improper treatment, the tuberculous process has spread from the kidney to other portions of the urinary or genital tract, and the favorable opportunity for surgical relief has passed away. The statement may well be emphasized that unnecessary and frequent instrumentation is a fruitful exciting cause for the extension of the tuberculous process in the urinary tract, by producing trauma favoring infection, and weakening the resistance.

I believe that it is of the utmost importance in all cases of chronic inflammatory urinary disease, in which the nature of the disease is not perfectly clear, that as a matter of routine practice the urine should be frequently and carefully examined for the presence of tubercle bacilli, and that even when tubercle bacilli cannot be found the possibility of tuberculosis should be kept constantly in mind. It has been frequently said that tubercle bacilli in the urine are difficult to find. This undoubtedly is true in some cases of tuberculosis, especially where but few bacilli are present. I cannot at the present time enter into a detailed description of the best methods for examining urine to determine the presence of this bacillus. I can, however, say as the result of personal experience that the failure to detect tubercle bacilli is more often due to the mode of examination than is usually supposed. The best results can be obtained only when the urine is examined immediately after it has been voided by the patient. The sediment should be collected by centrifuge and slides should be prepared at once. The examination of urine after the specimen has stood for a number of hours and from which the sediment has been collected simply by gravity rarely gives satisfactory results unless a large number of bacilli are present.

In addition to the improvements made in our methods of urinary examination, our ability to make a positive diagnosis has been greatly increased by improvements in the cystoscope and in the facility with which in practised hands this instrument and ureteral catheterism can be employed. In the early stages of tuberculosis direct inspection of the bladder and orifice of the ureter is of great value, and when the conditions are favorable for catheterizing the ureters we can determine the condition of either kidney with great accuracy. Unfortunately, in many cases of advanced disease cystoscopy is impossible, and I am inclined to think that except in skilful hand the practise of cystoscopy and ureteral catheterism does more harm than good.

The result of any operation upon the urogenital tract for tuberculosis is governed by the same rules which we apply to other surgical diseases. The immediate result of any operation will depend upon the general condition of the patient, upon the state of the lungs, and of other organs, upon the age of the patient and the extent and seat of the disease.

Operations Upon the Kidney.—Operations for tuberculosis of the kidney may be divided into three classes: (1) Operations in those cases in which the kidney is primarily affected and in which the diagnosis of urinary tuberculosis has been made while the infection is purely bacillary; (2) operations in cases in which the tuberculosis is primarily in the kidney and in which there is a mixed infection, but without tuberculous disease in any other portion of the urinary tract; (3) those cases of advanced tuberculosis of the kidney with secondary tuberculosis of other portions of the urinary tract. I believe that in all cases of tuberculosis of the kidney in which an operation is not absolutely contraindicated by the general condition of the patient, surgical interference is not only justifiable, but is imperatively demanded. The results of operation, however, will vary within very wide limits, and at the present time it is impossible to generalize in regard to the prognosis of any of the three classes of cases mentioned above. As a general rule, when operation upon the kidney for tuberculosis is indicated the choice should be given to nephrectomy.* Recent statistics show that the immediate mortality of nephrectomy and nephrotomy is about equal, but the remote results are greatly in favor of nephrectomy. We find that 61.71 per cent. of cases died during the first year after nephrotomy, while only 12.54 per cent. died during the first year after nephrec-

* Rapport sur la valeur de l'intervention chirurgicale dans la tuberculose renale par M. Pousson (de Bordeaux). "Ann. des Mal. des Organ. Genito- Urin.," Vol. xviii, 1900.

tomy. Of 63 cases operated upon by nephrotomy 39 died during the first year, and of the 24 that survived all had permanent fistulæ. Of 335 cases operated upon by nephrectomy 42 died during the first year by a spread of the tuberculous process to other organs. Of the 293 which survived the operation 33 were living at the end of the first year, 41 lived three years, 4 lived five years, 7 lived six years, and 2 lived eight years. A very small proportion of these cases suffered from fistula, namely 7 in 105 operations. It would seem, therefore, that nephrectomy should always be the operation of choice where only one kidney is affected, and I believe that the operation is frequently indicated even when the other kidney is the seat of beginning tuberculous infection, if the patient be put in surgical condition. The question has been frequently discussed as to the necessity of removing the ureter in cases of nephrectomy performed for tuberculosis. To do this increases the risk of the operation and frequently, I believe, subjects the patient to unnecessary risk.

In early cases of renal tuberculosis the upper part of the ureter is alone affected. In advanced cases in which the entire ureter is involved the operation upon the kidney is only palliative; and to remove the kidney simply increases the risk of the operation without doing any permanent good.

Tuberculosis of the Genital Tract.—Primary tuberculous infection of the genital tract may begin in the epididymis, or in the prostate, or possibly in the seminal vesicles; the primary involvement of the latter is very doubtful. The genital tract may also be involved secondarily as the result of tuberculosis of some portion of the urinary tract. Tuberculosis as a primary infection of the genital tract attacks most frequently the epididymis, but I believe that the prostate is more frequently the seat of tuberculosis than is usually supposed. Tuberculosis of the seminal vesicle is, I believe, nearly always secondary to tuberculosis of the epididymis or of the prostate. The spermatic ducts, or vasa deferentia, are never primarily infected by the tubercle bacilli. In these canals the disease is always secondary either to tuberculosis of the epididymis or of the prostate. If these statements are true it is apparent how important is an early and accurate diagnosis of the exact seat of the lesion in determining the extent of an operation.

Cases of genital tuberculosis may be generally classified into three groups: First, when the epididymis is the seat of primary disease and when the disease is limited to this part; second, when the epididymis is involved as the result of a descending infection from the prostate, but without involvement of the seminal canal; third, when the testis proper, as well as the epididymis, is involved, and in such cases the seminal canal is always more or less the seat of tuberculous diseases.

It would be impossible at the present time for me to discuss at all fully this question of operations upon the genital tract, for it is the subject of active discussion among all those interested in genito-urinary surgery. Opinions of the most competent of observers differ so widely upon this subject that I am forced to give only my own opinion, which is based upon a large clinical experience. The principal questions at issue may be formulated as follows: (1) Is castration indicated in every tuberculous condition of the epididymis, or can we by more conservative methods accomplish the same results? (2) When the epididymis or testicle alone is involved is it necessary for us to remove the seminal canals and seminal vesicles and portions of the prostate, even if these latter do not appear at the time to be the seat of the disease. At present I am very strongly of the opinion that when the epididymis is the seat of primary disease, and even in cases where there is some involvement of the prostate, if the testicle itself be healthy a conservative operation will give as good results as castration. Excision of the epididymis, together with as much of the seminal canal as seems to be diseased is, I believe, the operation of choice in early cases. It is possible by opening the inguinal canal to remove the seminal canal nearly as far as its junction with the duct of the seminal vesicle. And I believe that when the epididymis or a testicle has to be removed for tuberculosis it is best to remove as much of the seminal duct as can be done through this incision. When the testicle proper is the seat of a tuberculous process conservative measures are useless and castration with the removal at the same time of the seminal canal is the only operation to be considered. In such cases the prognosis is usually bad as to ultimate cure, and the operation can only be considered as a palliative measure. The value of more extensive operations upon the genital tract, which aim not only to remove the diseased testes and cord, but also the seminal vesicles and more or less of the prostate, are now under consideration. I think that my own is in accord with those who have had much experience with these operations. They are difficult to perform, and the results which follow such surgical interference have been far from satisfactory.

Tuberculosis of the Prostate.—Primary tuberculosis of the prostate has been denied by many very competent observers. The statement by Sir Henry Thompson that the prostate was never the seat of primary tuberculosis has been accepted and, I believe, still influences the thought of the present time. I am convinced that primary tuberculosis of the prostate does occur and is far from infrequent. It is difficult to diagnose, and, as a rule, the tuberculous process has extended from the prostate to other portions of the genital or urinary tract before the diagnosis is made. It is frequently possible by pressure upon the prostate with the finger introduced into the rectum to obtain the secretion from the prostatic follicles, which, upon examination, will

be found to contain tubercle bacilli when repeated examinations of the urine have been negative. Except in cases of isolated tuberculous nodules in the prostate, or in cases in which such nodules have broken down and have resulted in so-called tuberculous prostatic abscesses, there is little that we can do with certainty for the disease in this organ. I am strongly of the opinion that in a large number of cases of slow developing abscess of the prostate the cause of the condition when carefully sought for will be found to be tuberculosis. In such cases I believe that the proper course to pursue is to remove as completely as possible the diseased portion of the prostate, and I am sure that in many cases this can be done with great benefit to the patient.

Tuberculosis of the Bladder.—As I have already stated, tuberculosis of the bladder is, I believe, always secondary either to tuberculosis of the kidney or of the lower uro-genital tract. It is, of course, possible that the bladder may be primarily infected, but clinical experience and the results of post-mortem examinations show that this rarely occurs. The surgical treatment, therefore, of bladder tuberculosis can never be curative and must be regarded only as a palliative measure unless the original seat of the tuberculous infection can also be removed. Local treatment of tuberculosis of the bladder is, I believe, absolutely valueless. When the bladder is involved by a tuberculous process, and the condition is complicated by some form of pus infection, local treatment may give some relief by controlling the latter, but such treatment has no effect upon the progress of the tuberculosis. There are few conditions met with by the surgeon in which he can do so little as he can to relieve the symptoms resulting from tuberculous infection of the bladder. It may be possible at times by opening the bladder to apply local treatment more effectually and subsequently, by draining of the viscus, to relieve suffering, but the cases in which relief has been given are very few, compared with those in which no good has been accomplished by operation and in many of these the condition of the patient has been rendered worse. I believe that the reason for failure to accomplish more by surgical means in tuberculosis of the bladder is the fact that when the bladder has become involved the disease in other parts of the uro-genital tract has progressed too far to warrant any surgical interference.

It has been possible in the time at my disposal to present very imperfectly only a few points in regard to uro-genital tuberculosis, and these have been presented more for the purpose of suggesting the extent of the subject than of answering the many questions which are met with by every investigator in this department of pathology. There are but few of these questions to which we can at present give positive answer, and there are few fields of scientific research which have been so little explored. I hope that the observations which I have made may at least be suggestive, and may possibly stimulate others to enter this field of research.

TUBERCULOSIS OF THE BONES AND JOINTS.*

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THE fact that certain chronic diseases of the bones and joints are due to the action of the tubercle bacillus, has been demonstrated so completely that the steps of the demonstration need not be mentioned.

Predisposing Causes.—Predisposing causes—*e. g.,* trauma of moderate severity, youth, sex, and hereditary family tendency—need only be mentioned.

Method of Infection.—As in other tubercular lesions, the tubercle bacillus may enter the tissues in various ways—*e. g.,* through the respiratory system, the intestinal tract, or through wounds of the skin. The latter method is of little practical importance.

The great majority of children with tubercular joints who come to autopsy show tubercular foci in other parts of the body—*e. g.,* in lungs, intestines, bronchial or mesenteric lymph nodes. These foci, from their location and extent, must be considered the primary focus of tuberculosis, to which the joint disease is secondary. Sometimes only caseous, mesenteric or bronchial lymph nodes are present. In such cases the original point of entrance cannot be determined.

Rarely an old scar or calcified nodule of the lung, presumably due to healed tubercular disease, is the only indication of infection besides the joint lesion. Very rarely is the joint lesion the only evidence of tubercular infection.

Histogenesis.—The tubercle bacillus is carried to, and lodges in, the bone marrow. It then produces a proliferation of the adjacent endothelial and connective tissue cells, and a "tubercle" is formed. This tubercle is composed of epithelioid and perhaps giant cells, and soon is surrounded by a zone of lymphoid cells. No blood vessels are formed in the tubercle. The center of the tubercle usually becomes caseous.

By multiplication of the tubercle bacilli and their diffusion into the surrounding tissues, similar secondary tubercles are produced about the original tubercle. The center of these tubercles in turn becomes necrotic. As these centers of caseation enlarge, they fuse and coalesce, and form a conglomerate of tubercular caseation.

Besides the specific tubercular process just described, there early appears in the marrow of bone a non-tubercular granulation tissue, which surrounds the tubercular process. This granulation tissue is due to the irritation of the tubercular tissue, which acts as a foreign body. At first this granulation tissue is delicate and edematous. Later it becomes dense and firm, and may practically encapsulate the diseased area.

Anatomy in the Large Long Bones.—Tubercular disease of the large, long bones practically always starts in the epiphysis of the bones, in distinction from osteomyelitis, which generally be-

*Sixth paper read at the Seventeenth Annual Meeting of the New York State Medical Association in the Symposium on Tuberculosis.

gins in the shaft. This is an important factor in differential diagnosis. The process begins in the marrow, and the supporting bony trabeculæ are only secondarily affected. The process appears never to begin in the cortical bone or in cartilage. The earliest stage visible to the naked eye shows irregular gray or yellow areas (proliferating or caseous, coalescing tubercles), surrounded by a zone of purple-red granulation tissue. During an operation, while hemorrhage is taking place, it is almost impossible to determine correctly the limits of such an area. After removal, when the bone is drier, the limit can be determined with moderate accuracy. Such an area enlarges peripherally by the formation of new tubercles, which in turn become caseous, coalesce and form an irregular caseous area with a crenated margin. In this caseous area are included necrotic bony trabeculæ. About this caseous area is a zone of grayish proliferating tubercles, which in turn are surrounded by a layer of purple-red granulation tissue. Hence, in removing caseous bone, it is necessary to remove not only the caseous material, but a considerable margin, in order to include the proliferating tubercular area and the granulation tissue. This zone is at least 1 centimeter wide. Further extension of the tubercular process may lead to the formation of a "tubercular abscess" or of a "sequestrum."

Tubercular Bone Abscess.—The bony trabeculæ in the caseous area early become necrotic and may soften and be partially or wholly dissolved. Thus a cavity is formed in the bone, filled with caseous material, in which lie remnants of partly dissolved trabeculæ—*i. e.*, a "tubercular bone abscess." Sometimes the bone surrounding such a cavity is infiltrated with caseated tubercles; sometimes the cavity is limited by a definite membrane, the inner layer of which is tubercular tissue, the outer layer non-tubercular granulation tissue.

Sequestrum.—The bony trabeculæ in the caseous area may not dissolve, but may die and still retain their shape. Then the entire diseased area may separate from the surrounding bone and form a "sequestrum," or solid mass composed of undissolved trabeculæ, the spaces of which are filled with caseous material. As in the case of the abscess, the sequestrum may be surrounded by infiltrated tubercular bone or by a definite membrane of tubercular and granulation tissue.

Hence, in cleaning out tubercular abscesses or removing tubercular sequestra, it is necessary to remove a fairly wide margin in order to remove tissue that is tubercular, although not obviously affected.

Extension of Epiphyseal Foci.—Generally the process in the epiphysis enlarges peripherally and perforates the bone at some point. Very rarely the perforation takes place through the cortex of the bone outside of the joint. Almost always, however, the process perforates the cartilage at some point, usually along the attachment of ligaments, and causes a general infection of the joint.

Tubercular Disease of the Short Long Bones.—"*Spina Ventosa.*" Primary tubercular disease of the shaft of the large long bones seldom or never occurs. Tubercular disease of the shaft of the small long bones—*e. g.*, phalanges—is common. The tubercular process attacks the marrow of the shaft and the entire marrow may become caseous. The periosteum of the shaft proliferates and forms a new layer of cortical bone, so that the bone becomes flask-shaped. The tubercular process may extend through the periosteal bone, and open on the surface through a number of sinuses.

Tubercular Disease of the Short Bones—e. g., Bones of Ankle or Wrist.—Any of these bones may be infected. They all have a thin cortex and relatively much spongy tissue, and as a rule articulate with several similar bones. So a comparatively small tubercular focus may involve several adjacent bones and joints.

Tubercular Disease of the Flat Bones.—Any of the flat bones may be attacked.

Miliary Tuberculosis of bone occurs in connection with general miliary tuberculosis, but is of no clinical importance.

Cold Abscess.—If the tubercular process extends peripherally, it may perforate the cortex and periosteum and reach the soft tissues. By formation, coalescence and caseation of adjacent tubercles in the soft tissues, an extensive area of tubercular softening may form. Into this softened area comes an exudation of the serum and leucocytes, so that the caseous area becomes liquid —a "cold abscess." The contents of such an abscess differ in gross appearance from those of an ordinary abscess, chiefly because of the presence of caseous material. The contents may be discolored from the presence of recent or old hemorrhage. Tubercle bacilli often can be detected in the abscess contents. If they cannot be found, inoculation of a guinea-pig with the abscess contents invariably produces fatal tuberculosis in the animal. The wall of such an abscess is composed of an inner layer of tubercular tissue, outside of which is a layer of granulation tissue. Hence, in operations on cold abscess, it is inadvisable to curette the wall unless the entire cavity can be reached. Vigorous scraping of the lower part of an extensive psoas abscess, for instance, removes only a very small part of the tubercular tissue, and opens an extensive area of granulation tissue, which may take up tubercle bacilli and cause a fatal general distribution.

Tubercular Fistulæ.—As the tubercular abscess extends in the soft tissues, it may approach the surface, involve the skin and open on the surface of the body. The walls of such an opening are composed of tubercular tissue and show little or no tendency to close. Hence, if a tubercular abscess is opened through a thick layer of sound tissue, it may be secondarily infected with pyogenic organisms, close, and give rise to serious septic absorption, but if the abscess is opened only shortly before spontaneous opening is to occur, the tissues about the opening are tubercu-

lar and the opening remains patent, and premature closure of the abscess and septic absorption is avoided.

Tubercular Disease of the Joints.—Generally the tubercular focus in the epiphysis enlarges peripherally until it lies just beneath the cartilage. The cartilage over the tubercular tissue softens and disintegrates, and is perforated at one or more points, and the tubercular material enters the joint. Generally this perforation occurs near the attachment of ligaments. The tubercle bacilli having entered the joint are disseminated in the synovial fluid. Then the synovial membrane becomes infected and tubercles develop. The *synovial membrane* becomes thickened and is studded with yellow tubercles, while the base of the membrane consists of dense, fibrous tissue. The tubercles enlarge, fuse and become caseous, producing extensive tubercular ulcers of the synovial membrane. From the synovial membrane a layer of tubercular tissue extends over the surface of the cartilage and destroys the cartilage beneath it. Also, a tubercular layer may extend beneath the cartilage, between it and the bone. Wherever the tubercular layer comes in contact with the cartilage, this cartilage is destroyed, so the entire cartilage becomes ulcerated and perforated, or may be entirely lifted from the bone. Then the process extends to the underlying bone. Ultimately, the articular ends of the bone are destroyed, and various fractures, subluxations and dislocations may be produced.

Sometimes the synovial membrane forms papillary projections of tubercular tissue, which project into, and nearly fill, the joint cavity—"arborescent" form.

Secondary or Primary Tubercular Synovitis.—Most writers on tubercular joints state that tubercular disease of a joint may be secondary to a tubercular focus in the epiphysis, or may begin primarily in the synovial membrane. In fact, primary tubercular synovitis is extraordinarily rare and I never have seen one. Examination at the time of operation is of no value. After amputation, or removal of all the bones concerned in the articulation, almost invariably it will be found that the joint disease is secondary to a focus in the epiphysis in one of the bones. Consequently it seems possible that it may prove advantageous, in the treatment of tubercular joint disease, to make the diagnosis early, to localize the primary focus by means of the X-ray, and to remove the focus before perforation of the joint has taken place.

When the joint is first infected, the amount of fluid generally is increased and is turbid serum. Later, the joint may be filled with caseous necrotic material. In some joints the fluid is small in amount and caseation is slight—"caries sicca."

Repair.—Tuberculosis is a self-limited disease. Repair is brought about by the formation of granulation tissue, which replaces tubercular tissue and becomes scar tissue. Cavities in bone fill with fibrous tissue. Caseous material is absorbed or calcified and encapsulated. Adjacent joint surfaces may be bound firmly together by bands of fibrous tissue which may be converted into cartilaginous or bony tissue—"fibrous," "cartilaginous," or "bony" anchylosis. The joint cavities may be diminished or destroyed.

Special Joints. Tubercular Disease of the Spine. Pott's Disease.—The disease begins usually in the marrow of the anterior portion of the body of a vertebra. An area of tubercular caseation or softening is produced. The softening generally extends forward to the deep layer of the prevertebral ligament and then extends vertically upward and downward. As the disease reaches the level of each vertebra, it attacks the body of the vertebra. The vertebra primarily attacked shows the most extensive softening The softened bone is unable to sustain weight, so that the upper and lower surfaces of the body of the vertebra are pressed together. Then a "knuckle" appears. In time, the inter-vertebral discs are destroyed. The character of the knuckle depends upon the extent of the process and the region of the spine affected.

Abscess Formation.—During life often no abscess is seen, but in cases which come to autopsy an abscess is almost always present, although it may be of small size. The tubercular material early pushes up the prevertebral ligaments and forms a flattened, soon a nodular, swelling in front of, or to one side of, the bodies of the vertebræ. The abscess extends in the line of least resistance. Hence, retropharyngeal, mediastinal, lumbar, ilio-psoas, or femoral abscesses. Certain extraordinary distortions of the aorta may occur in connection with the formation of the knuckle, especially if the disease begins after the individual has attained his growth, but these distortions probably have no clinical importance.

Spinal Cord. "Pott's Paralysis."—Mere angular deformity seldom, if ever, diminishes the caliber of the spinal canal sufficiently to cause pressure upon the column. Rarely the upper segment of the spine crushes into a diseased vertebra in such a way as to cause bony pressure. Ordinarily, the tubercular process extends backward to the anterior layer of the dura of the cord, producing a tubercular pachymeningitis. Occasionally the pressure of the tubercular process in the dura is sufficient to produce degeneration of the cord. Rarely a tubercular abscess within the spinal canal may cause paralysis from pressure on the cord.

Spinal Nerves.—In the same way the tubercular process may extend to the openings through which the spinal nerves have their exit, and thus paralyze large nerve trunks.

Repair.—As in other joints, the tubercular process may cease to extend, and the tubercular tissue may be replaced by fibrous tissue. This fibrous tissue may be converted into bone and several vertebræ be fused into one bony mass.

Hip Joint.—The process may begin in the head of the femur. If it does, extra-articular perforation is uncommon. The process may begin

near the epiphyseal line between the head and neck, and may be extensive enough to cause fracture of the neck of the femur. Usually the joint is perforated early, and extensive destruction of the head takes place. Under pressure, the acetabulum may be enlarged upward and backward—"wandering acetabulum." Enlargement of the acetabulum and destruction of the head may cause partial or complete luxation of the head of the femur.

In a very large proportion of the cases, the process begins in the acetabulum itself. Perforation of the pelvic bones may occur, and an intrapelvic tubercular abscess may form. Excision of the head of the femur does not, under these circumstances, remove the primary bone focus. If the tubercular process ceases the joint may become anchylosed in the deformed position.

Knee Joint.—The primary focus may be in any of the bones which enter directly into the articulation, femur, tibia or patella, or even in the fibula. Muscular spasm may cause flexion and backward subluxation. In correcting this deformity it is possible to occlude the popliteal artery, unless the backward subluxation is corrected.

Anchylosis. Ankle Joint.—The primary focus may be in the lower end of the tibia, or in one of the tarsal bones. As the bones are small, contain much spongy tissue, and usually articulate with several other small bones, a number of bones and joints may be involved early. Hence, in operating, it is desirable to remove not only all caseous bones, but also all adjacent joints and sufficient of the adjacent small bones to insure complete removal of all tubercular tissue.

PUERPERAL SEPSIS; ITS PATHOLOGY AND TREATMENT.*

BY WILLIAM R. PRYOR, M.D.,
Professor of Gynæcology at the New York Polyclinic.

IT is hardly possible that in the time allotted me I can give a description of the many and minute changes wrought in the system by puerperal sepsis or discuss all the various methods of treatment. Still, I can call your attention to certain of the more recent investigations into the pathogenesis of puerperal sepsis and perhaps bring out a discussion regarding treatment which may be of value to us all.

The manner in which women become infected is of interest to us all. It is a comforting belief that *auto-infection* may take place, but the observations of Krönig and Whitridge Williams pretty thoroughly disprove the possibility of this, except in very, very rare instances. An infecting coitus may take place just previous to delivery as well as may an infecting examination, but such is not auto-infection. About 49 per cent. of prostitutes have the gonococcus present though latent in the cervical glands, and a small percentage of honest married women have the same. In such, of course, self-infection by the gonococcus after delivery is possible. Lastly, a few women with a pus focus in one or the other adnexa will conceive and go to full term, and become infected by this after delivery. But this must be very rare, because such a lesion supposes sterility or induces early abortion. We are therefore forced to believe that puerperal sepsis is caused by germs which are introduced from without.

Causes.—Franz, the most recent writer on this subject, found the gonococcus present in but 4 per cent of his fifty cases of puerperal fever; once in a mild case accompanied by saprophytes, and once in a severe case with streptococci. The degree of infection produced by the gonococcus is mild. In 300 cases of afebrile puerperia, nine observers found some sort of germ in 27 per cent., but never the streptococcus or pyogenic staphylococcus. In a very few cases of mild form streptococci are found, but in nearly all cases of infection by pyogenic streptococci and staphylococci the symptoms are grave. We are therefore warranted in asserting that puerperal sepsis is caused by streptococci and staphylococci. But in most cases these are accompanied by other germs, especially saprophytes.

Lesions Produced.—Upon entering the uterus these germs soon penetrate deep into the decidua, through the endometrium and enter the lymph channels of the uterus. From there they pass into the venous sinuses and into the lymphatics of the pelvis, thus entering the general venous and lymphatic systems. The peritoneum over the uterus and lymphatics may become inflamed, pouring out serum, lymph or pus. Septic emboli may break from the thrombi in the ovarian or iliac veins and produce septic infarcts elsewhere. Septic pneumonia, septic endocarditis, acute nephritis and general suppurative peritonitis, are some of the graver lesions induced, while ovarian abscess and pyosalpinx are local results. Viewed in the light of the lesions resulting we may divide puerperal sepsis into septic thrombosis and pelvic lymphangitis. We may also describe as puerperal any septic condition occurring after abortion where the induced lesions are such as we see follow full-term labor. The most rapidly fatal cases are the thrombotic.

The havoc wrought by the infection is governed by a great many factors. Chief among these is the virulence of the infecting germs. Then the traumatism to which the uterus has been subjected, the patient's general condition and the area of endometrium invaded, all influence the result.

Unlike saprophytic or putrid infection, which tends to spontaneous recovery, puerperal sepsis if not rapidly fatal almost always produces lesions which seriously damage either a pelvic organ or some other viscus. I wish this fact to be borne in mind when we consider the treatment. *Time* is here an important element. Therefore, our treatment is governed not only by the mortality figures but also the morbidity.

Regarding the virulence of the germs in different localities we notice that while Krönig and

*Seventh paper read at the Seventeenth Annual Meeting of the New York State Medical Association, in the Symposium on Obstetrics.

Whitridge Williams in their cases had a mortality of about 5 per cent.; Edgar Macharg in fifty-seven cases had 54 per cent. mortality. And those who will recall the epidemic here of 1881 will remember the great number who died.

The danger from saprophytic infection being so slight and its correction so easy, while the danger from streptococcus infection is great and the best method of dealing with it in dispute, the importance of an accurate diagnosis is apparent.

The best way to secure uncontaminated the uterine lochia is by means of a Döderlein tube which is passed, after sterilization, into the uterus and without touching the vulva or vagina. Even here there is a leak in the technic, for the cervical glands may soil the tube, but will hardly get into the lochia which is sucked up from the fundal cavity.

Treatment.—Having found pyogenic cocci how shall we proceed to treat the case? The most popular method of treatment is by intermittent washing. This is what Macharg did and lost 54 per cent. of his cases. Besides, the cocci not being on the surface, but deep in the uterine walls, washing cannot and does not reach them. All it succeeds in doing is to add to the distress by inflicting additional and needless trauma. The gentlemen who laud washing have not made bacteriological examinations of their patients' discharges, and they can rest assured that where they see benefit from the treatment it is not in streptococcus cases but those of saphrophytic nature. And even in these they have subjected their patients to needless danger by improperly performed manœuvres, for it is too easy to convert a saprophytic infection into a septic.

Curettage of the septic uterus gives a prohibitive mortality; and again we must condemn a measure in sepsis which is of benefit in saprophytic infection.

Serum Therapy.—The commission appointed by the American Gynecological Society, of which I have the honor to be a member, reported in 1898 that Marmorek's serum where used in 101 cases of streptococcus puerperal fever gave a mortality of 33 per cent. Of course, if used in cases showing no streptococci the mortality is less, but we do not believe the advocates of the serum claim it is efficacious against any germ but the streptococcus, and in streptococcus infection the mortality is 33 per cent.

We found that the serum was used in 251 cases where no bacteriological diagnosis was made and gave a mortality of 16 per cent. Now as Williams found the streptococcus in but 25 per cent. of his cases of puerperal fever, Krönig in 19 per cent. of his, Franz in 26 per cent. of his, we can assume that of these 251 cases about one-quarter were streptococcic; and as the other 75 per cent. would have lived if left alone, the serum here was followed by forty deaths in 63 cases, or 63 per cent. mortality. If we could only know the kind of streptococcus a given serum was prepared from and could secure a case infected by just that identical streptococcus we might secure better results from its use; but as our knowledge of streptococci now stands, the administration of anti-streptococcus serum is followed by a mortality which prohibits its use.

Fortunately, in taking from the man who occasionally sees a case of puerperal fever, this much-lauded remedy, we have other methods of treatment to offer which are more efficacious.

These septic cases are to be considered in two classes. The cases of *thrombosis* are comparatively rare. When the diagnosis can be made, my belief is that no form of treatment will prove effective short of an abdominal hysterectomy, preceded by intravenous infusion, and rapidly performed. Inasmuch as here as well as in pure pelvic lymphangitis the peritoneum and lymph streams are involved, I would suggest the use of a large abdominal Mikulicz dressing of iodoform gauze. But this is the only form of puerperal sepsis in which I would perform hysterectomy.

How are we to treat the more common cases of septic pelvic lymphangitis, the usual puerperal sepsis?

Krönig, basing his practice upon fifty-six cases of sepsis, lost 4 per cent., employing a general supporting treatment only.

Whitridge Williams in twenty-three cases treated in a similar manner lost 4.35 per cent. So the general practitioner has good ground for refusing to listen to the gynæcologist when he advises operation. But I for one cannot forget the mortality which attended exactly the same treatment in olden days, emphasized as they are by Macharg's recent figures. I must believe that the infecting germs in Williams and Krönig's cases were weak and not virulent. But even granting all they say as to mortality, the unchecked sepsis must have wrought havoc, not only with the pelvic organs, but also with the general health. I cannot see the logic of their position and must believe that these gentlemen, for whose scientific attainments I have the greatest respect, have been unduly attracted by the seductively low mortality.

At the time when Williams reported his cases I gave a list of fourteen cases in which I had operated, one when she was dying with endocarditis and nephritis, with this one death. To show how completely these women recovered two have since been reported as pregnant. The method I have adopted since 1894 has proceeded along these lines: I have attempted to check the local infection and to combat the general septicæmia. Incidentally also I wished to prevent pelvic suppuration.

I curette the uterus as thoroughly as possible, being careful to wash out all débris with this tube, using many quarts of normal salt solution. The material removed by the curette is placed in a sterile jar for examination. I then pack the uterus full of 5 per cent. iodoform gauze.

The next step is to make a broad incision into the posterior cul-de-sac. Through this I evacuate all fluids in the pelvis. In most cases there is

much serum present, some lymph and often pus free in the pelvis. Any false union between the organs is broken and the pelvis is wiped dry. I now make what I call the pelvic Mikulicz dressing of iodoform gauze. This dressing completely fills the pelvis and is in close opposition to all the pelvic peritoneum to the pelvic brim, except in front of the uterus. The iodoform is soon broken up by the serum and so rapid is its absorption that it appears in the urine from two to five hours after the operation.

The circulation of so large an amount of this powerful antiseptic in the blood must have a deterrent effect upon the general sepsis, as these charts will show.

To determine whether the streptococci which I found in the uterus and in the pelvic cavity were destroyed, I instituted with Dr. Jeffries, bacteriologist to several of our institutions, a series of investigations. We found that invariably all cocci were destroyed, streptococci remaining to the third dressing in only one case, and she has since reported pregnant.

If under ether I find the pulse 120 or over, or if there are grave visceral lesions elsewhere, particularly in the heart and kidneys, I always do an intravenous saline infusion of from two to three quarts. This seems a severe measure, but all the cases brought to me are in bad shape and most of them have nephritis. The essence of the treatment is local and general iodism, together with promotion of the function of the kidneys.

After operation I use colon enemata of salt solution every three hours, for the purpose of eliminating the toxins and the iodine. This treatment has been employed over fifty times by myself and associates. By means of it I feel sure we have saved women who otherwise would have died. While the procedure is novel to some of you and while it is based upon a new principle, namely: the introduction into the blood of so powerful an antiseptic as iodine, which would appear dangerous, I can but be governed by what we have seen.

Such is the position of our present knowledge regarding puerperal sepsis.

Repeated irrigations we find do harm. Curettages gives 20 per cent. mortality. Serum therapy gives 33 per cent. mortality. We have, coming from great men, the conclusion that it is best to do nothing in an operative way. You may elect to accept that advice. But what will you do if their further experience prompts them to desert you? If you are now so disposed as to follow me and many others, perform a rapid abdominal hysterectomy in your cases of thrombosis, and in the cases of true puerperal sepsis the curettage and cul-de-sac operation as I have described it.

TUBERCULOSIS TO BE NOTIFIED IN JERSEY CITY.—The physicians of Jersey City have been notified that henceforth cases of tuberculosis must be included in their reports of contagious diseases. This is taken to be the beginning of a movement in the direction of isolation of such cases.

A REPORT OF TWO CASES OF INTRASPINAL COCAINIZATION IN PUERPERAL ECLAMPSIA.

BY WM. P. THORNTON,
Buffalo, N. Y.

THE cases which I beg to report before the Association are two which came under my observation during the past six months in the maternity ward of the Buffalo General Hospital.

The first case was a robust Polish woman of 43 who entered the General Hospital December 19, 1900. General previous history was good. She had two other confinements both of which were normal. Present pregnancy was full term.

The patient was apparently perfectly well up to the day before entrance to the Hospital, when she began to complain of intense headache. Following this there was noticed a slight twitching of the muscles of the face and left arm. This condition persisted over night, and on the following morning became more marked. At 2 P.M. she had the first general convulsion. This was followed by three others at intervals of about one hour.

At 6 P.M. patient was brought to the Hospital. She was completely unconscious, pupils well contracted, and did not respond to light, extremities edematous, temperature, 99.8, pulse of 100, the volume of tension being in no way remarkable. There was a distinct odor of acetone to the breath. Skin and conjunctivæ were slightly jaundiced.

Directly on entrance she had a severe general convulsion, lasting for two minutes. The convulsive movements began in the left foot, rapidly involving in sequence the left leg, thigh and arm, muscles of the face, head and body, and then right arm and leg, disappearing in the same order as appearance, the right leg showing the last convulsive movement.

The uterus, even between the convulsions, was in a state of almost constant tonic spasm, not relaxing for over two minutes at a time. Cervix admitted two fingers, but was very firm. Bag of waters was present. Vertex presentation determined; head in transverse diameter; occiput to the left. Fœtal heart sounds detected at 120, strong and regular.

After the patient's admittance to the Hospital, convulsions occurred every ten to fifteen minutes. At 7.30 P.M. ten drops of the official tr. Veratrum viride were given by hypo. At 8.30, an hour later pulse fell to 80 and became quite soft, at 9.30 was very feeble and irregular, necessitating considerable stimulation, the convulsions, however, continued unchanged, occurring at least every fifteen minutes, and indicating quite conclusively that the tension and frequency of the pulse in this case had no bearing upon the convulsions.

Auscultation, at this time, failed to reveal the fœtal heart sounds. Examination of the cervix showed absolutely no progress in the labor. It was now determined to cocainize the spinal canal

for the purpose of relaxing the cervix, the rigidity of which was apparently the factor in preventing spontaneous delivery. Marx and Stone of New York have cited a number of brilliant results from spinal cocainization in rigid and spastic conditions of the cervix, none, however, occurring in eclampsia.

The convulsions were still continuing every ten or fifteen minutes, and the patient was becoming rapidly exhausted. At 10 P.M. she had the most prolonged convulsion of any since her entrance. At 10.10 I injected the cocaine. As the patient was in absolute coma, she had to be placed on her side. The spine was flexed as much as possible, in order to separate the vertebræ. The Lourde's needle and syringe was used. The point of introduction of the needle was one inch to the right and about three-quarters of an inch below the tip of the spinous process of the second lumbar vertebra. The needle was forced downward and a trifle inward towards the spine. The needle was introduced three inches when the feeling of resistance to the point disappeared and on removing the finger from the end of the needle, allowed a few drops of clear cerebro-spinal fluid to escape. The syringe was now attached and 10 drops of a 2 per cent. sol. of cocaine was slowly introduced. The needle was withdrawn, collodion painted over the site of the puncture and frequent examination made to determine the effect on the cervix. Contrary to the anticipated result, the cervix was in no way affected, but to the astonishment of those present the convulsions, which were occurring every fifteen minutes up to the time of the lumbar puncture, suddenly ceased. They did not reappear until more than three and one-half hours later, except for a slight spasm limited entirely to the left leg. This slight convulsion seemed to be provoked and was preceded by considerable irritation of the plantar surface of the left foot.

Shortly after the injection there was produced a markedly spasmodic condition of the four extremities with ankle-clonus and increased patellar reflex.

This spastic condition of the extremities is, as has been suggested by Marx, probably due to spinal shock or some disturbance of equilibrium within the subdural space and is not caused by the cocaine in itself, for similar effects have been noted with the injection of plain saline solution, though, of course, minus the analgesia.

This condition persisted until 1.15 when it began to disappear; at 1.30 the patient was entirely relaxed, and at 1.40 she had another severe general convulsion, beginning in the left leg, extending over the body and entering with the right leg. This was over three and one-half hours after the spinal injection, 30 minutes later there was another convulsion limited entirely to the right extremities. This one started in the fingers of the right hand and extended to the arm and right leg. This convulsion, as in the case of the first one following the spinal puncture, appeared to be provoked by external irritation, for I was, at this time, stimulating the palmar surface of the right hand in order to determine the reflex.

At 2 A.M., four hours after the cocainization, the cervix began to dilate rapidly, strong intermittent pains came on and the child was delivered at 2.45, still born.

At 3.40 there was another convulsion limited entirely to the left side, and again another at 4.20 and 4.50, both left sided. At 5 A.M. fifteen more drops of cocaine were injected into the spinal canal. At 5.10, directly after the second injection there was another convulsion. This one was just twenty minutes after the last one, the interval between the convulsions becoming rapidly shorter, being respectively, 1½ hours, 50 minutes, 30 minutes and 20 minutes in duration. After the second injection, however, the interval was again prolonged from 20 to 40 minutes, only four more convulsions occurring; the last one at 7.30 A.M.

By 8 o'clock the pulse had become quite full and frequent, and 3 drops of veratrum Viride were given by hypo. However, this had no appreciable effect on the pulse.

Hot air bed baths were now given every four hours, normal salt solution and whiskey, subcutaneously and per rectum, and bowels thoroughly purged by croton oil.

Towards evening, however, the patient's condition became worse. Examination of lungs revealed a hypostatic pneumonia. Respirations rose to 48, temperature, 105; pulse, 110. At 11 P.M. I withdrew 10 ounces of blood and injected 1 quart of salt solution into the vein. Some improvement followed the transfusion, but was only temporary, the patient finally dying at 1.30 the next morning, eighteen hours after the last convulsions.

At no time did the patient regain consciousness. The jaundice, which was slight at first, rapidly increased, and at the time of her death was extremely marked.

Examination of the urine revealed severe nephritis. The first sample collected a short time after entrance showed abundance of albumen, hyalin, granular and epithelial casts and red blood corpuscles, and only .7 of 1 per cent. of urea. In twenty-four hours there was (20 oz.) 600 c.c. of urine and but (60 grains) 4.8 grams of urea. Bile was present in both samples.

The second case has made a recovery, or, at least is rapidly convalescing at the present time. I do not, however, attempt to ascribe her recovery to the spinal cocainization, but to venesection and saline transfusion, the cocaine, apparently, having but a temporary effect upon the convulsions.

This woman was 33 years of age, American, been confined four times previously. Said that she had, during her first confinement, some puffing of eyelids and swelling of legs, and that she was taken with an indefinite convulsion at that time. Said she had some kidney trouble thirteen years ago with her second confinement. Three years ago was confined and had a severe postpartum hemorrhage which nearly proved fatal.

The present pregnancy was about eight and one-half month's duration. About one month before entrance to the Hospital, which was on the 17th of this last April, she noticed some swelling of her feet and ankles, her urine became scanty and high colored, and she complained of feeling dull. One week before entrance to the Hospital, said her hands and eyelids were puffed and legs became more swollen. Complained of severe headache the day and night previous to entrance. Said she had not urinated more than (5 to 6 oz.), 1 to 200 c.c., of urine in the past twenty-four hours.

On the morning of the 17th, headache was still severe and vision was very much impaired. At 8 A.M. she had the first convulsion which was general and severe. This was followed in a short time by another.

She entered the maternity ward of the Hospital at 8.30 A.M. She was perfectly conscious, complained of severe headache and dimness of vision. Pupils were well contracted, responded to light. Temperature, 99; pulse, 140, poor tension. Labor had begun. Cervix was dilated to size of a dollar; normal presentation. Fœtal heart 176, very irregular and feeble.

She had a convulsion at 9.15, which began with the muscles of the face and then became general, in this respect differing from the first case in which the convulsive movements began in one of the extremities. This convulsion was severe and lasted for three minutes. She was unconscious for ten minutes. At 10.15 she had another convulsion of about the same character, and again another at 11.15. Her condition was now becoming rapidly worse. Pulse more frequent, and temperature had risen to 103. At 12 noon there was another severe convulsion. It was interesting to note that these convulsions were within a few minutes of being exactly one hour apart.

I now determined to make a lumbar puncture and inject cocaine for the purpose of controlling the convulsions if possible. At 12.10, 15 gtts. of a 2 per cent. solution was injected. This was done while she was in a temporary coma following her last convulsion at 12. The technic was the same as in the first case. I obtained several drops of cerebro-spinal fluid with my puncture and so was sure of being in the canal. Immediately following the injection the patient's condition was not quite so good. She had an attack of vomiting, and became somewhat cyanosed. This was apparently due to spinal shock, and is not of rare occurrence. This condition, however, lasted but a short time, when she regained consciousness and her general condition rapidly improved.

At 12.20 there was complete analgesia from the waist down, but no spastic condition of the extremities as noted in the first case. The cervix was dilated very rapidly and strong pains came on, the child being delivered at 1 P.M., still born. The patient said that at no time did she experience any sense of pain.

The patient's general condition improved considerably after the delivery until 2 P.M., when she had another convulsion two hours after the spinal cocainization, the convulsion previously being from forty-five minutes to one hour apart. Whether or not the cocainization was responsible for prolonging the interval, I cannot say, it appeared that way, however, the patient not having had sedatives of any description during this period.

After this convulsion there was a decided change for the worse. She became rapidly jaundiced, and semi-unconscious between periods of marked delirium, amounting almost to mania. Pulse became frequent and irregular. A pint of salt solution was given subcutaneously and attempts made to sweat her, but with poor success. At 3 there was another convulsion. At 3.15 she was given ¼ gr. of morphine per hypo. to quiet the delerium. This, apparently, had no effect. At 4 P.M. she had another convulsion, and again another at 4.20.

At 4.30 I opened the median basilic vein of either arm, withdrew 1½ pints of blood from the left arm and simultaneously injected one quart of normal salt solution into the other. The venesection and saline transfusion were followed almost immediately by a marked improvement. The pulse dropped to 100, became regular and of good quality, within one-half hour the stupor had almost entirely disappeared, she became able to talk and understand what was said to her. At 6 P.M. the temperature was still 103, pulse 102. There was no reappearance of the convulsion.

During the night she perspired freely in hot air baths given every four hours.

There had been entire suppression of urine during the day and up to 1 o'clock the next morning, when she was catheterized and 4 oz. of urine withdrawn, which was found to be loaded with albumin and casts and contained bile. At midnight the temperature had fallen from 103 to 99, pulse still 100. At 7 A.M. she was again catheterized and 12 oz. of urine was drawn, almost black in color.

The improvement by morning was marked. The jaundice was appreciably diminished. Absolutely no mental disturbance. Headache entirely gone, but vision still somewhat impaired.

The recovery from now on was rapid. The general treatment consisted of hot air baths every four hours, in which she perspired very freely, salt solution per rectum and large quantities of potass. bitartrate by mouth.

At the end of twenty-four hours she had voided (26 oz.), 800 c.c. of urine; 540 grains), 36 grams of total solids, (255 grains), 17 grams of urea. Albumen considerable, and casts numerous. The next twenty-four hours (over 5 pints), 2,700 c.c. (935 grains), 62 grams of total solids (315 grains), 21.6 grams of urea; and only a good trace of albumen and a few granular casts. Next twenty-four hours (between 4-5 pints), 2.100 c.c. of urine and (375 grains), 25 grams of urea; very few casts. No casts found from the

23rd to the 26th, after which they reappeared for a few days along with an increased quantity of albumen. This relighting of the renal irritation was accompanied by a rise of temperature for a few days, reaching 103½ on one occasion. However, by means of vigorous flushing of the kidneys and frequent sweats the nephritis subsided accompanied by a corresponding subsidence of temperature.

From now on her recovery was uneventful, the patient at present being able to get up and walk about.

I have thus far been unable to find a report of spinal cocainization in eclampsia or convulsions of any kind, and as far as I know these are the first cases on which it has been tried. Marx makes the suggestion that it might be used advantageously in convulsions by quieting the peripheral nerves, when examination and external manipulations seem to provoke an attack. He, however, does not report of its having been used for that purpose.

The question now arises as to how to account for the effects which the spinal injections appeared to produce. The cases reported, being only two in number gives very little room for definite deductions, and many points must be left in question.

In the first case, we have to deal with the element of apparently severe spinal shock as manifested by the marked spastic condition of the extremities and increased reflexes. This may have been an element in controlling the convulsions and should be considered, for the convulsions reappeared immediately after the disappearance of this spastic condition. The most plausible reason seems to be a sedative influence on the peripheral nerve trunks. To support this theory is the fact that while she was well under the effects of the cocain, no external manipulation or irritation provoked any convulsion, but apparently just as soon as the effects of the cocain wore off, external manipulation provoked one. This was demonstrated by the spasm of the left leg alone, which was induced by irritation to the left plantar surface, the fact that it was limited to the left leg alone may or may not have been due to the cocain's inhibiting influence. On three other occasions, after the effect of the cocain had apparently passed off, external manipulation provoked an attack; once catheterizing, once irritating the right hand and once irritating the right foot. This same irritation directly after the cocain did not provoke a convulsion.

Why the second injection of cocain in the first case was not followed by the same results as the first injection in causing, apparently, an immediate cessation of the convulsion, I do not know. The intervals between the convulsions, however, were lengthened and within two and one-half hours they ceased entirely, no sedative of any kind being used.

In the second case we have a prolonging of the interval between the convulsions for two hours, and an easy, painless labor taking place in that time. There was apparently some spinal shock. connected with this injection, but not nearly to the extent of the first case. The recovery in this last case was unquestionably due to the venesection and saline transfusion which were followed by immediate and marked improvment. There has been, up to the present time, absolutely no untoward effects of the cocain. Sensation and muscle force being absolutely unimpaired.

Since reporting the last two cases I have had occasion to observe in private practice another case of puerperal eclampsia in which venesection and saline transfusion were performed, resulting in the recovery of the patient, who was, at the time, practically moribund.

This patient was 31 years of age, an American, had been confined twice previously, 8 and 6 years respectively. During first pregnancy was somewhat bloated and had one indefinite convulsion following the delivery.

Six years ago, during the second pregnancy, was again bloated. For three months previous to this last delivery which was on the 2nd of May, 1901, she had swelling of the extremities. This gradually became more marked particularly during the last two weeks. Examination of the urine failed to reveal any albumen or casts until May 1st, the day previous to the delivery, at which time here was found a large amount of albumen and numerous casts. On these findings preparations were made to induce labor without delay. No mechanical means were necessary, however, for after free catharsis and a hot pack, labor pains started and she was delivered 7.30 A.M., May 2nd.

This made the delivery between two and three weeks premature, for she was not due until the 20th of May. The labor was normal. The patient felt well until the afternoon when she complained of intense headache, dizziness, and had double and impaired vision. Patient said face felt drawn to one side. Examination of a sample of urine showed a few granular and epithelial casts and a large amount of albumen. The patient was again thoroughly purged and sweated. During the night of the 2nd became very dull and nearly comatose at times. On the following morning, still complained of severe headache and considerable dimness of vision. Twitching of the face became more marked, and at 10 A.M. she had a severe convulsion lasting three minutes. After the convulsion the twitching ceased, and the patient remained in a semi-comatose condition until 3.30 P.M., when it reappeared. At this time temperature was 99, pulse 100, full and of extremely high tension. From now on patient's condition became rapidly worse; she became jaundiced, relapsed into a complete coma and had marked Cheyne-Stokes respiration. The respiratory center seemed to be particularly affected. On several different occasions she stopped breathing entirely and only by the use of artificial respiration and oxygen were we able to start the breathing again. At 5 P.M. the pulse was still high tensioned and twitching of the face marked.

I now opened the median basilic vein of the left arm and withdrew two pints of blood, extremely dark in color and very thick, and injected three pints of normal salt solution. During the operation she had another severe convulsion.

There was an immediate change for the better in the condition of the patient, after the transfusion. Pulse softened greatly and became somewhat more frequent, respirations became more regular and within one hour patient had regained consciousness enough to speak. She perspired very freely after the saline transfusion. At 8 P.M pulse was 124, tension still marked. She was now given 8 drops tr. Veratrum Viride. At 8.30 pulse had fallen to 100, but was still tense. Five drops more of veratrum viride were again given. Pulse rapidly fell, and at 9.30 was 60; for a short time reaching as low as 48, was very feeble and irregular, necessitating considerable stimulation, patient's condition being very poor at that time. At 11.30 pulse had come up to 72 and was of fairly good tension. Patient began to rally again. Early in the morning 1 pint of salt solution was given subcutaneously. She perspired very freely during the entire night. By morning consciousness was rapidly returning; she was able to ask and answer questions and take nourishment by mouth. Headache was gone but still had marked double vision. Twice during the day over a pint of salt solution was given subcutaneously and on both occasions she started to perspire profusely directly after the injection. The urine which was almost entirely suppressed on the day of the convulsion, there not being over ½ oz. the entire day, now began to be eliminated. At 10 A.M. there was 4 oz. In the next 24 hours there was nearly 50 oz.; each sample showing less albumen and casts, jaundice rapidly subsided.

After regaining consciousness, patient noticed a slight numbness of entire left side of body and extremities with some loss of power, this was probably due to a slight meningeal effusion at the time of the convulsions and has persisted to the present time along with a fairly marked diplopia. Convalescence continued uninterrupted. At the end of ten days, the nephritis had entirely subsided and patient sat up on the 12th day.

This case as well as the last one, are certainly good demonstrations of the value of venesection and saline transfusion in desperate cases of eclampsia for in both life had been despaired of.

STRABISMUS AND ITS MANAGEMENT.

BY J. H. WOODWARD, B.S., M.D.,
New York.

EVERY physician must advise strabismic patients from time to time respecting the management of their condition. For the guidance in that regard of those who need it, my purpose, in this paper, will be to outline the subject as simply as possible, divesting it of technicalities and stripping it of abstruse considerations, which are of interest to ophthalmologists alone, and yet, making it sufficiently complete in detail to attain the object in view.

Strabismus is an abnormality of the eyes, in which the lines of sight do not meet at the object upon which the gaze is fixed. When the lines of sight meet between the observer and the point observed, the condition is known as convergent strabismus. When the lines of sight either do not meet at all, or meet beyond the point observed, the condition is called divergent strabismus. The line of sight may rise above, or it may sink below, the observed point. In the former condition, we speak of an upward strabismus; while, in the latter, we speak of a downward strabismus. Combinations of convergent and divergent strabismus with upward or downward strabismus occur. Of these combinations, the most often observed is that in which the eye turns upward and inward.

In deference to custom, we are all using a terminology in discussing this subject that ought to be considered obsolete. The terminology proposed by Stevens some years age, leaves nothing to be desired, and it should supplant the older and less scientific terms. Thus *heterotropia* signifies a deviation of any kind; *esotropia* signifies a deviation toward the nose; *exotropia* signifies a deviation toward the temple; *hypertropia* signifies a deviation of one of the lines of sight above the observed object, while *hypotropia* signifies that one of the lines of sight falls below the point of fixation.

From the etiological point of view, cases of heterotropia are divided into two classes; namely, cases of paralytic strabismus, and cases of non-paralytic strabismus. Among the examples of paralytic strabismus there are cases in which the suspension of function is complete, and there are others in which it is incomplete. Non-paralytic deviations may be alternating, in which case either eye may fix its gaze upon the object looked at; or the strabismus may be unilateral, and constantly confined to the same eye.

Paralytic strabismus is sequential to a pathic or a traumatic lesion of the ocular muscle itself, of its motor nerve, or of the origin of the nerve. When the paralysis depends upon a lesion of the muscular tissue, the cause is frequently a contusion, or a laceration, or an incised wound of the orbit. Rheumatism is the most common pathic condition of the ocular muscles, resulting in suspension of their function. And of these cases, rheumatic paralysis of an external rectus is observed most frequently.

The function of the motor nerves may be suspended by penetrating traumatisms of the orbit, and by fractures at the base of the skull. Pathic changes in the membranes covering the base of the brain, and diseases of the bones composing the base of the skull, also may interrupt the function of the motor nerves of the eyeball. A large percentage of the lesions are syphilitic, and, in general, a provisional diagnosis of that disease may be entertained as a working hypothesis. Other diseases of the meninges and cranial bones are observed as etiological factors in para-

lytic strabismus. Among them may be mentioned as especially important, pachymeningitis, leptomeningitis, tubercular meningitis, cerebral tumors and cranial osteomata.

The central lesions which destroy the function of the ocular muscles are also frequently of syphilitic origin. Thrombosis, embolism, and rupture of cerebral blood-vessels often cause paralysis of ocular muscles, usually in conjunction with paralysis of other parts of the body.

Paralytic strabismus occurs as a congenital defect. In certain cases this paralysis may have been due to traumatisms of the orbit sustained during delivery. In other cases, however, there can be no reasonable doubt that the function of the affected muscle had been arrested *in utero*.

Ocular paralyses are due also to acute systemic diseases, especially typhoid fever. Diphtheria often gives rise to paralysis of the accommodation, but it is rarely followed by paralysis of muscles that rotate the eyeball.

The symptoms of paralytic strabismus may be enumerated in the order in which they attract attention, thus, confusion of sight, vertigo, double vision, impairment of the sense of perspective, uncertainty of gait while both eyes are open, deviation of one of the lines of sight from the object observed, restricted movement of the eye, confused feelings in the head, and sometimes, headache. Their onset is sudden, and they are fully developed early. The most characteristic and troublesome of them is the diplopia.

The nature of non-paralytic strabismus is still less simple. In a marked number of cases, hypermetropia, myopia, or astigmatism is the predisposing condition. It occurs as a sequence of ulceration of the cornea, even during the stage of inflammation and photophobia. It is induced by opacities of the media of the eye, and by other conditions which reduce the visual power of one of the eyes below that of the other. Its beginning is often observed during or immediately following an attack of whooping cough. We find, moreover, that after the hypermetropia, myopia, or astigmatism has been corrected by properly-fitted glasses, even in many cases which were primarily due to errors of refraction, the squint still persists. Then, the persistency of the deviation will be the result of contracture of the over-acting muscle and its investing capsule, or to enfeeblement of the antagonistic muscle through continuous stretching of its fibers, or to both conditions combined.

These are the common apparent causes of non-paralytic strabismus. It is not pretended that this summary may be regarded as anything more than a sufficient explanation of the commonest phenomena, for the guidance of those who are not especially interested in the subject. Further discussion of it would involve technicalities which the limits of this paper do not permit.

The principal symptom of non-paralytic strabismus is deviation of the line of sight of the squinting eye away from the object upon which the gaze is fixed. This constitutes a deformity, which, in marked divergent strabismus, may be almost hideous. And yet, however great the deviation, the movements of each eye separately are not restricted in any direction in the same sense as they are in paralytic cases. When the squint is alternating, the visual power of both eyes is about equal. When it is fixed, the squinting eye is nearly always more or less amblyopic, and the ophthalmoscope reveals no reason why its visual power is not normal, or why it may not be raised to normal by lenses. As yet, I have not seen a case of non-paralytic strabismus in which the patient *complained* of double vision. Indeed, it is often extremely difficult to make the patient see double. They do not use both eyes simultaneously. The images that are photographed upon either the central or the peripheral portions of the retina of the deviating eye are not consciously perceived without an effort of the will. And the longer the period through which the squint is permitted to exist, the less sensitive to visual impressions does the eye become. On the other hand, if the heterotropia be corrected and proper glasses worn, a fair degree of acuteness of sight may be gradually restored to many of these eyes.

A differential diagnosis of paralytic from non-paralytic heterotropia does not present any important difficulties. It is evident that the sudden appearance of annoying double vision is the most significant indication of paralysis of the ocular muscles. In non-paralytic cases, patients do not complain of diplopia, although in certain instances it may be proven to exist notwithstanding that they are unconscious of its presence. Restriction of motion toward the side of the paralyzed muscle is the second important differential factor. There is some restriction of movement in the direction opposite to the deviation of the squinting eye in the very marked non-paralytic squint. But in paralytic cases it is the almost invariable rule that limitation of the excursions of the eyeball is so distinct as to suggest paralysis immediately. Moreover, the sudden onset of confusion of sight, the sudden impairment of the sense of perspective, the sudden inability to walk without closing an eye, or turning the head so as to suppress the false image, complete the differential diagnosis of paralytic from non-paralytic strabismus.

From a psychical point of view, the significance of paralytic heterotropia is much greater than that of the non-paralytic variety. It is quite as important from a sociologic point of view. For the greater number of patients are adults, engaged in useful and profitable occupations, whose ability to continue their pursuits with their customary vigor is either suspended, or greatly impaired by the ocular defect. Furthermore, life is often endangered by the lesions upon which the paralysis depends. In every case, a favorable prognosis as regards permanent and complete recovery from the squint should be made with great reserve.

In non-paralytic heterotropia, two factors are especially important to the patient: (1) The ex-

istence of deformity that distinguishes him from his associates; and, (2) The exclusion of one of his eyes from participation in binocular vision. Inasmuch as these squints are developed in childhood their significance from a psychic and sociologic point of view should not be overlooked. For children are made sensitive, shy, and timid by the attention which unthinking adults and barbarous playmates bestow upon their deformity. Others become morose, resentful, and suspicious. These facts are common to both sexes. The cosmetic importance of normal and attractive eyes to the female needs no elaboration. These deformities, then, may prove to be serious handicaps in the struggle for existence, a disadvantage that is intensified by loss of binocular vision. If we comprehend, therefore, the significance of these drawbacks to individuals afflicted with stabismus, we must understand that the condition materially diminishes their importance as members of society.

Much misapprehension respecting the relationship of non-paralytic strabismus to "eye-strain" has been revealed in ophthalmologic literature even within recent dates. From what has been said already, it must be clear to every one that "eye-strain" cannot be due to non-paralytic heterotropia, for in such deviations there is no effort of binocular vision. In cases of paralytic heterotropia, when the paralysis is not complete, instinctive efforts to suppress diplopia develop the symptoms of muscular asthenopia. But, when the paralysis is complete, I would not classify the symptoms in any case as belonging to that category.

In the management of paralytic strabismus, a thorough determination of the extent of the paralysis and a probable diagnosis of the underlying lesion must be made at the very outset. I submit to you the rational proposition that this may be accomplished only by those who are conversant with both cerebral pathology and the intricacies of ophthalmology as well. A complete diagnosis is essential; for there are cases which are hopeless from the beginning, and there are others which may be relieved by the application of proper measures. In syphilitic cases, anti-syphilitic remedies, in rheumatic cases anti-rheumatic remedies are indicated. Sometimes medicines that diminish the blood-pressure must be prescribed. In other words, the internal therapeutics of ocular paralyses depends upon the nature of the lesion and the extent of its manifestations.

Locally, we are compelled to exclude the deviating eye from the act of vision, in order to suppress the diplopia. When the paralysis is confined to one or two muscles, and especially if it be incomplete, prisms, stereoscopic exercises, and electrical stimulation at the proper time, are indicated. Later, if the paralysis be confined to a single muscle, and should it prove incurable, advancement of the paralyzed muscle may be considered. The operation is most likely to succeed in cases of incomplete paralysis; but it should be remembered that diplopia from ocular paralysis is very difficult to subdue.

The management of non-paralytic strabismus consists, first, in a proper correction of the errors of refraction of both eyes. Atropine should be used until the accommodation is complete paralyzed. And all the resources of ophthalmosophy should be brought to bear to insure a perfect correction of the refraction. Were it not for the fact that many physicians are in the habit of sending patients to opticians to have their glasses fitted, it would be superfluous to comment further upon this point. It is incomprehensible that an intelligent and conscientious physician should give such advice to one of his patients. But it is done regularly by a very large percentage of our colleagues; more frequently, I believe, in large cities than in smaller communities. What criticism would be heaped upon ophthalmologists if, in a perfectly comparable and precisely as reasonable a way, they were to advise patients to consult a druggist for their various ailments! You would struggle to find words suitable to express your indignation, I am sure. The welfare of thousands of patients depends more upon the adjustment of correct lenses to their eyes by a trained ophthalmologist who understands pathology as well as optics, than upon all the medicines in all the drug shops in this city. It seems sometimes that efforts to press home these facts have been expended in vain.

In a comparatively small number of cases, the constant use of proper lenses will subdue the heterotropia. In a certain percentage of cases, relief may be obtained by the addition of exercises with the stereoscope to the treatment. In the majority of cases, one or more operations will be required to complete the cure. When the strabismus is alternating and well-marked, both eyes must, as a rule, be operated upon. When the strabismus is unilateral, operation upon the deviating eye will usually prove sufficient. Division of an ocular muscle is indeed a small matter which any surgeon can accomplish without much effort. But that is not what we mean now-a-days by the treatment of strabismus. The doctrine that, given a convergent squint for example, we must divide one internal rectus, and if that does not cure we must then divide the other, has resulted in so many examples of divergence, that the traditions of those days of heroic ignorance still carry distrust of ophthalmic surgery to the minds of many patients and physicians. The truth is, each case is a problem by itself, to be studied with care and solved by cautious deliberation and sound judgment. In general terms, we have to deal, on the one hand, with an over-acting and often contractured muscle, and, on the other, with an over-stretched and enfeebled muscle. The principle that ought to control operative interference is that we should weaken the one by judicious tenotomy and strengthen the other by advancement of its insertion. Upward deviations, so often overlooked

in convergent strabismus, must be corrected by "graduated" tenotomies, in order that the objective sought may be attained.

The ideal result consists, not only in reduction of the apparent squint, but in the establishment of normal binocular excursions of the eyeballs, and in restoration of binocular vision. It is readily comprehensible that such an ideal may not be attained by a *coup de theatre!* That it may be attained by painstaking endeavor, is one of the many achievements of modern ophthalmosophy.

Treatment of heterotropia should begin as soon as the child is old enough to wear glasses. Even operative interference need not be postponed, as some authors advise, until the sixth or seventh year; for it is frequently advantageous to begin such work at an earlier age. On the other hand, the fact that strabismus has persisted twenty years or for a longer time does not contraindicate an operation for its correction.

In conclusion, it may be said that heterotropia is vastly more difficult to deal with satisfactorily than most cases of cataract, notwithstanding that the truth of the proposition depends upon the conception of what constitutes a good result. Operations for heterotropia should not be undertaken by any physician who is not familiar with the anatomy, physiology, and pathology of the visual apparatus. And only those operators whose technic is characterized by scrupulous surgical cleanliness should ever be permitted to engage in such work.

THE VALUE OF BLOOD EXAMINATION IN APPENDICITIS.*

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ALTHOUGH appendicitis has perhaps as rich a literature as any ailment of the body, and each symptom and sign has been exhaustively considered time and again, nevertheless there is no other inflammatory condition which presents so many and difficult phases and requires so much judgment and medical sense on the part of the physician and surgeon.

During the past five years, I have had the opportunity of seeing many appendix cases, some of them my own, most of them with other physicians. In all I have made blood examinations, and where it was possible, in those operated upon, have witnessed operations and in some fatal cases, have obtained autopsy. In this way I have been able to confirm the blood diagnosis in most of the cases here presented. The results have been so gratifying that I have no hesitancy in ranking blood analysis as first and foremost among the diagnostic methods at our command.

As Robin† aptly quotes in his paper, "To operate or not to operate" is the perplexing question, and the blood analysis gives us a quick and sure method of determining whether pus is or is not present. It informs us whether the case in hand is catarrhal in nature, subsiding or becoming suppurative in character, by estimating the number and kind of leucocytes. This presence or absence of leucocytosis, as a means of differentiating between appendicitis and non-inflammatory conditions, is invaluable. Frequently it is necessary to differentiate between lesions of the appendix, gall-stone colic, right kidney colic, obstruction of bowel, fecal impaction and inflammatory conditions such as typhoid.

In three of my cases, there were no localized symptoms and typhoid was suspected. The presence of a leucocytosis of over 16,000, with increase of the polymorphous or adult cells, led us to suspect a suppurative process. One patient had no temperature, but a high pulse rate with pain and rigidity, yet the appendix was gangrenous. In this case examination of the blood was of great value, as the presence of leucocytosis led to immediate operation.

In three cases the disease started with a distinct chill; one patient had chilly sensation with regularity and was supposed to have malaria, and in one patient, a child, the question whether he had appendicitis or obstruction of the bowel came up. A leucocytosis of 22,000 was found, and this settled the question.

One young man had no temperature and no especial increase in pulse rate, but several ounces of pus were discovered upon operation. The blood showed 23,000 leucocytes.

These questions of differential diagnosis are of every-day occurrence, and apply to suppurative inflammation elsewhere as well as in the appendix. Different individuals react differently to the same infection and the clinical picture may be very difficult to interpret. It is in these questionable cases that the knowledge of the presence or absence of a polymorphous leucocytosis is most valuable. It is as a method of differential diagnosis that examination of blood is especially applicable, as well as to determine whether pus is present and operation is necessary.

It would seem as if a few words on the physiology and pathology of the blood might be apropos.

Normal blood as it exudes is bright in color, coagulating in from three to four minutes, and under the microscope the cells are surrounded by a fibrin network, the amount of which can only be learned by experience. The red cells number 4,500,000 to 5,000,000; the white cells about 7,500 or one white to 600 or 700 reds. The white cells upon staining are found to be made up of polymorphous cells 66 per cent., small lymphocytes 25 per cent., large lymphocytes 6 per cent., and eosinophiles 1 per cent. to 2 per cent.

The hemoglobin and blood plaques are of secondary importance and have no especial significance as regards this paper.

Nothing shows the wonderful mechanism of the body more than the constant way the blood

* Read before the New York State Medical Association.
† A. Robin, *Medical Record*, Oct. 27, 1900.

is kept at about these figures in the normal individual. The white cell may be increased physiologically after meals, a digestive leucocytosis, during pregnancy and after the bath.

The cell that interests us in inflammation is the polymorphous cell, called by Metchnikoff "phagocyte" on account of its propensity to seize and digest organisms and foreign particles that gain entrance to the body. They have other functions undoubtedly in the way of furnishing antitoxins to neutralize the products of bacterial growth. At any rate they are increased in number in certain inflammatory conditions of the body, and especially those caused by pyogenic organisms, so that if we are careful to rule out pregnancy and the digestive leucocytosis, a leucocytosis occurring in an individual who has vomiting, rigidity, induration, pain and tenderness localized in region of the appendix confirms the diagnosis of inflamed appendix.

We can conclude that under 15,000 leucocytes means a catarrhal process.* Cabot reports four out of seventy-two cases when, on account of low resisting power on part of individual, pus was present with low leucocyte count. I have not seen any of these cases. They are uncommon and may be properly disregarded.

Among the cases here reported three were operated on after subsidence of symptoms and evidence of previous inflammation found. In three cases, second and even third counts were made. In one of them, the increase of leucocytes from 11,200 to 15,600, with increase in general symptoms, led to operative interference; a suppurative appendix being disclosed. Three cases, second counts, revealed decrease in leucocytes and amelioration of symptoms and signs with recovery from attack. One case in which the count was 13,000 with recovery from that attack, and the second count, some months later, 16,800, pus was evacuated by bowel before operation could be performed. This patient had a third attack subsequently and died within a few hours of peritonitis.

The purulent cases, 13 in number, revealed counts ranging from 15,600 to 28,000, and in all these cases the blood was decidedly darker than normal, the fibrin network much increased, and the time of coagulation shortened. The blood was examined in three of these cases within 24 hours and one three days, with counts of 18,000, 15,600, 21,600, 22,000; the appendix was gangrenous, and a small amount of pus with local peritonitis was revealed by operation.

Case I. *With Typhoid Symptoms.* — Male about 45 years old, after five days' illness. No localized symptoms, continuous high temperature, high pulse rate, delirium. Patient in typhoid condition. Blood very dark and concentrated, coagulation rapid. Leucocytes, 24,000; polymorphous cells, 86 per cent. Patient died a few hours later. Autopsy, gangrenous appendix, multiple liver abscesses.

Case II. *With Typhoid Symptoms.*—Male, 48 years old, examined after several weeks' illness. Slight chilly sensations; no localized symptoms; a diagnosis of typhoid had been made; no Erhlich. First count, reds, 4,800,000; whites, 16,000; polymorphous, 90 per cent. Diagnosis of pus; no operation. Second count, 47 days later; condition serious; whites, 17,500. Third count, 15 days later; whites, 17,500.

Patient gained in strength; while working, seized with acute abnormal pain, ascites, death. Autopsy, appendix purulent, thrombosis of portal, multiple liver abscesses.

Case III. *With Typhoid Symptoms.*—Female, aged 30; illness of several weeks. Diagnosis of typhoid fever. Emaciated, remittent temperature; pulse rate high, 140; septic appearance. Blood examination, leucocytes, 28,000; polymorphous cells, 90 per cent. Operation, appendix perforated; death; autopsy. Abdominal cavity filled with pockets of pus.

Case IV. *Onset with Distinct Chill.*—Female, aged 50, history of chill evening before, somewhat apathetic; temperature of some degrees; pulse accelerated. Reds, 4,480,000; whites, 18 hours after attack, 21,600; polymorphous cells, 91 per cent.; small lymphocytes, 9 per cent. Operation, gangrenous appendix, small amount of pus.

Case V. *Onset with Distinct Chill.*—Miss B., history of chill evening before, pain and tenderness in McBurney region. Temperature, 98. Reds, 5,300,000; whites, 5,720; polymorphous cells, 48.8 per cent. No pus, no operation; uninterrupted recovery.

Case VI. *Onset with Distinct Chill.*—Male, aged 20; history of previous attack of abdominal colic. Was exposed to cold rain; taken with chill, abdominal pain and induration. Temperature, A.M., 100; P.M., 101.6; pulse, 100; some rigidity. Examination of blood, leucocytes, 22,000; polymorphous cells, 87.5 per cent. Operation same evening; gangrenous appendix, about one ounce of pus found.

Case VII.—Male, 22 years; vague history of previous colic; pain in abdomen; slight rigidity; no temperature; pulse, 120; patient's general condition not characteristic. Examination of blood made within 24 hours of onset. Reds, 15,600; polymorphous cells, 82 per cent. Operation same day, gangrenous appendix.

Case VIII.—Male, aged 5; two weeks' illness, vomiting and diarrhœa; some temperature last few days; obstinate constipation with tympanites. Question whether obstruction of bowels or appendicitis. Examination of blood: Reds, 22,000; polymorphous cells, 90 per cent. Operation, several ounces of pus; perforated appendix.

Case IX.—Male, aged 40, pain and abdominal tenderness; some rigidity. Examination of blood: Reds, 4,900,000; leucocytes, 11,200; polymorphous cells, 82 per cent. Vomiting next day. Blood examination: Leucocytes, 15,600; polymorphous cells, 87 per cent. Pulse accentuated. Temperature raised. Operation, purulent appendix; localized peritonitis; ounce of pus.

Case X.—Female, aged 25. Last few days

* "Clinical Examination of Blood," Cabot.

pain in right iliac region; temperature 100.6, pulse, 90; some induration. Examination of blood: Reds, 4,800,000; whites, 13,000; polymorphous cells, 95 per cent. Some months later, second attack; examination of blood: whites, 16,800; polymorphous cells, 87 per cent. Operation advised, but pus was dicharged through bowel so that no operative procedure was employed. Few months later the patient had another attack and died within 24 hours from peritonitis.

CASE XI.—Female, aged 35; history of abdominal pain a few days before, easily controlled and apparently not amounting to anything serious. Pain coming on again with temperature of few degrees; pulse accelerated. Blood examination: Reds, 4,550,000; whites, 16,000; polymorphous cells, 81 per cent. Operation not undertaken on account of general condition of patient. Blood examination 24 hours later: Whites 20,000; polymorphous cells, 90 per cent. Temperature higher; pulse up. Seventy-two hours later, amelioration of symptoms; pulse and temperature down. Whites, 19,600; polymorphous cells, 89 per cent. Vomiting, temperature up, pulse high. Whites, 26,800; polymorphous cells, 97 per cent. Death, general peritonitis.

CASE XII.—Male, aged 24; history of abdominal pain, rigidity, some temperature previous week. Patient gaining. Upon taking a little food he had return of abdominal pain. When seen, no temperature, pulse slightly accelerated, general condition excellent. Blood examination: Reds, 4,636,000; whites, 23,200; polymorphous cells, 84 per cent. Operation advised, localized peritonitis, several ounces of pus found.

CASE XIII.—Boy aged 9. Illness of 72 hours; colicky pain, tenderness in right ilium, induration, rigidity, temperature elevated, pulse slightly accelerated: Reds, 4,816,000; whites, 11,000; polymorphous cells, 61 per cent. Catarrhal appendix, recovery.

CASE XIV.—Male, aged 50 years; usual symptoms, temperature of 2°. Examination of blood at night: Reds, 5,168,000; whites, 13,840; polymorphous cells, 87 per cent. Next morning, meanwhile subsidence of symptoms: Whites, 6,800: polymorphous cells, 69 per cent. Operation later, evidence of catarrhal appendicitis.

CASE XV.—Male, 28 years, ill for five weeks, pain and tenderness in right ilium; chilly sensation, a question of malaria: Reds, 4,448,000; whites, 14,400; polymorphous cells, 90 per cent. Diagnosis of probable catarrhal appendix. Operation, removal of inflamed appendix; inflammation catarrhal in nature.

CASE XVI.—History of previous attacks, usual symptoms. Blood examination: Whites, 15,600; polymorphous cells, 85 per cent. Operation advised and refused. Second examination of blood: Whites, 10,400; polymorphous cells, 69 per cent. Lost sight of patient.

CASE XVII.—Female, aged 30. Pain in right iliac region, some temperature; pulse accelerated; history of previous attacks; examination of blood: Whites, 5,000; polymorphous cells, 60 per cent.; no operation; recovery.

CASE XVIII.—Male, aged 28. Pain and tenderness in right ilium; temperature of some degress; pulse accelerated. Examination of blood: Whites, 18,000; polymorphous cells, 96 per cent. Operation, purulent appendix, few ounces of pus.

CASE XIX.—Male, temperature, etc. Examination of blood: Reds, 4,800,000; whites, 19,800; polymorphous cells, 93 per cent. Operation, appendicitis, localized peritonitis.

CASE XX.—Female, aged 13. History of several attacks of localized pain; temperature of 103, coryza and other symptoms pointing to measles. Question whether appendicitis or not. Blood examination: Whites, 6,300; polymorphous cells, 64 per cent. Next day measles eruption.

We can therefore state that examination of the blood yields information of great value in appendicitis:

1. As a means of differential diagnosis in obscure cases, a leucocytosis would mean that an inflammatory process was at work.

2. Where a diagnosis has been made, we can learn whether the process is operative or non-operative in nature.

3. A leucocytosis under 15,000 in the great majority of cases means a catarrhal process.

4. A leucocytosis of more than 15,000 in the great majority of cases means a purulent process.

5. Increasing leucocytosis means a spreading inflammation, and operation probably indicated.

155 Allen Street.

EXCLUSION OF IMMIGRANTS.

The Commissioner of Immigration has decided to attempt to exclude consumptives in early stages as well as those whose disease is well advanced, the latter having been excluded under earlier rulings, usually on the ground that they are likely to become public charges. It is doubtful whether this decision will have any other practical effect than to advertise still further the dangerously contagious character of the disease, and thus perhaps impose additional hardships upon those who are suffering in incipient stages and who are not provided with the means for seeking a cure under favorable conditions.

In the same class of doubtful expedients should be placed the decision of the New York State Health Department, to take an enumeration of the people in the State afflicted with tuberculosis. No such census can possibly approach completeness, and there is ample knowledge already to justify far more radical action by State and local governments than is likely to be taken.—*Charities.*

A GENERAL ANTIDOTE FOR POISONS.

Borate of sodium mixed with milk is said to be the best general antidote after the stomach has been emptied. For vegetable poisons permanganate of potassium in 1 per cent. solution. For carbolic acid, vinegar. This is said to act well also externally.

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THE NEW YORK STATE JOURNAL OF MEDICINE is published on the first day of each month by The New York State Medical Association. It supersedes the annual volume of *Transactions* formerly issued by the Association. It aims to be a direct medium of communication between the members of the Association, and to widely disseminate Association news. Scientific Articles, Clinical Memoranda, and News Items of interest are solicited for publication. Communications should be typewritten. Reprints of Original Articles will be furnished at cost price, provided a request therefor accompanies the manuscript. Price-list on application. The Committee on Publication does not hold itself responsible for individual views of correspondents.

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To the Members of the New York State Medical Association:

The annual meeting of the New York State Medical Association, to be held at the Academy of Medicine in New York City from the 21st to the 24th of October, will close an eventful year in the history of the association. During the current year eighteen new county associations have been organized, and at the annual meeting for 1902 it is justifiable to predict that the State Association will have its representative county organization in every county of the State of New York, giving each county through the New York State Medical Association its affiliation and representation in the American Medical Association. To thoroughly organize the profession of the State by completing the county organizations should be the self-imposed duty of every member of the profession who accepts the axiom that in united action there is strength. The upholding of the high standard of medical education which now prevails, and the protection of the public in all matters pertaining to health can only be achieved by thorough organization.

The unanimous selection of Saratoga Springs as the place of meeting of the American Medical Association in June, 1902, was a vote of recognition of, and confidence in, the New York State Medical Association which every member of the profession in the State should appreciate. We should bend every energy to make it the most successful meeting in the history of that great body which has justly been called "the only representative and really national medical association of America."

In the spirit of devotion to its best interests, and in the full confidence of complete triumph, the meeting of the State Association in October of this year should command the largest attendance in its history.

JOHN A. WYETH, M.D.,
President of the New York State Medical Association.

THE LATE PRESIDENT MCKINLEY.—It is beyond the province of the medical press to keep its readers informed on matters of general news which the daily papers treat so much more promptly and exhaustively. Comment on such matters in professional journals is often injudicious, and seldom productive of any good; but it is only right to make some passing allusion here to our recent national tragedy.

Our readers, like other good citizens, heard of the assassination of President McKinley with feelings of horror and consternation. After the first shock we felt a pardonable professional pride in the fact that this president could be treated so much more skilfully than had been possible in the case of his martyred predecessors, and that members of our profession had taken up the awful responsibility thrust upon them without any evidences of indecision or uncertainty. We read the bulletins announcing his continued improvement with perhaps less assurance than our fellow citizens not so conversant with the uncertainties of abdominal surgery, but still with optimism. We were slower than the public to credit the startling change of condition that preceded the end and to give up hope, because there had been but the slightest indications of the approach of any such calamity. And when at last it became certain that the plot of a criminal without even the excuse of insanity had been successful, and that a murder conceived in cold blood had been accomplished, our feelings were identical with those of our fellow citizens. We shared the consternation of a nation deprived without warning of its head; we shared the sympathy for the invalid suddenly deprived of her lover and protector; above all we shared the personal regret for one great as a public officer but greatest and most beloved as the noblest type of good citizenship and true manhood.

If anything, we have cause for a deeper regret than others because the incident which at first promised to unfold to a wondering world the mar-

velous advances in surgical skill since Garfield's time has instead distinctly tended to lessen the respect of the public for our whole profession. It was not any lack of surgical skill that we have to deplore, for so far as we can see nothing was done or left undone that was not based on good judgment of all knowable conditions. It was not the issue of bulletins of too optimistic a tone, for it was a public duty at such a time to offer every possible encouragement. We give all praise to the operator who did all that human skill could do to save his distinguished patient. He would have received our felicitations had the outcome been happier as he now has our sympathy.

To what, then, is due the grave public disapproval seen in every country newspaper? Though our colleagues did not show any lack of surgical skill, they exemplified one of the great evils of divided responsibility—they talked too much. It is difficult enough under ordinary circumstances to elude the ubiquitous reporter, and the pressure for interviews must have been tremendous, since hardly any escaped; but nothing of even personal profit was to be gained by the exploitation of theories in the public press, and not content with offering incomplete individual theories many variations of opinion were published as to actual facts. So evident did this discord become that the impression prevails that Mr. McKinley's case was not understood; that the treatment was wrong, and the result unnecessarily fatal. These conclusions are, in our opinion, without basis of fact, but nevertheless we have to add them to our professional handicap. The public has always thought that the lamented Garfield died of too many doctors, and it is no fault of our colleagues if their freedom of speech does not lead it to add a second notable instance in support of its theory.

This same tendency to talk too much has been evident far beyond the circle of the president's advisors. We have nothing but praise for the surgeons who testify publicly to the unquestioned surgical skill of the men under fire and urge us to assume till we have evidence of the contrary that this same skill was exercised in the case of our president. But what can we say of the men who if not distinguished themselves are at least the assistants of distinguished men, who from a distance of 500 or 1,000 miles offer criticisms in the public press? We suppose they hope to extend their local reputation, but we regret the fact that in our profession more than in any other are so many men whose education has not extended to the point of differentiating fame from notoriety.

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Cortland County Medical Association.—The regular monthly meeting of the Cortland County Association was held during August at the office of Dr. Phillip M. Neary, Cortland, N. Y., at which the serum treatment of diphtheria was discussed by the members present. The subject was of particular interest, because the disease had been prevalent to some extent in the community during the summer. The September meeting was held on the 20th at the office of Dr. C. D. Ver Nooy, Dr. S. J. Sornberger presiding in the absence of the president, Dr. H. S. Braman. Dr. Ver Nooy read a paper on the Uses of Digitalis, and Dr. F. W. Higgins one on Wounds Penetrating the Abdominal Cavity, which was a general review of the subject. Both papers were ably discussed and the meeting was a most interesting one. The next meeting of the association will be held the third Friday in October.

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Duties of Secretaries.—The attention of secretaries of county associations is called to Section 5, Article VIII. of the State Association by-laws, which reads as follows: The secretary of each county association shall make an annual report to the secretary of his district branch association, which shall contain the names of the Fellows and their alternates and the member of the nominating committee of such branch association for his county association.

Secretaries of district branch associations should make their reports in accordance with the following, Section 6, Article VII.: The secretary shall perform the usual duties pertaining to that office and shall present an annual report of the proceedings of the district branch association to the secretary of the State Association and shall give therein the names of the Fellows and their alternates and the members of the nominating committee of the State Association for his district branch association.

It is important that these reports, if not already made, should be sent in at once, as the secretary of the State Association must present his report at the annual meeting of the association on October 21st.

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Ulster County Medical Association.—The regular quarterly meeting of the Ulster County Association was held at the Kingston City Hospital, Kingston, N. Y., August 20, 1901, Dr. Frederick Hühne, presiding. The following papers were read and discussed: A Case of Pachymeningitis Interna, by Dr. Mary Gage-Day; The Relationship of the Mosquito to Malaria and Kindred Fevers, by Dr. J. L. Preston; The Operation for Hernia and Its Complicated Forms, by Dr. H. Van Hoevenberg.

The next meeting will be held the third Monday in November, at a place and time to be announced later.

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The Need for a Lay Business Manager.—The rapid growth of the New York State Medical Association during the past year has not been accomplished without an immense amount of work by the officers and members of the various committees, and as the association continues to grow, in like manner will the work continue to increase. No one will deny that the success of

any organization largely depends upon its officers; nor can it be denied that many medical men are anxious and willing to serve in any official capacity, and a call for a meeting to nominate future presidents and secretaries, etc., will always bring forth one or more candidates for every vacancy that may exist. But how many of the candidates realize what is demanded of them in the way of time, labor and thought, to successfully carry on and build up a State or county medical association? Those who have any real appreciation of the work know that appeals to the pride, to the good nature, the unselfishness and the universal willingness of medical men to help each other and to forward the interests of medical work will frequently bring forth candidates who will devote the necessary time, while they also too frequently know that the men best fitted for the work cannot be induced to serve, and that as a result the positions are often occupied by those who give no thought or time to the business; and the association suffers.

This very properly brings up the question: should not the business part of the work be done by a layman or business manager? Is it right to ask a fellow-member to give up, not hours, but days and weeks of his time to the non-medical work of the association, addressing circulars, sending out notices of meetings, soliciting advertisements for a directory or a journal, soliciting members, urging those in arrears to pay up, reading proof, etc.?

In a small society the work may be light, comparatively, and no necessity exist for outside help beyond, perhaps, the occasional use of a stenographer or clerk, but in a large association such is not the case. It also frequently happens that records, contracts and valuable papers are mislaid in being passed from one officer to his successor. Letters on business matters should receive prompt attention, answers should be copied, etc., but how is this possible for a busy doctor, unless he neglects his professional work to promote the interests of the association he represents?

It is also admitted by all that to successfully carry on any business venture it is necessary to have the best of business men to manage it; men must grow and learn what is needed, must profit by the experience of past mistakes, to be able to take advantage of many little things, which is impossible when the incumbent of the office is changed yearly. Experience is costly; and while doctors are learning they or the men they represent have to pay for this experience.

Some will suggest paying the officers who have the onerous work to do, but a moment's reflection will show that this cannot be a satisfactory solution of the problem, for a paid employee does his work for three reasons: (1) his love for it; (2) his hope of greater financial reward; or (3) because he knows that if it is not done his employment will cease. All will admit that, so far, the medical men who have done the work did it because it was a labor of love. This ceases the moment the work is paid for, and it is then done for one of the other two reasons. The higher reward financially can never be such as to encourage an ambitious medical man to seek higher pay as a clerk, for his returns from professional work will be far greater; and no one would think of the employer and employee being one and the same. How often would the employer find fault with his own work or discharge himself because it was poorly done?

The policy should always be directed by the medical men, but the detail work, the business portion, would be better done by a competent layman, and it is to be hoped that the New York State Medical Association, at its next meeting, will realize this, and inaugurate a movement which cannot but be beneficial in its results to all concerned.

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Orange County Medical Association, September Meeting.—The regular monthly meeting of the Orange County Medical Association was held at the office of Dr. M. C. Conner in Middletown, New York, on Wednesday, September 18, 1901. There were present Drs. Wise of Turner, Taylor of Otisville, William Evans and L. G. Distler of Westtown, F. W. Dennis of Unionville, W. T. Seeley of Amity, D. B. Van Wagener of Suffern, W. E. Douglas, M. C. Conner, I. H. Lent and C. I. Redfield of Middletown, and, by special invitation, Dr. J. Riddle Goffe of New York City.

The meeting was called to order by the president, Dr. M. C. Conner. After reading of the minutes of the previous meeting by the secretary, Dr. C. I. Redfield, the association proceeded to elect Dr. W. T. Seeley, of Amity, New York, to membership. The secretary was instructed to cast a ballot in his favor for the association. He was duly declared elected. Communications were received from Dr. W. S. Russell, Dr. F. H. Wiggin and Mr. Arthur MacDonald, of Washington, D. C.

Dr. Worthington S. Russell, who was elected to membership at the meeting August 21, 1901, regretted his inability to be present at this meeting. Dr. F. H. Wiggin stated that the Directory of New York, New Jersey and Connecticut would be ready soon for distribution.

Mr. Arthur MacDonald requested the endorsement by the members of a resolution presented in his letter:

Resolved, That we are in favor of the establishment of a Psycho-Physical Laboratory in the Department of the Interior at Washington for the practical application of physiological psychology to sociological, jurisprudential and abnormal or pathological data, especially as found in institutions for the criminal, pauper and defective classes and in hospitals and also as may be observed in schools and other institutions.

Dr. W. E. Douglas reported that additional copies of the by-laws were in the hands of the secretary for distribution.

The secretary called attention to the fact that the next meeting of the Orange County Medical Association coincided with one of the days on which the New York State Medical Association meets in New York. It was decided to adjourn this meeting until the third Wednesday in November, and that meeting to be held in Newburgh, N. Y., as the Fifth District Branch Association holds its meeting there at that time.

The scientific session was opened by a very instructive address by Dr. J. Riddle Goffe, of New York. He spoke at some length on "The Vaginal Route of Attacking the Pelvic Diseases of Women." He described in detail his incision for attacking and doing conservative operations upon the uterus and appendages as follows:

"A short transverse incision is made anterior to the cervix uteri and a short distance from the junction of the vaginal wall with the cervix. A longitudinal incision is now made at right angles to the primary one extending nearly the whole length of the anterior vaginal wall. Dissecting the bladder from the vaginal mucous membrane and from the uterus up to the uterovesical ligament, which is cut across and the peritoneum opened, the bladder is stripped off the uterus by finger dissection. No sound is used in the bladder. Through this opening the fundus uteri is delivered and by hooking a finger in the broad ligament the appendages are brought down and the whole field of operation brought under the eye at the vulva. If there are adhesions in the cul-de-sac a transverse incision posterior to the cervix will admit of their free division by the finger or knife." The angiotribe was spoken of with favor as a means of hemostasis.

Drs. R. H. Taylor, W. E. Douglas, M. C. Conner, C. I. Redfield and D. B. Van Wagenen discussed the paper of Dr. Goffe.

The president then introduced Dr. D. B. Van Wagenen, of Suffern, N. Y., who gave a very interesting account of the outbreak of "Cuban itch" or "smallpox" at that place and Hillburn, N. Y., where he is health officer.

Dr. Van Wagenen's paper was discussed by Drs. Douglas and Conner. Dr. Van Wagenen also illustrated his remarks by photographs of the cases. Dr. Conner also presented photographs of the disease, kindly loaned by Dr. Sigmund Pollitzer, of New York, who addressed the Orange County Association August 21, 1901, on the subject of smallpox and kindly inspected a case of the disease in which there was some doubt as to the diagnosis.

There being no further business before the association, after giving each of the speakers a hearty vote of thanks the meeting adjourned until Wednesday, November 20, 1901.

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The New Medical Directory.—The Medical Directory of New York, New Jersey and Connecticut for 1901, the third of the annual series, has just been issued by the New York State Medical Association. In every way it is creditable to the committee having it in charge, but especially is credit due the secretary of the State Association, under whose direct editorial management the volume has been produced.

Few can appreciate the immense amount of labor and the annoyances the preparation of such a Directory entails. From the beginning the object in view has been the production of a book that would be complete in every particular; that would be a standard of reference; that would be an improvement on former editions, and a credit to the Association. Work was begun more than one year ago. A force of assistants was engaged, card-catalogues purchased, and every step reduced to an exact system. In the compilation of the lists and other data previous editions of the Directory, as well as similar works, were not relied on, but official lists from Association sources, from county clerks of the several State districts, Board of Health and Regents' registrations, and from private sources were made use of. In the principal cities of the State a personal canvass was made, and the resulting lists compared with the official lists. In addition, many thousand postal cards were sent out, each asking for correct information as to address, college and date of graduation, office hours, appointments, etc. Those returned filled out by the recipients have been filed away and will be of great value in the preparation of future editions.

Every effort has been made to supply absolutely correct and up-to-date information. An elaborate system of checking has been followed, whereby the street and alphabetical lists, as well as the society membership lists, have been made to correspond. In those instances in which errors have unavoidably occurred, the source has largely been the failure of physicians to furnish the data requested of them.

The make-up of the book differs materially from that of its predecessors. The list of physicians of Manhattan and the Bronx and the street lists are printed on white paper; those of the Boroughs of Brooklyn, Queens and Richmond on yellow; New Jersey on pink; and Connecticut on blue, thus facilitating ready reference. The alphabetical State lists and information regarding hospitals, dispensaries, medical societies and the like, are grouped under the several State headings, and such other information as that relating to national medical organizations, location of piers in New York, Health Board stations in New York, postal rates, ferries, consuls, quarantine and Board of Health regulations, etc., is given space. The charter and by-laws of the New York State Medical Association, an abstract from the medical laws of the State of New York, a list of medical examiners, a list of members of the American Medical Association residing in New York, New Jersey and Connecticut, and much more valuable information is also given.

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Unlike former editions of the book, the present Directory contains the names of all legally

registered physicians in the States which it covers, without regard to the school of practice. The Preface explains this departure as follows: "Among the reasons for this action on the part of the Committee is their belief that one of the chief objects for the existence of State medical associations is to help enforce the medical laws of their States, not the least part of which duty should consist in the prosecution of illegal practitioners; therefore, it is important that the officers and members of these associations should have at hand a convenient and reliable list of legal practitioners in their States in order that these violators of medical practice acts can be readily located for the purpose of prosecution."

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The total number of names contained in the lists of physicians is 12,644, of which 10,112 are in the State of New York, 1,472 in New Jersey, and 1,060 in Connecticut. Of the 10,112 names in the New York State lists, 3,991 are credited to the Boroughs of Manhattan and the Bronx, 1,410 to the Borough of Brooklyn, 118 to the Borough of Queens and 60 to the Borough of Richmond, a total for Greater New York of 5,579, which leaves the number of physicians residing in the rest of the State outside of this territory 4,533.

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Every member in good standing of the State Medical Association receives a copy of the Directory free of charge. By "good standing" is meant those who have paid their annual dues to date. The treasurer reports that many are yet delinquent, and as the mailing list is made out from a comparison with his receipts, those in arrears will fail to receive a copy until such arrears are made good. In some instances the treasurers of local associations have not yet remitted to the treasurer of the State Association the dues collected by them. Those members who have neglected to pay their dues are earnestly requested to do so to their local treasurers at once. The edition of the Directory is limited, and already an unexpected demand for it has arisen from pharmacists and others, so that the supply on hand promises soon to be exhausted. To those not members of the State Association the price is $2.50. An order sent to the Committee on Publication at 64 Madison avenue, New York, will secure a copy.

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THE EVILS OF SUBSTITUTION.—The following has been received from a correspondent; it is worthy of serious thought on the part of every member of the medical profession:

"There have appeared in the recent issues of several of the leading medical journals editorials in relation to the evils of substitution, and I take this opportunity of putting myself on record as being in thorough sympathy with the general sentiment expressed in these editorials.

"It has seemed to me for a long time that the medical journals could do their subscribers and their advertisers an immense amount of good by calling forcibly and frequently to the attention of the physician the evils that result from substitution.

"The subject has been handled with considerable skill by several of the journals, and there is little left to add to their argument, but too much stress cannot be laid upon the necessity of impressing on the doctor that he himself is the man who is responsible in a great measure for substitution and that he himself is the man and the only man to stop this practice.

"If physicians would take the trouble to find out for themselves just what article they want, and then insist upon the druggist supplying that article, there would soon be little trouble from this source. The doctor prescribes a given remedy or drug and his patient takes what the druggist gives him; he has no way of knowing whether he has been imposed upon and seldom gives the matter a thought. The physician usually seems to think that his duty ceases when he writes his prescription; if he could be brought to understand how dependent his patient is, not only for the advice he receives but for the medicine he obtains, much good would result.

"The retail druggists' profits in the aggregate are not large; the percentage profit on individual sales frequently is, and the incentive to supply cheap articles is a strong one. I am sorry to say that I know of my own knowledge that many of the manufacturing chemists and supply houses do not hesitate to supply inferior goods. Let any certain article get a reputation and the retailer is importuned by the wholesaler to buy some other article represented to be just as good at a less price, on which the wholesaler or supply house will make a better profit than they would on the standard article. Increased profit appeals strongly to the retailer as well, and he feels that he is within his rights as long as this particular article is recommended by the firm that supplies him with his drugs; and this inferior product, starting from a general manufacturer, passing through wholesaler and retailer, finally finds its way into the patient's hands and the doctor is surprised to find that his patient does not improve or does not respond to his treatment. The next move of the physician is to change the medicine; it never or rarely occurs to him that the trouble may be due to the quality of the medicine which his patient has obtained.

"Until the physician has a proper appreciation of this whole affair the evil cannot be remedied. It is of little or no use to attempt to punish individual druggists, for they are often not the really guilty ones, but a general interest by the profession at large would soon force the druggist to know that he had to supply what a doctor calls for or be driven out of business.

"Many of the advertisers in medical journals are proprietary men, men who devote their time and attention to the manufacturing of a few specialties. It goes without saying that a manufac-

turer of one or two articles will become more skilful than a manufacturer of several hundred articles, and it is to this skill, which experience and a liberal expenditure develops, that many of the so-called proprietaries or special articles owe their success. These are the people that the medical journals depend on to a great extent for support and in most cases they are actuated by a very honorable desire to appreciate and acknowledge this support. In no way could more be accomplished than to impress on their subscribers the importance of determining for themselves what they want and insisting upon getting what they want.

"It would really require but little effort on the part of the physician, for one or two assertions would soon stop the practice with any druggist, and the result would be in all ways satisfactory—satisfactory to the manufacturer who suffers, not merely a financial loss, but in reputation; satisfactory to the doctor because he would be able to know and depend on just what certain medicines and remedies would do; and satisfactory to the patient because fewer mistakes and less suffering would ensue.

"I have gone somewhat fully into this subject because I believe it to be an important one and I believe that the medical journals should appreciate the situation and should do all in their power to assist so worthy an effort."

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Chautauqua County Medical Association, September Meeting.—The tri-annual meeting of the Chautauqua County Association was held at Jamestown, N. Y., at the Sherman House, Tuesday, September 17, 1901. The following papers were read and discussed: Some Compound Fractures of the Leg, by Dr. W. C. Duke, of Ripley; Eclampsia, by Dr. Wm. M. Bemus, of Jamestown; Chronic Interstitial Nephritis, by Dr. Edgar Rood, of Westfield; Imbalance of the External Ocular Muscles, and Its Effect on the General Health, by Dr. Arthur G. Bennett, of Buffalo; Maternal Infant Feeding, by Dr. J. W. Morris, of Jamestown; Constipation, by Dr. V. D. Bozovsky, of Dunkirk.

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Changes in the Medical Directory.—Since the publication of the new Medical Directory of New York, New Jersey and Connecticut by the State Association, the Committee has been advised of the following additions and changes: *Additions:* Dr. Myles Tierney, 69 West 45th street, New York. Hours, 9-1 and 5-6. Telephone, 3900, 38th street.—Dr. Dean Seaman, Beaver Dams, Schuyler County, New York. *Changes*: Dr. Edmund Prince Fowler from 38 West 40th street, New York, to 18 East 58th street.—Dr. Anna Lukens from 1068 Lexington avenue, New York, to 485 Central Park West.—Dr. Louis R. Eichberg from 225 West 106th street, New York, to 241 West 141st street.—Dr. T. H. Newland from 10 West 66th street, New York, to 218 West 112th street.—Dr. Susan R. Pray from 139 South 9th street, Brooklyn, to 135 South 9th street.—Dr. William A. Valentine, 34 West 38th street, New York (not 45 West 38th street). Dr. A. A. Boyer, New York, removed to 12 West 40th street. *New members of the State Association:* Fifth District Branch Association, Orange County, Dr. Worthington S. Russell. Rockland County, Dr. Robert R. Felter, Pearl River; Dr. Daniel Burr Van Wagenen, Suffern. Nassau County, Dr. Hermann G. Wahlig, Sea Cliff. Orleans County, Dr. E. M. Tompkins, Knowlesville; Dr. F. L. June, Waterport. *New members of the American Medical Association:* Dr. Ferdinand M. Jeffries, 955 Trinity avenue, New York. Dr. Francis W. McGuire, 1540 Main street, Buffalo. *Change of Office Hours*: Dr. R. H. M. Dawbarn, 105 West 74th street, New York, until 10 A. M., 5 to 6 P. M. *Died:* Dr. F. J. Tompkins, of Lansingburgh.

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Rockland County Medical Association Organization.—The Rockland County Medical Association was organized August 6th at Nyack, New York. A large number of physicians of Rockland County met at the St. George Hotel, Nyack, and under the auspices of the Fifth District Branch Association perfected the organization. Owing to his inability to be present, Dr. Emil Mayer sent a letter of regret, and asked Dr. E. L. Cocks, secretary of the Fifth District Branch, to call the organization to order. Dr. John A. Wyeth, of New York, was made temporary chairman, and Dr. N. B. Bayley, temporary secretary.

The following officers were elected: President, Dr. Gerrit F. Blauvelt, of Nyack; vice-president, Dr. Daniel B. Van Wagenen, of Suffern; secretary and treasurer, Dr. Norman B. Bayley, of Haverstraw; fellow, Dr. S. W. S. Toms, of Nyack; alternate, Dr. Charles D. Kline, of Nyack. The following committees were also appointed: On public health and medical charities, Drs. George A. Leitner, of Piermont; D. B. Van Wagenen, of Suffern; S. S. Carter, of Haverstraw. On legislation, Drs. E. H. Maynard, of Nyack; R. R. Felter, of Pearl River; F. E. Pagett, of Spring Valley. On new members, Drs. D. B. Van Wagenen, J. H. Crosby, of Haverstraw; F. E. Pagett, G. A. Leitner. On by-laws, Drs. E. H. Maynard, D. B. Van Wagenen, N. B. Bayley.

After the election of permanent officers the association went into open session and brief addresses were made by Dr. John A. Wyeth, president of the New York State Medical Association and the American Medical Association; Dr. John W. S. Gouley, librarian of the New York State Medical Association, and Dr. G. F. Blauvelt, president of the Rockland County Medical Association. The association then adjourned, to meet October 2nd at Spring Valley, New York, to adopt the by-laws and transact such business as may be necessary.

Among those present were the following: Dr. John A. Wyeth, Dr. John W. S. Gouley, Dr. Edmund L. Cocks, and Dr. Charles E. Denison, of New York; Dr. Milton A. Conner, of Middletown, president of the Orange County Medical Association, and Dr. C. S. Payne, of Liberty, president of the Sullivan County Medical Association. After adjournment a collation was partaken of by the physicians at the St. George Hotel.

The enthusiasm of the profession in Rockland County was marked. Of twenty-four regular medical practitioners in the county, eleven have become members of the county organization and others have promised it their support. There is no doubt that the association has begun in earnest its work among the physicians of the county and will be a source of lasting influence where for many years there has been only dormancy in the profession.

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Lay Interest in the Association.—We of the medical profession have been prone to think that the general public takes very little interest in the professional affiliations of its medical advisers, but the laity is beginning to perceive that a physician's medical knowledge is kept abreast of the times very largely by his association and intercourse with other physicians and that there is apt to be a direct proportion between his membership in organizations and his medical knowledge. The following, quoted from the *Orleans American* for September 12, 1901, published at Orleans, N. Y., is notable as showing the interest that is being taken by the laity in the matter:

"The large increase in membership of various medical organizations in the last year has attracted considerable attention. In speaking about this fact recently a well-known physician of this city said to a *Tribune* reporter:

" 'In this country there are one hundred thousand medical men, many thousands of whom, realizing the importance of compact organization in the advancement of medical science and art, in ministering to public health, in regulating general sanitation, in checking epidemics and in bettering medical legislation, are for the first time joining State associations, whose membership they are helping to increase with such unprecedented rapidity that every one of these affiliated associations will be certain to secure full representation in the house of delegates of the American Medical Association at its session in June, 1902. Judging from the signs of the time it is safe to predict that very soon the American Medical Association will be counting its members by scores of thousands. Then the medical profession will be in a position to exercise the immense power of thorough organization for the good of individuals as well as of the whole nation. It is apparent that "the same zeal is animating all, that the general good may become the good of all," and this is owing to the impetus given to organization by the national association. Heretofore the scattered profession had but little influence with the people, whose masses were too often led astray, medically, by designing individuals, some of whom, becoming members of legislatures, were ever ready to advocate the worst medical and sanitary laws, much to the detriment of the public. This rapidly progressing organization of the medical profession throughout the land will be certain to prevent the continuance of baneful legislation and of other evils from which the profession and the people have so long suffered, and will be as certain to effect great individual and general good in other respects.' "

"The foregoing sketch of the progress of medical organization, reprinted from the *New York Tribune* of the first of September, is worthy of the special attention of both our lay and medical readers. In this colossal organization, which is destined to accomplish great results for the good of the people as well as the medical profession and its individual members, New York State should at once come to the front and cause to be formed a county medical association in each of its sixty-one counties, as a branch of the State Association and thus be in constant touch with the national association. We are informed, by a prominent member, that, in the past few months, the New York State Medical Association has more than doubled its membership—but this is not enough; the Empire State should have a representation proportionate to its magnitude and bring forward at least five thousand medical men through its State Association by the rapid formation of new county associations where none exist, and by filling to their utmost capacity those that are in operation. It appears that the union of the existing county associations constitutes the recently reorganized State Association, so that every county shall have a voice in the management of the State organization, which is already in affiliation with the American Medical Association, to whose house of delegates it has the privilege of sending representatives. Every physician in sympathy with the movement should labor diligently for its promotion and use his influence in all directions to further the purposes of this laudable undertaking.

"We have in Orleans County at least fifty physicians who are eligible to membership, and yet we have no county organization in affiliation with the great national association. Are our physicians indifferent to the needs of their profession and of the public?"

* * *

The following, clipped from the Rochester, N. Y., *Post-Express* of September 18, 1901, will also be read with interest:

"The statement was made to-day that Monroe county doctors are not in affiliation with the American Medical Association. There has appeared in the medical journals and in some of the newspapers of the large cities evidences that medical men are awakening to the possibilities of

complete organization in the direction of better general sanitation and greater protection to the public from the ravages of contagious diseases as well as the importance to the profession itself of defense against blackmailing malpractice suits.

"A doctor said this morning: 'At the last annual meeting of the national body of physicians and surgeons in St. Paul a reorganization of that assembly was effected so that now there is complete and adequate representation from the county organizations, in every State of the great national association which meets annually.

" 'The State of New York was honored at the last meeting by the election of Dr. John Allan Wyeth, of New York City, as president, and by the selection of Saratoga Springs as the next annual meeting place.

" 'In each State there is but one accredited representative organization, and from its membership members of the house of delegates of the national association are selected. In this State this organization is called the New York State Medical Association, of which at one time Dr. E. M. Moore, of this city, was president.

" 'The activity, power and growth of the State Association during the past year have been remarkable, until now our physicians through the State are becoming aroused to the needs of the public and are beginning to realize the strength of a united medical profession toward better public health.

" 'Monroe county seems to be conservative in the extreme, though a few of our best physicians have independently become members of the association. It can hardly be charged that the great body of our physicians are indifferent to the public needs or that the physicians of the State outside Monroe county are able to offer all the good suggestions. It would seem, therefore, that it is a matter of great importance that steps be taken toward the formation of a regular county organization at once, for certainly our city should be kept in touch with all that goes to benefit its general health.' "

* * *

District Branch Association Meetings.—Following are the dates upon which the several district branch associations of the State Association will hold annual meetings: First District Branch, at Utica, June 3, 1902; Second District Branch, at Troy, May 29, 1902; Third District Branch, at Syracuse, June 19, 1902; Fourth District Branch, at Chautauqua, July 1, 1902; Fifth District Branch, at New York, May 6, 1902.

* * *

City Hospital Appointments, Binghamton.—Dr. L. D. Farnam and Dr. J. M. Farrington have recently been appointed consulting physicians to the Binghamton City Hospital.

* * *

Annual Dinner of the State Association.—The annual dinner of the Association will be given on the evening of Wednesday, October 23rd, at the Murray Hill Hotel. Members who have not yet secured their seats should do so at once by remitting the subscription price (five dollars for each seat) to the Chairman of the Committee on Arrangements Dr. Irving S. Haynes, 1125 Madison avenue, New York.

* * *

Little Falls Hospital.—The Little Falls, N. Y., Hospital Association is negotiating for a site for its new hospital building, plans for which have already been prepared.

Correspondence.

CONVICTION OF ILLEGAL PRACTITIONERS.

To the Editor of the New York State Journal of Medicine:

Sir: The inquiries from various county associations as to the method of convicting illegal practitioners perhaps require a word for general information.

There are various classes of illegal practitioners, as follows: non-registered in county clerk's office; practising under another's name; practising after commission of a felony; practising under diplomas improperly secured or issued, or by persons not physicians; advertising the title of M.D. or doctor in such a way as to deceive the public. All these are subject to arrest, conviction and fine. This fine, when paid, shall be turned over to the county association making the complaint (Laws of 1895, Chapter 398).

The first step to be taken is to carefully examine the register of physicians, which, by law, must be kept by the county clerk in each county of the State, to ascertain if the person under suspicion has registered his name. The county clerks see that no person is registered without proper credentials, at least such credentials as are regular on their face.

It having been discovered that the person is not registered, it becomes necessary to obtain the evidence that he actually practices medicine. This can be done either by requesting some person who has been under the man's treatment to come forward for the public good, or by securing some one to act as a detective to obtain the required evidence.

In order to convict, there must be all of the three essential requisites present, to wit: First, the examination; second, the diagnosis or treatment, which, of course, is the mental or intellectual process; and third, the prescription, which for use as evidence should be either an ordinary written druggist's prescription or the medicine itself, compounded by the individual, together with the directions for its use.

The statement, carefully made out, should give in detail what questions were asked, the hour and date of calling, the amount paid—in fact, a concise statement of what was said and done. This should then be presented to the district attorney of the county, with a request that he proceed in the case, or personally by an officer of the association to a justice of the peace. To have the record complete the proceeding should be entitled "The People of the State of New York, upon complaint of the ..... County Medical Association," which will show to the county treasurer or other official that such county association made the complaint and is entitled to receive the fine.

It is best in most instances to begin the proceeding with a summons, instead of a warrant, issued by a police magistrate, justice of the peace, or whoever has authority in the various counties to issue such court process.

The local district attorney should be notified of the date of the hearing, and he will take charge of it. The evidence, in the shape of a prescription or vial, should be at once carefully sealed and the date and name of the person securing it written thereon.

If any county association is contemplating such prosecution I will gladly forward a complete set of blanks upon application. JAMES TAYLOR LEWIS,
Counsel New York State Medical Association.
120 Broadway, New York, September 25, 1901.

Book Reviews.

INTERNATIONAL CLINICS. A quarterly of clinical lectures and especially prepared articles on Medicine, Neurology, Surgery, Therapeutics, Obstetrics, Pediatrics, Pathology, Dermatology, Diseases of the Eye, Ear and Nose and Throat, and other Topics by leading members of the medical profession throughout the world. Complete in four volumes. Cloth, $2 each, half leather $2.25. Philadelphia: J. B. Lippincott Company. 1901.

A copy of Volume 2 of the Series of 1901 is before us, and we can easily say that the present volume is fully up to the high standard, which for the past eleven years has made this publication so valuable to the practicing physician. The contents is very satisfactorily divided up amongst the different departments of medical investigation, and it is perhaps invidious to single out special articles where all are so good, but especially timely, at least, are the articles on Spinal Anesthesia, by Prof. Tuffier of Paris, than whom no one has had a wider practical knowledge of the subject, and on Variola, by Prof. Jay Schamberg of Philadelphia, which, by the way, contains some beautiful illustrations. Ramon Y. Cujae has a valuable clinical lecture on the Mechanism of Mental Operations and more practical if not more interesting are the contributions of M. Allen Starr. Fraenkel and Fournier on various phases of Locomotor Ataxia. All considered, the volume in conjunction with the others of the series will play an important part in keeping the busy practitioner abreast of the latest developments of medical thought.

* * *

MERCK'S 1901 MANUAL OF THE MATERIA MEDICA. A ready-reference pocket-book for the practising physician and surgeon. Containing names and chief synonyms, physical form and appearance, solubilities, percentage strengths and physiological effects, therapeutic uses, modes of administration and application, regular and maximum dosage, incompatibles, antidotes, precautionary requirements, etc., of the chemicals and drugs usual in modern medical practice; a comprehensive collection of prescriptions, embracing also the newer remedies of established merit; a classification of medicaments; and miscellany, comprising poisoning and its treatment, metric system and tables, etc. Price, $1.00. New York and Chicago: Merck & Company, 1901.

The scope of this Manual is fully explained by the above quotation from the title-page. While issued primarily in the interests of the well-known firm whose imprint it bears, it has a distinctive value as a book of reference aside from the commercial. It contains 282 pages of closely printed matter, and is divided into four parts. Part I. includes the materia medica, alphabetically arranged, as in actual use to-day by American physicians. Part II. contains prescription formulæ arranged alphabetically under the titles of the various pathologic conditions. Part III. is devoted to a classification of medicaments according to their physiologic actions. Part IV. contains miscellaneous information, including an essay on poisoning and its treatment; a description of the metric system, with tables of equivalents; a chart showing the diagnostic points of difference between the eruptive fevers; a new obstetrical chart; and a table showing the frequency of the pulse and respiration at different ages. The book reflects great credit on the publishers.

PRELIMINARY PROGRAM OF THE EIGHTEENTH ANNUAL MEETING OF THE NEW YORK STATE MEDICAL ASSOCIATION, WHICH WILL BE HELD AT THE ACADEMY OF MEDICINE, NEW YORK, OCTOBER 21-24, 1901, INCLUSIVE.

FIRST DAY, MONDAY, OCTOBER 21ST.
Luncheon at 1 P. M.

Afternoon:
Meeting of Council and Fellows.

Evening:
Meeting of the New York County Medical Association, to which the members of the State Association are invited.

SECOND DAY, TUESDAY, OCTOBER 22D.
Morning Session, 10 o'clock.
Introductory and Business Session.
Papers.

The Correction of Deformities following Osteitis of the Knee.
Wisner R. Townsend, of New York.

Echinococcus Disease in North America.
Irving P. Lyon, of Buffalo.

Appendiceal Fistula.
John B. Deaver, of Philadelphia.

The Reception of Delegates from other States.
Luncheon at 1 P. M.
Afternoon Session, 2 o'clock.

Symposium on Malignant Growths.

The Clinical Course of Cancers with reference to their resemblance to Inflammatory and Infectious Processes.
Albert E. Woehnert, of Buffalo.

The Present Status of the Infectious Theory of Malignant Neoplasms.
George Blumer, of Albany.

The Estimation of the Malignancy of Tumors with Reference to the Reported Cures of the Disease.
James Ewing, of New York.

The Treatment of Sarcoma by Toxin Injections.
William B. Coley, of New York.

The Treatment of Carcinomatous Growths by Caustics.
Andrew R. Robinson, of New York.

The Surgical Treatment of Cancer.
Francis W. Murray, of New York.

Malignant Disease of the Nose and Accessory Cavities.
Joseph H. Gibb, of Philadelphia.

Intrathoracic Growths.
Alexander Lambert, of New York.

Cancer of the Large Intestine.
James P. Tuttle, of New York.

Malignant Disease of the Penis.
Henry H. Morton, of Brooklyn.

Malignant Disease of the Uterus.
William M. Polk, of New York.

Evening Session, 8:15 o'clock.

The Daily Medical Inspection of Schools.
Frederic William Loughran, of New York.

Perforation of Gastric Ulcer, with Report of a Case successfully operated upon sixty hours after perforation.
Lucius W. Hotchkiss, of New York.
Alcohol as a Therapeutic Agent at the beginning of the Twentieth Century.
Frank Wellington Dennis, of Unionville.
The Diagnosis and Management of Pelvic Inflammation.
A. Brothers, of New York.
Skin Diseases of special interest, illustrated by the Stereopticon.
Grover W. Wende, of Buffalo.
Collation.

THIRD DAY, WEDNESDAY, OCTOBER 23RD.
Morning Session, 10 o'clock.

Symposium on Arteriosclerosis.
Arteriosclerosis; Importance, Definition, Etiology and Symptomatology.
Charles E. Nammack, of New York.
Retinal Findings in Disorders of General Nutrition.
L. A. W. Alleman, of Brooklyn.
Cardiac Manifestations of Arteriosclerosis.
DeLancey Rochester, of Buffalo.
Management and Therapeutics of Arteriosclerosis.
Egbert Le Fevre, of New York.
Blood Examination from the Standpoint of the General Practitioner.
Frank W. Higgins, of Cortland.
Surgical Malposition of the Gall Bladder.
E. D. Ferguson, of Troy.
President's Address:
Comments on some New Surgical Methods.
John A. Wyeth, of New York.
Luncheon at 1 P. M.
Afternoon Session, 2 o'clock.

The Value of Bacteriological and Pathological Research in Diagnosis, Prognosis and Treatment in Practical Surgery.
Iodophilia.
Richard C. Cabot, of Boston.
Laboratory Differential Diagnosis in Surgery.
Simon Flexner, of Philadelphia.
Modifications in the Methods of Operative Surgery resulting from Laboratory Research.
Joseph D. Bryant, of New York.
The Use of the Pneumatic Cabinet in the Treatment of Diseases of the Heart.
Charles E. Quimby, of New York.
Gunshot Wounds of the Hip-Joint by Reduced Caliber Projectiles.
Maj. L. A. LaGardi, of Washington, D. C.
Asthma of Blood Origin and not Nerve or Reflex.
G. N. Jack, of Depew.
Conservative Surgery in the Treatment of Tubercular Glands of the Neck.
Parker Syms, of New York.
A Reconsideration of the Pathogenisis of Concomitant Strabismus.
Alvin A. Hubbell, of Buffalo.
Acne.
Edmund L. Cocks, of New York.

FOURTH DAY, THURSDAY, OCTOBER 24TH.
Morning Session, 10 o'clock.
Differential Blood Count in Fractures.
Wm. G. Le Boutillier, of New York.
Prostatic Obstruction to Urination. Its Remedy by Enucleation of the Diseased Parts.
J. W. S. Gouley, of New York.
Discussion opened by Parker Syms, of New York.
Typhoid Cholecystitis, with Report of Cases.
Charles G. Stockton, of Buffalo.
In conjunction with Albert T. Lytle, of Buffalo.
Uterine Prolapse.
Frederick Holme Wiggin, of New York.
What Percentage of Rheumatic and Gouty Patients Develop fatal Pulmonary Phthisis?
Thomas F. Reilly, of New York.
Luncheon at 1 P. M.
Afternoon Session, 2 o'clock.

The Diagnosis of Mitral Stenosis.
H. C. Buswell, of Buffalo.
Resection of the Cervical Sympathetic in the Treatment of Glaucoma; its present status.
Wilbur B. Marple, of New York.
A Durham-tube in the Right Bronchus.
E. D. Ferguson, of Troy.
Indications for Treatment in Uterine Myomata.
George Tucker Harrison, of New York.
Brief Comments on the Materia Medica, Pharmacy and Therapeutics of the year ending July 1, 1901.
Edward H. Squibb, of Brooklyn.

For announcement of Annual Dinner see page 224.

REDUCTION OF FARE.—The Trunk Association has agreed that persons from points in New York State who pay one full fare of 75 cents or upwards, visiting New York City at the time of meeting, shall be returned at one-third of the fare by the route traveled.

Certificates must be obtained from ticket agent at starting point (or nearest station issuing through tickets to place of meeting) and be deposited with the Secretary of the Committee on Arrangements as soon as the members arrive at the Academy of Medicine. It must be understood that the reduction is contingent on an attendance of not less than 100 persons holding certificates, showing payment of full first-class fare.

If the necessary minimum is in attendance, and the certificates are properly validated, the holders will be entitled to the reduced return fare as late as October 28th.

Guy D. Lombard, M.D.,
Secretary.
Irving S. Haynes, M.D.,
Chairman.

Original Articles.

THE PATHOLOGY, DIAGNOSIS, SPECIAL PROPHYLAXIS AND TREATMENT OF TUBERCULOSIS OF THE FEMALE PELVIC ORGANS.*

BY JOHN G. CLARK, M.D.,

Professor of Gynecology in the University of Pennsylvania; Gynecologist in Chief to the University Hospital, Philadelphia.

IN view of the fact that a number of other papers in the Symposium on Tuberculosis, while dealing with special topics are also expected to include the pathology and etiology, there must, necessarily, be some repetition, for the broad discussion of the general etiology, general pathology and general prophylaxis, should fully cover this subject and leave little that is especially noteworthy from the specialist standpoint, for the local manifestations of tuberculosis, notably in the female generative organs, are more frequently a part of a general tuberculosis than a primary focal infection. Therefore, as a brief preliminary statement, one may say that the pathology of tuberculosis of the female generative organs is the same as in other organs of the body, the minute histology of the tubercle being identical with that of the tubercle in the eye, ear, lungs, peritoneum, etc.

Coincident with the growth of the tubercle bacillus characteristic lesions are produced, which identify it wherever it is found; therefore, to dwell upon the pathology of this subject is unnecessary.

As to special prophylaxis in tuberculosis of the female generative organs, little or nothing can be said, for we are as yet in ignorance as to the way in which the tubercle bacillus gains access to these organs. The natural inference would be that they are introduced by sexual congress, just as the gonococcus, but, like any other medical inference, this has not been sustained by scientific observation, for, in many instances, when sexual intercourse has been carried on for years by a husband infected with tuberculosis, the wife has not become infected. In one instance which came under my observation, of a negro who was operated upon for advanced tuberculosis of the testicles, although he had carried to excess the marital right, his wife showed no trace of genital infection. An isolated case, however, necessarily has little weight in arriving at conclusions on a broad question like this, but, as this is in line with many other similar observations, it serves as contributory negative evidence to the theory that tuberculosis of the vagina, uterus and tubes is contracted through sexual intercourse. Likewise, in many recorded cases of tuberculosis of the female genital ogans, the evidence has also been negative in another way, for the man has been healthy and entirely free from any symptoms of tuberculosis and could not have infected his wife. If, therefore, this method of infection, which is so important in the transmission of gonorrheal infection, is largely eliminated as an etiological factor, little ground is left upon which to base any suggestions of value concerning prophylaxis.

All parts of the female generative organs are subject to infection, the Fallopian tubes being most frequently the seat, and then, in a decreasing ratio, the uterus, cervix, vagina and vulva.

Tuberculosis of the Vagina.—Thus far, the one case of primary tuberculosis of the vagina, which seems to have been absolutely limited to the vagina, without any association whatever of the adjacent organs, is reported by Friedländer. This case was that of a woman, thirty years of age, who died suddenly from apoplexy, in whom there was a distinctly localized tuberculous ulceration of the vaginal fornix, just below the external os. A very careful post-mortem examination failed to reveal the slightest trace of tuberculosis in other parts of the body, and the area just described was, therefore, unquestionably a primary focus of infection. While Friedländer's case stands as a unique example of primary infection, there are numerous recorded cases of infection of the vagina associated with other organs, indeed, this condition is not especially rare.

In the majority of cases of secondary infection it occurs as a descending process from the uterus, consequently, as Williams has pointed out, the posterior vaginal vault and upper part of the vagina are the points most likely to be infected from the uterine discharges which trickle down from the cervix. In some instances, the vagina appears to be more susceptible to tuberculous implantation than either the tubes or the uterus, for it occasionally occurs as a secondary process to tuberculous peritonitis, the infection having travelled down from the Fallopian tube and the uterus without harming these organs and finally becomes engrafted upon the vaginal wall. In the majority of cases, however, as indicated above, tuberculosis of the vagina is merely an associated process with that of the uterus, Fallopian tube and possibly the peritoneum.

Other methods of infection of the vagina are from the rectum or bladder, in which case there is likely to be established a fistulous tract from one organ to the other, and again, it is possible to have tuberculosis occur as a secondary process from a focus in some remote part of the body. Thus, autopsies have shown tuberculosis of the vagina as a secondary process to that of the lungs. These, however, are very unusual cases.

Tuberculosis of the Uterus.—What has been said of tuberculosis of the vagina, as to the frequency, ways of infection, pathological characteristics, etc., applies equally to tuberculosis of the endometrium, for this is rarely primary and nearly always secondary. The greatest involvement occurs first in the endometrium, and in-

* Eighth paper read at the Seventeenth Annual Meeting of the New York State Medical Association in the Symposium on Tuberculosis.

volvement of the muscular structure only occurs as a rule in the later course of the disease.

The same classification is given by Williams to tuberculosis of the endometrium as to tuberculosis of the Fallopian tube, viz.: miliary, chronic diffuse and chronic fibroid tuberculosis.

The second form, chronic diffuse tuberculosis, is the more frequent, while the third variety, according to Williams, has not as yet been discovered in the uterus, although he assumes that it is possible because of the close kinship between the two processes in the Fallopian tube and the uterus.

As the secondary form is very seldom seen outside of the autopsy room, it is not necessary to dwell upon it, mainly because its clinical significance is not, as a rule, brought into question for it is usually simply one manifestation of a very widespread general tuberculosis.

Tuberculosis of the Fallopian Tube.—Infection of the Fallopian tube may occur primarily or secondarily, the latter being more frequent. Autopsy records, however, show that secondary involvement of the tube is not frequent, even in cases of widely disseminated general tuberculosis. With the constant circulation of the peritoneal lymph currents, which bathe the fimbriated extremities of the Fallopian tube, it would appear, *a priori*, that any involvement of the peritoneum would invariably be followed by a secondary infection of the Fallopian tube. This occurrence, however, is not frequent, for in general tuberculous infections, Von Winckel has found that in 575 autopsies there were only 5 cases of tuberculosis of the tube; Dönhoff, in 509 autopsies found 14 cases and Schramm in 3,386 cases found 34 cases. While the above statistics are of considerable value in the general discussion of this subject, those recorded in the last decade are of greater weight because of the more accurate microscopical examinations which have been made of the diseased pelvic structures. Williams, in 91 cases of inflammatory disease of the Fallopian tube, found 7 of tuberculous origin; Martin in 620 cases, 17, and Von Rostram in 143 cases, 7.

Tuberculous infection gains access to the Fallopian tube in four essential ways: first, through the blood-channels (hematogenous); second, through peritoneal lymph currents; third, through the lymphatic vessels; fourth, through direct extension through continuity from adjacent organs. While the first means of infection is considered the most frequent, it is difficult to prove. Extension by continuity may occur through adhesions between the Fallopian tube and a tuberculous intestine or rectum. Transmission by means of the peritoneal lymph current may take place from an intestinal ulcer without actual perforation of the ulcer for it has been demonstrated that bacilli may pass through the unbroken but impaired peritoneum covering a tuberculous ulcer.

Primary infection of the tube is said to occur through coitus, but the recorded cases do not support this theory. Infection is also attributable in some instances to lacerations of the cervix and vagina, from which points a hematogenous transmission has taken place.

The gross pathological appearance of a tuberculous tube filled with pus, presents no characteristic difference from that of other cases of pyosalpinx. The tube may be only slightly enlarged, or it may be increased to an excessive size. It is more likely to be of a distinct serpentine or nobbed appearance, and if the process is of long standing, may be hard and almost cartilagenous to touch. In extensive involvement of the Fallopian tube, the muscular layers are invaded and the pathological process may penetrate the peritoneal covering, and then breaking down, give the peculiar caseous appearance characteristic of a tuberculous process in other organs.

The coincident irritation gives rise to a local peritonitis, with the formation of adhesions, which may be dense or only fibrinous in character. The fimbriated extremity of the tube may be closed as in cases of pyosalpinx; on the other hand, it not infrequently occurs that the fimbriæ are congested, stiff and stand out as finger-like processes, the abdominal end of the tube being more widely open than normal. In those cases in which the pus has undergone caseous degeneration small friable calculi may be found within the tube.

In acute secondary tuberculosis, the fimbriated extremity, being the point at which the infectious process gains access from the peritoneal cavity, is naturally more involved than the uterine end. At this stage there may be no adhesions of the fimbriæ, and only miliary process is noted.

In the progress of tuberculosis of the tube, it passes through all of the characteristic changes of tuberculosis in others parts of the body. The following classification was suggested by Williams: miliary, chronic diffuse and chronic fibroid.

In this discussion I shall not consider the minute anatomy of these various forms of tuberculosis, for it has little or no clinical significance and is, therefore, only interesting from the pathological standpoint.

Tuberculosis of the Ovary.—On account of the resisting capsule of the ovary (tunica fibrosa), this organ is less frequently infected than the other parts of the genital apparatus, and so far, no authentic case of primary tuberculosis of the ovary has been reported.

Symptoms.—This question may be best summarized by quoting the statement of Wittridge Williams, who has written one of the best monographs on the subject, and who says in this connection, "It would thus appear that tuberculosis, as long as it is limited to the tubes and ovaries, does not give rise to any symptoms which would of themselves, cause us to suspect its occurrence and accordingly, its physical diagnosis becomes impossible in most instances. Not so, however, when the disease is associated with pulmonary or peritoneal tuberculosis, for in these instances

the discovery of masses involving the tubes and ovaries, should at once lead us to suspect tuberculosis."

What has been said of the impossibility of tracing a clear clinical history of these cases from their symptoms, may likewise be said of the diagnosis of these cases.

Tuberculosis of the external genital organs is so rare that it is likely to be confounded with other ulcerative conditions of the external genital organs: thus, tubercular ulcers may be mistaken for both hard and soft chancres, also, the possibility of confusing them with primary carcinomata of the genitalia may be taken into account. In all such cases, however, the diagnosis should promptly be cleared up by a microscopical examination of a small section removed under cocain. Therefore, in cases of doubt, the chief diagnostic means is the microscopical examination. In other suspicious cases, where it is possible to obtain the secretions from the uterus or vagina, its inoculation into the peritoneal cavity of rabbits or guinea pigs may confirm the diagnosis by the production of experimental tuberculosis. In order to discover these cases early, Williams advises very strongly the early examination of the uterine discharges, and certainly this is most desirable, for the treatment of the case depends very largely upon the stage of involvement, especially when the uterus is the primary seat.

Treatment.—In view of the fact that so little is known of the primary infection, no advice of practical value as to prophylactic treatment can be given.

Primary localized tuberculosis of the external genital organs should be excised. As tuberculosis of the vagina is usually more or less limited to the vaginal fornix, it may also be excised or deeply cauterized. This, however, should not be done until it is determined definitely that the uterus is not infected. As tuberculosis of the genital organs associated with tuberculous peritonitis is very likely to occur in young women, it is considered the best plan of treatment to remove the ovaries and tubes in order to prevent a miliary dissemination. It is clinically well known that tuberculous peritonitis tends to heal spontaneously after operation, and tuberculosis of the uterus, after removal of the ovaries, is also likely to undergo obliterative or fibroid changes, incident to the decreased blood supply.

To assist the healing process in all cases where the ovaries and tubes are removed, dilatation and curettage of the uterus should be performed at the same sitting, followed by an iodoformized gauze tampon. In older women, and in fact in younger women, it may be advisable to remove the uterus as well as the ovaries and tubes, in order to exclude the danger of subsequent miliary dissemination. In addition to the operative treatment, it is hardly necessary to state that the patient should be put upon the same general treatment as a patient suffering with tuberculosis in any part of the body. This, naturally, consists of cod liver oil, malt, out-door exercise, change of climate, stimulating nourishing food, etc.

Thus far, the treatment of these cases has been very gratifying, and one may confidently say that if taken in hand before the tuberculosis becomes generally disseminated, a very satisfactory prognosis may be given.

THE OPERATIVE TREATMENT OF SYMBLEPHARON BY THE USE OF THIERSCH GRAFTS.

BY WILBUR B MARPLE, M.D.
New York.

THERE is a class of cases which not infrequently comes under the observation of the ophthalmic surgeon the operative treatment for which has been very unsatisfactory. From some cause or other (as from a wound or burn) the lid (or lids) over an extensive surface has become adherent to the globe, producing a condition of symblepharon. There is a dragging upon the eyeball or limitation of its motility producing constant discomfort and often diplopia, aside from the deformity attending it. Or, if the globe is gone, adhesions between the lids and stump prevent the wearing of an artificial eye. Many such cases have been presented after operative treatment for their relief at our special Society meetings where the result looked more like failure than success, though success was often claimed.

It has often times been said that we learn more from our failures than from our successes. Certain it is, that if we learn from anybody's failures, it will probably be from our own, for we find very little in print concerning failures.

Several years ago the writer was consulted by a gentleman who was suffering from an aggravated form of symblepharon. The case was unfavorable, being the result of many previous operative attempts at the hands of others to remove a pterygium, several times by the knife and then by the cautery, and the patient's condition was indeed most distressing. A fleshy mass at the inner canthus (of the nature of a keloid scar), encroaching some distance upon the cornea, welded both lids and globe together. Attempts by myself to relieve the condition first by covering the defect on the lids and globe by the patient's conjunctiva, and some months later by employing a rabbit's conjunctiva, did not succeed. This membrane proved to be entirely too fragile to resist the contraction of the firm scar tissue. Subsequent experience has convinced me that had I employed in this case Thiersch grafts instead of conjunctiva I would have succeeded in greatly benefiting my patient.

There is nothing new or original in the method. Holtz[1] of Chicago in 1893 used Thiersch grafts successfully as a substitute

[1] Annals of Ophthalmology, April, 1893.

for conjunctiva in various forms of symblepharon and after the removal of large pterygiums. In some of his cases he used nothing to keep the grafts in place, in others he used moist pledgets of cotton.

Shortly afterwards de Schweinitz[2] of Philadelphia employed the method successfully after the removal of a large pterygium.

Morton[3] of Minneapolis in 1898 employed Thiersch grafts for the restoration of the fornix conjunctivæ so that the patient could wear an artificial eye. He sutured the graft to the outer lip of the wound and then inserted as large a glass eye as could be used.

Chambers[4] of Jersey City also employed this method in a case of symblepharon. He used a gauze-covered button to keep the graft in position.

May[5] reported a case in 1898 where he employed this method for restoration of the fornix conjunctivæ to enable the patient to wear an artificial eye.

The advantages of the method in dealing with this class of cases were apparent to the writer from the result in the case presented at the Academy of Medicine by Dr. Chambers in 1896, and it was this case, seen just after his own unsuccessful attempts with conjunctiva which determined him to employ it in a similar class of patients.

So far as he is aware the writer was the first to employ the glass shell to hold the graft in position, his first case occurring about four years ago (in January, 1897.)

The principal advantage of the shell consists in the fact that it stretches the divided parts to their normal dimensions while the graft is forming its new attachment, consequently the latter does not wrinkle or fall into folds. The resulting sac is much more capacious.

Dr. Chambers' gauze-covered button was an improvement over the previous method, but the glass shell is even better than the button.

During the last three or four years the writer has had the opportunity of operating upon several similar cases with success, and will narrate briefly the history of one or two of them to illustrate the method employed.

Miss S., aet. 24, dropped a siphon of vichy which she had in her hand; the bottle burst and a piece of glass flew into her left eye, cutting through the lid and into the globe. She was attended by a neighboring physician, who closed the wounds in the lids by interrupted sutures. The patient was first seen by the writer about two weeks after the accident, when her condition was as follows:

There was a vertical cicatrix through the upper lid beginning 8 m. m. from the inner canthus, and extending upwards 15 m. m. from the free border of the lid and one through the lower lid just below, 8 m. m. long. The cicatrix of the upper lid was retracted and attached to the tissues of the orbit above, and firmly united to the ocular conjunctiva; that of the lower lid was not attached to the globe. The movements of the eye were very much restricted, the cornea not passing beyond the median line in looking toward the right; when she attempted to look in this direction the scar in the lid was deeply indrawn and there was diplopia. The ophthalmoscope revealed where the glass penetrated the globe in the upper nasal quadrant; vision 20/100.

It has often been a matter of surprise in similar cases to find after the adhesions between the lid and the globe have all been divided how much larger was the conjunctival defect to be covered than was expected.

Remembering this we secured permission from the patient beforehand to operate as seemed best to us after the parts had been freely separated, *i. e.,* either by using conjunctiva or a skin graft.

January 5, 1897, ether. The symblepharon was divided above so that the globe moved freely in all directions. The adhesions extended beyond the fornix into the tissues of the orbit, and the conjunctival defect was very much larger than any of us had thought. Efforts were made by undermining the conjunctiva all around and drawing together its edges so as to cover the defect, but it was readily apparent that this method of dealing with the condition would be productive of a very unsatisfactory result. Accordingly, a transparent shell like an artificial eye, was inserted exactly as would be an artificial eye. There was too much bleeding to permit the immediate insertion of the grafts; this was postponed till the second day following, and the eye was simply bandaged with the shell in. On January 7, under ether, a Wolfe graft, 4 c. m. in diameter was dissected from the inner side of the upper arm and fitted smoothly over the upper and nasal side of the shell (previously removed from the eye and cleansed), with the raw surface out. The lids were held widely open and the shell carefully inserted so as not to disturb the graft. The lids were then carefully closed and a moist dressing and bandage applied to both eyes. The skin around the denuded surface of the arm was then undermined all around and the edges brought together with interrupted sutures and a bandage applied. The wound healed per primam. January 11, (four days after second operation) the dressing of the eye was changed carefully; moderate swelling of the lid, eye not opened; had had considerable discomfort and pain in the eye. On the next day the pain was severe and the eye was carefully opened and the shell removed. The inner part of the flap had united where it was in contact with the raw surface. Some of the redundant portion was carefully excised. There was marked injection of the

[2] Annals of Ophthalmology, April, 1893, p. 147.
[3] Oph. Rec., Aug. '98.
[4] Transactions Section Oph. N. Y. Academy of Medicine, 1896.
[5] Arch. Oph., 1899, p. 182.

conjunctiva, cornea hazy. Marked area of infiltration involving the lower inner quadrant, due to pressure from the concave surface of the shell. Pupil contracted. Atropine was instilled and hot boric acid irrigation employed twice daily. Pupil dilated, haziness of the cornea disappeared, and ultimately there was only a faint macula left. The patient was discharged January 17, with the eye bandaged, ten days after the insertion of the grafts.

March 24, 1897. Improvement marked in every way. Eye moves well to caruncle; is much more comfortable and less red.

Seen again May 17, 1897, and again October 30, 1897, when the improvement was still greater.

The patient soon afterwards went to Europe and has not since been seen by the writer.

In this case we employed a Wolfe graft, *i. e.*, one including all the thickness of the skin. This proved rather thick and bulky and though the result was satisfactory, we determined to use a Thiersch graft in the next case as it is so much thinner and could be better fitted into an irregular cavity.

It may not be amiss to emphasize here the importance of properly handling a recent case when the lids and underlying globe have been wounded. If, as is so commonly done, only the cutaneous wound through the lids is sutured, and nothing is done to the ocular conjunctiva beneath and no attempt made to keep wounded lid and globe apart, the conjunctiva of these two parts will surely unite underneath as it did in this case, causing a disagreeable symblepharon. In such injuries the wound upon or in the globe should first be closed by conjunctival sutures, then the wound through the lid should be similarly closed and finally a piece of gauze or rubber tissue or a glass shell inserted for a few days between lid and globe to prevent the two fresh adjacent wounds from adhering. If attention is paid to this point at the time of the original injury, these patients will not have before them the ordeal of another operation later to relieve them of the symblepharon.

Another patient whose condition was very greatly improved met with a very uncommon accident. A live electric wire fell and caught into his lower lid between the lid and globe. Both these parts were burned and extensive adhesions formed between the two. He had already undergone two operations without success at his home in the West, before the writer saw him. In this case the glass shell was removed four days after its insertion and the result was very satisfactory.

Another case is as follows: M. K., æt. 60, male, presented himself in September, '98, at the New York Eye and Ear Infirmary, in the clinic of Dr. Emil Gruening to whose courtesy the writer is indebted for the privilege of observing the patient and of performing the operation.

There was a total symblepharon of the lower and a partial one of the upper lid of the left eye. The lower conjunctival pouch was entirely obliterated, the edge of the lid being adherent from one end to the other to the globe at the lower corneal margin, and the eyelashes were in contact with the cornea.

The diagnosis was pemphigus of the conjunctiva. Inasmuch as this is a disease the progress of which nothing can ordinarily stay, a Thiersch graft was employed only to ameliorate if possible his condition. This succeeded far beyond our expectation, and, moreover, the graft has shrunk but little in two years. This latter point is very interesting, for many cases of this condition have previously been operated upon by skin flaps with a pedicle taken from the face in the vicinity of the eye, and they have invariably shrunk leaving the condition as bad as, if not worse than, it was before.

The disease of the patient's eyes had existed for over a year and a half and the condition had steadily become worse. Both eyes were affected, as is usually the case, but an operation was done only on one as it was doubtful how much benefit would follow or how permanent the improvement would be.

On November 29, 1898, under cocain, the adhesion between the globe and lid was separated with surprising facility. A small opening was made into the adherent tissues at the outer canthus, the blade of the scissors slipped in along the edge of the lid, and the symblepharon was divided easily from one end of the lid to the other, liberating the globe, and forming a pouch of the usual depth. The shell was then slipped in. As the lids came together with difficulty the shell was removed and the symblepharon of the upper lid was divided. This permitted the easy closing of the lids after the shell was in place, and the eye was bandaged. On the following day a Thiersch graft, 25x20 mm., was taken from the upper arm, slipped over the transparent shell, (which had been well irrigated as well as the parts divided the day before), introduced between the lids, and both eyes were covered with a bandage and then with a starch bandage.

Patient comfortable, no pain, bandage undisturbed for 9 days (December 8, 1898), cornea seen through shell is clear. Latter removed carefully with bent probe, parts cleansed and irrigated and bandage reapplied.

December 22, graft had taken, symblepharon gone, pouch of normal depth below; patient discharged.

As to the technic, a word or two may not be amiss. The skin where the graft is to be obtained (preferably the inner surface of the upper arm), is thoroughly scrubbed with soap and water and then with alcohol and ether, and covered with a moist sterilized gauze bandage. (Sublimate solution should not be used.) This should be done the day before. Strictest asepsis is necessary for success. When ready the parts are moistened with a warm sterilized normal salt solution, put on the stretch with retractors, and the graft removed

with a very sharp flat razor, which is also moistened with the same solution. The razor is held quite flat, the thinnest possible layer of skin is removed, and we endeavor to obtain grafts of considerable size. These contain the papillary layer and a little of the stroma of the skin.

Handling the graft (the less of which there is the better it is), is very difficult, for it is apt to adhere to anything with which it comes in contact, as, for example, a towel or the fingers. Much patience and delicacy of manipulation is therefore necessary in order to get it into position. In one of his last cases the writer succeeded best after the graft was cut by carefully slipping the razor out and leaving the graft lying in the spot from which it had just been cut, holding it with a probe to prevent its following the razor. Lying *in situ* it was then fitted first to one and then to the other surface of the shell and thus transferred to the eye. It has been suggested to use a broad, flat spatula to transfer the graft to shell or orbit. If not enough surface has thus been covered and a second piece is necessary, the shell and graft are laid on a folded towel moistened with hot normal salt solution. We then cut another graft, and thus proceed until that part of the shell which, when introduced into the eye, is to come in contact with the dissected surfaces is well covered, being particularly careful to envelop the edge which reaches deepest into the pouch. After the shell is properly overlaid, the next task is to get it to the eye without disturbing the grafts. The lids may be opened wide with retractors, or a loop of thread can be passed through the border of each lid which can thus be held widely apart by an assistant. It is of advantage to have one or two small holes ground through the center of the shell which facilitates the lifting of the latter, either with a bent probe or fine forceps. After the shell with grafts is in proper position between the lids, the latter are carefully closed over it, and may be fastened together by two or three interrupted stitches if necessary.

In Morton's cases he first fitted the grafts into the conjunctival pouch then put the shell in afterward.

The grafts must be from one-third to one-half larger than the surface to be covered as allowance must be made for the subsequent shrinkage. As Hotz says, these skin shavings are almost as thin and supple as mucous membranes but possess a denser and firmer texture and greater vitality. They do not gain the structural character of a mucosa but become as smooth and soft as the surrounding conjunctiva from which they differ in their opacity.

As to whether or not we introduce the grafts the same day the symblepharon is divided, will depend upon the amount of bleeding. If this latter is slight, there is no objection to proceeding at once to the next step of the operation. If, however, as was the case in most of the writer's patients, the bleeding is profuse and persistent, the chances of success are better if we wait until the following day, until which time a small piece of absorbent gauze can be slipped in to separate the divided parts.

The raw surface on the arm, left after the removal of the Thiersch graft, is covered with a piece of gauze smeared with some sterile salve as zinc ointment and a light bandage applied. It heals ordinarily quite promptly.

It is best to use a shell of transparent glass (and not an opaque one as the writer did in the first case) as the former permits us to inspect the cornea without disturbing it.

If there is much pain in the eye, especially if the pain is referred to the front of the globe, the latter must be carefully examined, and if an infiltrated area shows in the cornea, due to pressure, the shell must be gently removed. This was done by the writer in one case four days, in another five days after the operation. In the first case the infiltration was extensive, looking almost like an abscess; yet this disappeared rapidly after the exciting cause was removed. If there is no pain the shell can be left in for a week. The longer the parts are undisturbed up to about a week, the better the result. In two cases, however, the early removal of the shell did not seem to interfere at all with the success of the operation, although great care must be taken not to disturb the graft. It is of advantage to have several shells to select from so as to get one which best fits the eye and most nearly corresponds to the curve of the cornea.

In dividing the symblepharon it is important to obtain a pouch of normal depth, so that the lids easily close over the shell after it is introduced. If they do not do this readily, the shell must be taken out and any remaining adhesions divided. And so we must proceed, inserting and removing the shell until finally the lids close easily over it when in position.

In the first case the writer employed a Wolfe graft, *i. e.*, one including all the layers of the skin and consequently easier to handle. This, however, is much thicker, and can be less readily adapted to the inequalities of surface than the Thiersch, which is preferable, especially when the eye is still intact. When the surgeon is dealing only with a stump which does not permit the wearing of an artificial eye, particularly if there are dense cicatricial adhesions, perhaps a Wolfe graft will better resist subsequent contraction, although in exactly such cases the Thiersch graft has worked admirably in the hands of several operators. It is infrequently necessary to operate several times, accomplishing something each time, before the maximum benefit is secured.

One point of much importance is the question as to whether the results are permanent.

The writer presents a case here to-day which was operated upon with success two years ago, and the result so far as the symblepharon is concerned, is about as good to-day as it was two years ago.

I do not wish to be understood as advocating the use of Thiersch grafts in all cases of symblepharon. In many cases after dissecting the adhesions loose we can undermine the conjunctiva all around and draw this together and fasten with sutures, thus covering the defect. This can be supplemented sometimes by grafts of mucous membrane from the inside of the lip or cheek. But when the adhesions are very extensive, leaving a defect too large to be covered with conjunctiva, and especially if there is much dense cicatricial tissue, unless something more resisting than conjunctiva or mucous membrane is employed, subsequent contraction of the graft will surely take place. It is in such cases as the latter that the method described gives comparatively good results. As to the prognosis in many of these cases, no honest operator would ever promise an absolute cure, *i. e.*, to restore the eye and lids to their original normal condition, but there are few of these patients whose condition cannot be greatly ameliorated.

In several of the writer's cases he feels sure that no other method would have succeeded nearly so well as did the one described in this paper.

THE PATHOLOGY, DIAGNOSIS, SPECIAL PROPHYLAXIS AND TREATMENT OF TUBERCULOSIS OF THE SKIN.*

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IT is only in a comparatively recent time that cutaneous tuberculosis has been definitely separated from other skin affections with which it is closely allied clinically. The old designation, lupus, which is still used to specify that form most frequently met with, would, in its strict meaning, be equally applicable to certain syphilides and to rodent ulcer. Before the days of exact bacteriological diagnosis these maladies were frequently confounded by the dermatologist as they are now by many practitioners whose opportunities have not afforded them the needed skill in diagnosis.

The number of affections which are now included under the general term of cutaneous tuberculosis has been considerably augmented since lupus vulgaris was found to contain tubercle bacilli and to be capable of conveying tuberculosis by inoculation experiments. It now includes acute tuberculous ulceration usually met with about the mouth or arms in patients suffering with pulmonary or intestinal tuberculosis; lupus vulgaris and its clinical varieties: verruca necrogenica or post-mortem wart and certain conditions called scrofulodermata when the skin is involved secondarily by extension from ulcerating lymph nodes, tuberculous osteomyelitis or from subcutaneous deposits called scrofulous gummata. The tuberculous nature of all these affections has been definitely established by the usual bacteriological and experimental methods. They differ, however, in their clinical manifestations and pathological anatomy so that we are perhaps justified in continuing the use of the clinical terms which have been so long associated with the varied conditions. It is not sufficient, therefore, to make a diagnosis of tuberculosis of the skin but we must define in more exact terms the special form with which we have to deal.

In the acute form of tuberculous ulceration about the orifices bacilli with a high degree of virulence are inoculated in fissures or some minor lesion and produce spreading ulceration with ragged undermined edges and the presence of miliary tubercles. Such lesions are usually painful, show no tendency to heal, and slowly infect the contiguous parts.

Bacilli can readily be detected in the secretion or scrapings from these ulcers. In this respect and in the virulence of the infecting organisms this form differs from all other varieties of the affection in question and notably from lupus vulgaris where the bacilli are very few in number and difficult to detect in sections of tissue.

Lupus vulgaris is characterized by so many distinctive features that it almost deserves to retain its place as a definite morbid entity. In its remarkably slow and indolent course it presents a striking contrast to the superficial serpiginous syphilide with which it is so often confounded. Its ravages are generally limited to the skin and superficial tissues and though producing marked deformity of these organs it rarely, like syphilis or epithelioma, involves the bones.

The characteristic lesion of lupus is a peculiar yellowish or brownish red nodule, somewhat translucent, which is situated deeply in the skin. It spreads by the formation of new nodules which destroy the invaded parts by ulceration or atrophy. The lupous nodule, when obscured by surrounding hyperemia, may be rendered visible by pressure with a piece of glass, as a microscopic slide, which empties the hyperemic vessels and brings into clearer view the new formation. The disease may be limited to a single patch and remain as a small localized lesion for many years. On the other hand, numerous lesions may by their coalescence involve large areas of the skin, presenting central scar formation with peripheral active development. The recurrence of lupous nodules in the scar tissue spontaneously formed or following operative interference is of common occurrence, and no case can be regarded as cured when such nodules are revealed by the diascopic method to which reference has been made.

As with tuberculosis of other organs, after a period of active extension the process may remain quiescent for a long time. It may again become actively inflamed, ulcerate, and be followed by enlargement of the communicating lymph nodes. Scarification or curettage of a lupous patch is

*Seventh paper read at the Seventeenth Annual Meeting of the New York State Medical Association in the Symposium on Tuberculosis.

sometimes followed by swelling, redness and other evidence of an acute inflammation similar to the phenomena which appears in lupous tissue after a tuberculin injection. A generalized tuberculosis has been observed by Besnier to follow scarification of lupous patches, and such treatment has been condemned by him for this reason. Secondary infection with pus producing organism may give rise to considerable discharge and crusting of the original affection so that its features are so obscured as to render a diagnosis at first inspection difficult. I have in mind a case of lupus of the arm of some fifteen years' duration in which various diagnoses had been made on account of this complication. After the use of local antiseptics the original condition was brought prominently to view and the proper treatment successfully carried out.

The lupous process presents certain peculiarities which depend somewhat on the locality involved. An excessive development of fibrous tissue may take place around and in the morbid tissue which tends to arrest the progress of the new growth and to produce the variety to which the name sclerotic lupus has been applied. Frequently recurring inflammation and lymphatic infection in lupus of the extremities results at times in the productions of a pseudo-elephantiasis in which the original disease may almost disappear or only be recognized here and there by a careful examination. In lupus verrucosus the epithelial layers of the skin undergo hypertrophy, and this is especially noticeable in the hands and feet where the epidermis is normally thick.

The bacilli or their toxins undoubtedly have a stimulating effect on epithelial proliferation as seen in the post-mortem wart and in the tuberculosis verrucosa of Riehl and Paltauf. The new development of epithelium tends to circumscribe the lupus nodule and disguise to some extent its true character. In such cases the bacilli do not penetrate deeply, and the reaction in the derma is rather superficially situated. The prognosis is correspondingly better as there is less tendency to recurrence after the removal of the affected skin.

This epithelial hypertrophy has direct bearing on another complication of lupus, viz., epithelioma, which occurs with sufficient frequency to indicate something more than an incidental relationship.

The morbid condition of the connective tissue permits a more rapid development of the growing epithelium so that we have a tumor of more malignant type than when independent of such a connection.

The prognosis of epitheliomata which develop in lupus is of more gravity than in the ordinary surface epithelioma.

SECONDARY TUBERCULOSIS OF THE SKIN—THE SO-CALLED SCROFULODERMATA.

From a clinical standpoint the so-called scrofulodermata are to be sharply differentiated from the primary forms of skin tuberculosis which have been defined. They generally follow tuberculosis of the lymph nodes, the lymphatic vessels, tuberculous osteo-myelitis, or tuberculosis of the tendon sheaths, bursae, etc. Adhesions form between the underlying morbid process and the skin, fistulous openings appear, giving rise to the familiar clinical picture.

A lupus vulgaris of the skin, with its brownish-red nodules, has exceptionally been observed to start from such discharging fistulæ.

On the other hand, the cutaneous and subcutaneous lymphatics have become infected by a skin tuberculosis, resulting in secondary abscesses along their course.

These are exceptional occurrences, however, as the two types of tuberculosis generally preserve their distinctive features. As in lupus vulgaris, which is imitated so closely by the serpiginous syphilide, so the scrofulodermata find in the syphilitic gummata striking resemblances and demand more than a passing observation to reveal their true nature.

In addition to the forms of tuberculosis which have been touched upon and which are of known bacillary origin, there is a growing tendency, especially in the French school of dermatology to group together a class of dermatoses which occur with more or less frequency in subjects of tuberculosis.

These affections, which include lupus erythematosus, lichen scrofulosorum and various disseminated papular and necrotic eruptions, are considered to be due to the soluble toxins of the bacilli carried to the skin from some extracutaneous focus.

The general term of tuberculides or toxi-tuberculides has been proposed for this group of cases; the arguments used to support their toxinic origin are the following:

In two-thirds of the cases there is present a tuberculosis of the lymph nodes or viscera; the lesions themselves, with the exception of lichen scrofulosorum, are free from micro-organisms; inoculation experiments give negative results; the eruptions are symmetrical in distribution, and some of them closely resemble true tubercular lesions.

In certain rare forms of lupus erythematosus the outbreak on the skin is accompanied by fever, albuminuria, acute pulmonary tuberculosis, broncho-pneumonia and rapid death.

Histological examination of excised pieces of tissue does not usually show the ordinary structure of tubercular tissue, but marked vascular changes, consecutive necrosis or slow degenerative changes in the connective tissue leading to its atrophy.

Cultures of tubercle bacilli have been shown to contain a necrotizing substance, and the evolution of these various lesions may depend in some way on the action of such a chemical poison on the blood vessels of the skin.

The theory proposed is an ingenious one, and affords an explanation of those rapidly fatal cases which have been described by Kaposi and others.

In the majority of cases lupus vulgaris is probably due to accidental inoculation of the tubercle bacilli on the skin or adjacent mucous membrane. The infection may take place on some abrasion, fissure or some other skin lesion. Direct inoculation has been observed to follow vaccination, tattooing and accidental pricks with needles or other objects which had come in contact with tuberculous matter. Latent tubercular lesions of the nasal cavity may infect the lymphatic vessels and cause the disease to develop in a symmetrical manner over the face.

The possibility of infection through the blood stream is not excluded, for a generalized eruption of skin tuberculosis has followed measles and other infectious processes.

Age is a strong predisposing factor in lupus, for more than seventy-five per cent. of the cases begin before the age of twenty. The more delicate structure of the tissues in the young favors the penetration and growth of the bacilli.

As to the probability of generalized infection following the local disease, the greatest difference of opinion exists. Leloir reported ten cases of general tuberculosis in seventeen cases of lupus. Other statistics agree in the main with this writer.

On the other hand, certain dermatologists have never seen lupus followed by general tuberculosis. We know that it frequently exists for thirty years or longer and exerts no deleterious influence on the general health. It may even confer a certain degree of immunity to the affected individual.

Histology.

The structure of the lupus nodule is similar to that of other tuberculous tissue. It consists of a network of connective tissue enclosing numerous collections of cells which have been variously designated epitheloid, plasma cells, and uninucleated leucocytes. Giant cells are frequent in the new growth which extends deeply in the corium or to the subcutaneous tissue.

In warty tuberculosis epithelial hypertrophy predominates and the tissue reaction is more superficially seated. The cells of the new growth soon undergo degeneration, probably owing to the action of the tubercular toxins; the centre of the invaded tissue clears up while steady progression takes place at the margins.

Bacillli are few in number and difficult to detect by the ordinary methods. They can sometimes be found in greater numbers by crushing a small piece of freshly removed tissue between two slides and staining as in ordinary sputum examination. Inoculation experiments are usually successful. It is probable that in lupus we have a form of tuberculosis due to some attenuation of the virus and for this reason its slow clinical course is to be explained.

Diagnosis.

A number of chronic affections of the skin manifest themselves by a deposit in the derma, which shows a tendency to clear in the center while spreading at the edges. Aside from lupus, late syphilis and certain forms of epithelioma progressively infect the skin in this manner and are not infrequently mistaken one for the other. Nodular, or gummatous syphilide of the skin is much more rapid in its evolution; it lacks the translucent nodule which is present in lupus. It is firmer in consistence and does not tend to invade the scar tissue. There are usually other concomitant marks of syphilis about the skin or mucous membranes which assist in diagnosis of doubtful cases. At times we must have recourse to the therapeutic test.

The differential diagnosis of serpiginous epithelioma is not so difficult, for we are aided by its onset late in life and by the presence of elevated, waxy-looking margins due to the proliferating epithelium. A microscopic examination should remove all doubt, which is not always the case when we are looking at lupus or syphilitic tissue. When epithelioma develops on a lupous surface the question of diagnosis is somewhat more complicated. Lupus erythematosus is characterized by symmetrical erythematous patches, sometimes scaly, terminating in central atrophy, but having no lupous nodules. It is also a disease of adult life, but not exclusively so.

Glanders and actinomycosis of the skin are rare conditions which have more of a theoretical than practical interest in connection with the diagnosis of cutaneous tuberculosis. The possibility of their occurrence, as well as of sarcoma and leprosy, should, however, be borne in mind in unusual cases.

Blastomycetic dermatitis and skin infections due to a protozoan are late candidates for differential diagnosis. They have been confounded with forms of skin tuberculosis and with dermatitis due to staphylococcus infection. In these unusual infections, which were first described by Gilchrist, there is epithelial proliferation, numerous miliary abscesses, and giant cells in the skin, in fact, many of the gross as well as minute characteristics of tuberculosis.

The protozoa or blastomyces are not, however, difficult to detect with the miscroscope, while inoculations for tuberculosis fail.

Some unusual types of streptococcus and staphylococcus infection of the skin present somewhat similar appearances at times and can only be distinguished by bacteriological research.

Late syphilis may infect the lymph nodes as a gummatous infiltration, and is difficult to differentiate from tuberculous infection of the same structures. Deep cutaneous or subcutaneous gummata in both infections may closely simulate each other, but can usually be distinguished by carefully estimating all the accompanying conditions. Tuberculosis is here as in the superficial tissues, a slower process than syphilis.

Little can be said as to the special prophylaxis

of cutaneous tuberculosis aside from the general hygienic laws which pertain to tuberculosis in general. Accurate diagnosis of early manifestations when the skin is primarily involved ought to insure radical treatment and prevention of its extension. As a matter of fact the cases are usually well marked when they first come under observation, so that early destruction of the lesions is precluded.

When extension from underlying lymphatic structures or bone takes place the surgical rules which apply to these lesions should be carried out.

The education of the masses as to the infectiousness of tuberculosis together with personal cleanliness should be effective in preventing some cases of local tuberculosis.

Treatment.

The treatment of tuberculosis of the skin depends on the form in question, the extent of tissue involved and the locality implicated. Tuberculous ulceration about the orifices is usually preceded by grave pulmonary or intestinal tuberculosis in an advanced stage. We have to content ourselves in most cases with local remedies which alleviate without holding out any prospect of permanent cure. Iodoform is one of the best of these as it relieves pain as well as promotes healing. Should more radical measures be deemed expedient, the Paquelin cautery under local anesthesia enables one to penetrate deeply without loss of blood.

Anatomical tubercle and other forms of papillary tuberculosis of the extremities are best removed with the sharp curette after local anesthesia with chloride of ethyl spray.

The morbid process is superficial, being mainly in the epidermis and papillary region and generally shows less tendency to recur than ordinary lupus.

Numerous surgical and dermatological methods have been employed in treating lupus vulgaris, the best of which comprise total excision of the patch with skin grafting; destruction of the diseased tissue with chemical caustics, the Paquelin or galvano cautery, curettage, linear scarification and finally the concentrated chemical rays of light as proposed by Finsen, of Copenhagen. Lang, of Vienna, is at present an enthusiastic advocate of the excision of lupous tissue and reports over 60 per cent. of cures in 35 cases operated upon.

This method is in a certain class of cases to be recommended. It is not, however, applicable to cases of wide extent, nor where the affection is seated about the eyes, nose, mouth, etc., Lupus of the face in general is not well adapted to this form of treatment.

Lupous tissue may be destroyed by chemical caustics like nitrate of silver, chloride of zinc, arsenious acid and agents of like character. They are, however, much less frequently employed than in former years and chiefly after morbid tissue has been scraped away with the curette.

As the lupous tissue is much softer than the surrounding skin it can readily be removed by curettes of various shapes and sizes, leaving much of the normal skin intact, and preventing the disfiguring scars which result from more active surgical methods.

When the lupous nodules are too small to permit their removal with the curette the dental burr as recommended by Dr. Fox can be made to penetrate to the bottom of the lesions and complete their destruction. There is much less probability of a recurrence of the lesions if a chemical caustic be applied to the resulting raw surface. Chloride of zinc or pyrogallic acid are the best of these. The former may be applied either pure to a limited surface, or in the form of a paste if a larger surface is to be treated. Pyrogallic acid is a milder caustic but has a more or less selective action like arsenic, on pathological tissue. In special localities like the eyelids or external ear the Paquelin or galvano cautery are excellent supplementary measures. The actual cautery may also be used to destroy relapsing nodules and is chiefly relied on where the mucous membranes are implicated.

Linear scarification is not a favorite method of treating lupus in this country, although its advocates claim that it produces less disfiguring scars than the methods touched upon in this paper. It is tedious, painful, attended with considerable loss of blood, and open to the theoretical objection that secondary tubercular infection may follow.

Dr. Finsen's method by concentrated light which has been filtered of its heat rays is now atracting some attention. It has doubtless cured some cases, but is exceedingly slow in its action requiring several months to effect a resolution of the disease. Similar results have followed the use of the Roentgen rays.

Tuberculin though practically discarded in the treatment of lupus on account of the danger of disseminating the disease has undoubtedly rendered a number of cases in which it was used more amenable to local treatment, and seemed to prevent recurrences.

It as lately been revived by Hallopeau in France as a local remedy. Applied to lupous tissue it is followed by a pronounced reaction and subsequently by a diminution in the infiltration. Used in this way it is perhaps worthy of further study.

The treatment of the ordinary forms of scrofuloderma is purely surgical and is too well known to require further elucidation.

A Laboratory for the Marine-Hospital Service.—Surgeon-General Wyman, of the Marine-Hospital Service, has sent to James Knox Taylor, supervising architect of the Treasury, a request that plans, estimates, and specifications be prepared for the erection of buildings for a laboratory for the marine-hospital service. Congress by the act approved March 3, 1901, appropriated $35,000 for the buildings.

REPORT OF THREE CASES OF INTESTINAL OBSTRUCTION DUE TO MECKEL'S DIVERTICULA.

BY JOHN F. ERDMANN, M.D.,

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New York.

A FEATURE of these cases was the pronounced resemblance, from a clinical standpoint, to appendicular involvement; another feature was that in each of two of the cases there was an existing appendicular complication.

In each case the diagnosis of appendicitis was made, although in one doubt as to the diagnosis was expressed and exploration was suggested. While in the first of the cases recorded we were undecided between acute obstruction by internal strangulation and perforative appendicitis of the so-called fulminating variety. Close study of the symptomatology of these cases will readily demonstrate the resemblance of three kinds of symptoms of onset in appendicitis, namely, the so-called acute fulminating or profoundly septic, the second a subacute attack attended by abscess formation, and the third, an acute appendicitis accompanied by gangrene with toxic absorption.

In the first case, the symptoms were due entirely to a rapid strangulation with gangrene of 7 feet of bowel and rapid sepsis. In the second case, the symptoms were produced both by the involvement of the appendix and strangulation of some 5 feet of bowel, with gangrene of the diverticulum. While in the third case the symptoms were due to acute appendicitis and a gangrenous adherent diverticulum, with no gut inclusion except through the medium of bands of some former trouble.

Case I.—M. K., gentleman, was seen by the writer on November 15th, at 10:30 a. m., exactly twenty-four hours from the date of onset of his illness, at which time the following history was obtained. He had been perfectly well up to November 14th, at 10:30 a. m. He said that he had eaten a large quantity of white grapes on the day preceding. On the morning of November 14th he was seized with pain in the abdomen, which he said was very severe and was accompanied by nausea and vomiting. At this time the hotel physician saw him and gave him several injections of morphine. Owing to the hotel physician being called out of town, and his pain still persisting, Dr. John Woodman was called in the evening and found him suffering slightly from pain. The abdomen was somewhat rigid, the pulse, temperature, and respirations were normal, and vomiting and nausea still continued. Dr. Woodman saw him early on the next morning, at which time the symptoms were such that a consultation with a surgeon was advised. I saw the patient at 10:30 a. m., exactly twenty-four hours after the onset of pain; at this time there were all the manifestations of an acute abdominal involvement, his face was pinched and anxious, somewhat livid or cyanotic, pulse 144-150, respirations rapid and shallow; the temperature was not taken; the abdomen was distended and exceptionally sensitive; in fact, painful to the touch; rigidity of the abdominal muscles was more marked on the right side, pain was also more evident on this side. He had just vomited some greenish material. There had been no discharge of feces by the bowel in twenty-four hours; no flatus passed in twenty-four hours. An exploratory section was suggested, and the patient transferred to St. Mark's Hospital. The operation was performed at 12.15 p. m., twenty-six and one-fourth hours after the onset. Upon opening the abdomen through the right rectus we found the peritoneal cavity filled with offensive bloody fluid, and a large mass of gangrenous small intestine; at the points between the healthy and gangrenous bowel we found a band surrounding the bowel. This proved to be a Meckel's diverticulum with its distal end attached to the umbilicus and its proximal end within three feet of the ileocecal junction. The patient's condition was such that nothing further than liberating the strangulation and excluding the gangrenous gut from the abdomen was done. Although the patient stood the operation badly, he reacted within three hours, with absolute freedom from pain, nausea and vomiting, and a well-marked improvement in his pulse. This condition of improvement continued until the following morning at 7 o'clock, when he became rapidly toxic and died within an hour. There were exactly 7 feet of gangrenous gut removed upon autopsy.

Case II.—Previously reported, with presentation of the patient and specimen, to the Surgical Society of New York City.

E. D., twenty years old, clerk, was seen by me with Dr. S. Leo, on March 1, 1900, at which time the following history was obtained: On Wednesday, the last of February, about 2 p. m., and one and one-half hours after a lunch of roastbeef-sandwich, cake and coffee, he was seized with pain the abdomen, not localized to any one region; he "broke out in a perspiration," and had two or three chills lasting in all about two hours. He vomited about four hours after the onset of pain. During these four hours his pain was constantly increasing. Pain was severe, but not intensified throughout the night. He was given some codeine by Dr. Leo. No movement of the bowels except small quantity as a result of an enema on Thursday, March 1st. I saw him March 1st, 8 p. m., at which time his pulse was 86-90; temperature, 100.5° F. Temperature had been 101.5° in the forenoon. Deep pressure caused some pain in the abdomen, localized in the right side, a little internal and superior to the usual appendicular situation. Rectus somewhat rigid. The urine contained no albumin, the quantity had not been measured, but the patient said he had been passing urine as frequently and in as large quantities as usual. The use of codeine was discontinued,

calomel was given internally, and ice used externally.

Friday, March 2d, I saw him again with Dr. Leo. Temperature, 99.5°; pulse, 80-84; pain localized to the right, not excessive; rectus tense, but not markedly so. Somewhat tympanitic, but not general, rather outlining coils of intestines.

Dr. Leo telephoned on Saturday, March 3d, that the patient's condition had become normal, that there was a very slight amount of pain remaining on deep pressure, and that my services were not necessary. Sunday night, March 4th, I was telephoned that his condition had again become grave, and I made an appointment for the following morning, at which time I was told that he had vomited fecal material on Saturday evening twice and once Sunday morning, and that there had been a large evacuation per rectum following the administration of an enema. When I saw him on Monday morning at 10:30, his condition was one of anxiety; face was drawn; pulse, 118; temperature, 101.5°; abdomen generally tympanitic; pain in the right side and in the umbilical and hypogastric regions. Operation was advised and accepted. Dr. C. Leale was present, by the family's request, at the operation.

An incision was made in the usual manner for appendicitis. Upon incising the peritoneum, a large quantity of dark-brown fluid was present and a coil of deeply congested intestine was seen. The appendix was found bound down posterior to the cecum and ascending colon, and several coproliths could be felt. There were also many recent adhesions. The examining finger felt a dense band surrounding a mass of intestine. The incision was rapidly enlarged through the right rectus, and then a mass of intestine fully five feet long, dark-brown and edematous, was extruded with a Meckel's diverticulum about 3 inches long and ½ inch in diameter at its base, with a long, fibrous extension leading up to the umbilicus, literally tied about the involved intestine. A part of the diverticulum was gangrenous and adherent to a coil of ileum. There was a small amount of pus at this situation. The intestinal end of the diverticulum was cut off and the intestinal site of the diverticulum was inverted as in an appendix operation; a row of Lembert sutures was placed to strengthen the area. The umbilical end was cut after applying a catgut ligature near the umbilicus. The appendix was next removed—in the usual manner, its stump being inverted after the method of Dawbarn. Feeling that it would be rather risky to close the abdomen entirely, a gauze drain was placed in at the site of the inverted stump of the appendix, and also one at the site of the removed diverticulum. The greater part of the wound was then closed with three rows of catgut sutures and a superficial one of silk.

There was a great amount of serous discharge during the first twenty-four hours. The temperature and pulse became practically normal after the second day, from which time convalescence was rapid.

Case III.—Male, J. L., æt. thirty-four. Previous history negative. Was seen by the writer on May 1st, in consultation with Drs. Goldberger and Kompert, at about midnight. He was seized with a severe generalized pain in the abdomen on Sunday, April 29th; he had had no chill nor had he vomited. On the day following—*i.e.*, April 30th—the pain was localized to the right iliac fossa, with evidences of a tumor. Rectus on the right rigid, not marked on the left. When I saw him his pulse was 90; temperature, 101°; respiration, 22; abdomen somewhat distended; pain pronounced in the right side, and a tumor distinctly palpable. Rectus somewhat rigid. I advised operation the following day. On the morning of May 2d, the day of operation, his pulse was 96, temperature 102.6°, and respiration 26. Under anesthesia a mass could be outlined, that suggested a very much distended appendix, or one accompanied by a great deal of exudate. The abdomen having been prepared, an incision was made after the manner of Kammerer, etc., and a diverticulum about 3½ inches by 1½ inches wide, with a pronounced mesentery was found adherent to the parietal peritoneum in the right iliac region; the apex of this was gangrenous and covered with much exudate; in addition, about 6 inches of bowel was strangulated by a band in the immediate vicinity. This latter was released, the diverticulum cut off, the opening in the intestine closed with three tiers of suture. Search was then made for the appendix, which was found in a state of acute inflammation surrounded by a dense mass of adhesions. The appendix was removed by splitting the serosa and musculosa thereby leaving only the mucosa; in other words, the appendix was stripped (a method I have often found of service in cases with dense adhesions and one by which an immense amount of time is saved).

The appendix was then removed and the stump inverted after the method of Dawbarn. Several coproliths were found in the appendix. The abdomen was wiped out with gauze, a small wick drain was placed in the lower angle of the wound, and tier sutures were employed to close the remainder of the incision. The drainage was removed in forty-eight hours, and with the exception of a stitch abscess the recovery was uncomplicated.

Attention has been called in this paper to the resemblance of the onset in each of these cases to an attack of appendicitis, and when it is remembered that the usual location of these diverticula is within 3 feet of the cecum, no great amount of suggestion is necessary to show the effect symptomatically of an inflammation or involvement of a viscus in such proximity to the appendix. Naturally, the conditions of obstruction rapidly supervene upon those of sympathetic involvement, and thus the diagnoses is more read-

ily made of obstruction from some other cause than appendicitis, except when there is profound sepsis, as was noted in the history of Case I.

QUACKERY: SEVERAL OF ITS DANGERS AND REMEDY FOR SAME.*

BY FRANCIS E. FRONCZAK, A.M., M.D.,

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QUACKERY is defined in the "Century Dictionary" as "the boastful pretensions or knavish practice of a quack, particularly in medicine; empiricism; charlatanry; humbug." From the very definition we see that the "art" is practised only by people whose scruples are of a very elastic quality and whose conscience is easily stretched, if necessary, even to a very high degree. The last word in the definition, "humbug," just about covers the idea.

What are the dangers of medical humbug? What can we do to lessen the same? The dangers are great indeed in this epoch of quackery or humbug, especially, as Dr. J. Brown writes in the "Spare Hours," when "quackery and the love of being quacked are in human nature as weeds in our fields."

The science of medicine in the past one hundred years has been studied so thoroughly, and has grown to such an extent, that the nineteenth century, the era of great inventions, discoveries and scientific researches, would be one of the grandest, were it to be known only for what has been done for the alleviation of pain and preservation of health and life alone; in fact, medical science to-day stands as a giant compared with the pigmy of medicine of one hundred years ago.

Medicine was always surrounded with a certain aureola of mysticism, and the men practising it seemed to awe their fellow men with their powers of healing, and bringing the ill to health again. This mysticism and awe alone suffice to aid quackery. Men arise and declare that they have found wonderful and miraculous powers in the air, electricity, water, the sun's rays, newly mown hay, faith, and what not, and then proceed to utilize this so-called new discovery by placing advertisements and reading notices in the daily papers if no medical journal will condescend to insert them. Fictitious letters relating wonderful cures, and still more fictitious resolutions of thanks are printed, and, in one word, everything done that by hook or crook will catch the unwary, and the "fool and his money soon part" for the pocket of the medical humbug or quack.

The dangers from quackery do not come as much from the know nothings, sometimes called the "wise," for they are less believed by the people at large, as they do from members of the medical profession itself. This is the era of competition, anything to get at the dollars, and to do so men must do something out of the ordinary. Classes and sects are formed among the less honest, and usually among uneducated medical men themselves, who slowly but surely deteriorate into first-class humbugs, and then we have the quack in all his glory, with subsequent dangers to the health of the community. For whence come the "nature healers" (Naturheilverfahren, physiatria), the followers of Dr. Lahman, or the theorists of "dysæmia" the hydropaths, the physico dietists, and most of the patent medicine producers, if not from the ranks of the medical profession. The danger here is the greatest, for people have already some confidence in the somewhat dwarfed knowledge of these miraculous physicians, and they will allow themselves to be treated so long that the disease cannot be eradicated, before they see that they are in the hands of a medical humbug or quack. The columns of the papers in every city are filled to overflowing with glaring descriptions of wonderful cures of men or women, whose pictures are staring at us. The reverend gentleman here and another there, "in true Christian charity and spirit" tells the community at large of the wonderful cures effected by the balsam or liniment, or cure-all this or that, and that he always keeps a bottle of it in the house for all possible necessities. These various men with full knowledge of the untruthfulness of their statements aid the medical quack to do his nefarious business and to spread his human and dangerous practices. The accompanying descriptions of symptoms, sometimes disgusting to a very high degree, usually immoral, always mendacious and tending to multiply and exaggerate simple physiological functions, soon poison and pervert the minds of the ignorant and thus make them the prey of their ensnaring words.

Self preservation is the first law of Nature. This is the ground on which the quack doctors work. By misleading statements people are prepared to believe that they are ill and that this or that quack's medicines are the ones to make them well. "A little knowledge is a dangerous thing," said Pope, and this little knowledge is spread and distributed by the medical quack, by means of the newspapers, and with the result that after a short time, any one who has read the alluring "writeups," and who has heard the paid agent's lecture, is sure to develop one of the diseases which can and ought to be treated by the medicine advertised. And by this means very often invalids are manufactured, to the detriment of the individual and the community at large, for every invalid is a nuisance, not only to himself but also to the State.

Now, let me proceed further. Does not the distributing of nostrums in our public streets and places, and on our doorsteps, contain a great danger to the children and to ourselves? This method of the quacks' is quite prevalent, and a great number of deaths can be directly traced to this practice, which is in itself so dangerous, that strict laws should, and must be promulgated by

*Read at the Annual Meeting of the Fourth District Branch Association, held at Buffalo, N. Y., May 31, 1901.

the various States to protect the people from the poisonous effects of the various preparations of these men.

There are many cases where no medical aid can be rendered, the pathological conditions being so uncertain or unknown, or if known, of such a character as to render all medical treatment valueless. These uncurable, chronic cases are the prey of the quack, for the sufferer will reach right and left and grasp at all hope, as a drowning man grasps a straw, to alleviate his condition. Death, as we know, will only put an end to their pains, yet in the vain hope that some of the nostrums advertised may aid them, they will continue to patronize them and quackery will flourish. It is dangerous in the extreme to permit quacks to furnish medicine and in their ignorance and unskilfulness and conscienceless greed for the filthy lucre to practice upon the unwary. The "free-advice and only-charge-for-medicine man" attracts a multitude of people to his office, and as is to be expected, the "cure-all" nostrums cannot possibly bring good results, so that the patient after many trial bottles and much money spent, gives up all hope and blames all medical men for their lack of knowledge, thus tending to undermine faith in medical science and men.

We must also bear in mind that the methods of medical quacks and others of the same ilk are the cause of unfriendly feelings and enmity between members of the profession, for the regular and ethical members can not and will not look with forbearance and complacency upon their colleagues who practice in a quackish manner, (as, for instance, dividing the samples of infant's foods into powders and dispensing them for various ills, or advertising in the regular "hurrah" quackish manner), or full fledged quacks; thus even the social life of the physicians is affected by medical quackery.

Now, what remedies can we apply for the relief of these dangers, due to quacks and their humbuggery?

In the first place it is most necessary that the medical schools admit only young men whose antecedents, surroundings and personal moral character are such as will admit of no probability that they will be men who will dishonor their professional standing by dishonest and quackish methods. For all must admit that the son of a patent medicine man will probably follow in the footsteps of his father, and the employee of a cure-all medicine office will surely use the quack tactics of his former employer.

Secondly; the medical student ought to be an educated man to a very high degree; he must be a liberal man, and yet an individual who will not tolerate anything which is outside the confines of honesty of judgment, common sense and morals. After graduation from a reputable medical college, having finished a course of at least four years of study, he should have hospital experience of one or two years. Only a thorough knowledge of medical science equips one for the great labor which a physician undertakes, and at the same time prevents him from diverging from the path of righteousness and honesty to the side-track of dishonesty and quackery.

Thirdly; medical students should be taught all the simple methods of healing and nursing. They should be instructed in the various practices which are resorted to by the quack, so that they may know how to forearm themselves against impostors and protect by advice the community in which they live, and show the danger and humbuggery of the preaching quacks, by exposing their methods.

Fourthly; they should try to popularize as much as possible writings on hygiene and simple medical preventives.

Fifthly; physicians should never antagonize one another, or speak ill of one another, or use unethical or improper means to obtain practice, for otherwise they dishonor themselves, their profession, and the science of medicine and make it a subject of ridicule and distrust, thus opening the field for quackery.

Sixthly; the various States should make it obligatory upon every one practicing medicine to undergo an examination before a proper board, and every transgression of the law should be severely punished, thus limiting quackery. The contents and ingredients of all patent medicines shoul be printed on every bottle or vial, and all the conspicuous and nauseating public advertisements should be strictly prohibited.

Seventh; the medical press of the country should give due notice of all quacks and quackery in their neighborhood and the method employed by these men, and provide physicians with valid and strong arguments which could be used against the quacks on every occasion. They or the medical societies should see that the newly settled quack be not allowed to linger, even for a short time, if he does not come within the provision of the medical act of the State.

Finally, physicians should be careful in giving their opinion on all new drugs which have not been as yet fully tested and tried, for it is a discredit to the profession to praise some new medicine to-day and condemn it to-morrow. It gives the quack an excuse to say that the medical men do not really know what is good, but only try it on their patients with subsequent loss to their health or even lives.

THE MAJOR OBSTETRIC OPERATIONS FROM THE STANDPOINT OF THE GENERAL PRACTITIONER.

BY EDWARD REYNOLDS, M.D.
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THE recent advances in the study of the contracted pelvis and the possibility of saving fetal life in such cases by the extension of the major operations to a wider field, have as yet been confined too exclusively to the practice of professed obstetricians, and too little popularized among the great mass of the

profession; perhaps, because it has been thought by many that the technicalities involved in the detection of contraction are too great for the general practitioner's use, and probably because there is still too much credence for the former erroneous idea of the comparative scarcity of contraction in America. This belief must, however, now be given up. The results of all those who have recently investigated the subject have yielded about the same percentages, namely, about seven per cent. (or one in every fourteen cases) of contraction, if we except the negroes, in whom it rises to nearly 20 per cent. Only about 2 per cent., however, reach the degree of mechanical obstruction which demands operation; but when we consider that in each of these cases the question of whether the woman shall be delivered by one of the ordinary methods or by a cutting operation, must necessarily be raised, even this percentage is surely large enough to make the question one of living importance to every general practitioner.

The operations to be considered in any such case are forceps and version, the induction of premature labor, craniotomy, the Cæsarean section with or without the extirpation of the uterus, and symphysiotomy. The choice between them must always be determined by due regard to their respective maternal and fetal mortality under the conditions of the individual case. The short time allotted to papers makes it impossible for me to discuss in detail the status of all these operations and their application to practice, and, as I have recently published (in *Obstetrics,* for January, 1900), a detailed paper upon the status of the cutting operations, I propose to limit myself to-day to a bare statement of the mortalities, unsupported by argument, in order to afford myself room for a full discussion of the application of these results to every-day practice.

It is my belief, however, as an essential preliminary to any intelligent consideration of these mortalities, that we should first and for each operation sub-divide the cases into favorable and unfavorable classes, putting in the favorable class all cases in which at the time of operation the woman is uninfected, not exhausted by long labor, and free from complicating diseases; and per contra, into the unfavorable class all cases in which the woman is already exhausted by neglected labor, infection or other intercurrent diseases.

FORCEPS AND VERSION FOR CONTRACTED PELVIS.

It will, I think, be conceded by any obstetrician of wide experience that the use of high forceps and version for contracted pelvis has a small intrinsic maternal mortality, yet I think that we shall find that this maternal mortality is insignificant or non-existent in the hands of skilful men and when the operations are undertaken with the mother in thoroughly good condition, but that it will not be insignificant in the unfavorable class of cases.

It is generally and somewhat loosely held that the fetal mortality of high forceps and version is not unduly large, but I think any one who will analyze a large series of cases with regard to this point will be surprised to find how large the fetal mortality is. I have myself found that analyses both of my own experience and of a considerable number of reported series of cases have uniformly yielded about the same result, *i.e.*, a fetal mortality of not less than 50 per cent. in cases in which high forceps or version were performed on account of contracted pelvis. (We must, of course, exclude cases in which these operations are done for less important mechanical obstacles; in which cases the fetal mortality is naturally much smaller.)

INDUCTION OF PREMATURE LABOR FOR CONTRACTED PELVIS.

In these aseptic days the maternal mortality from the induction of labor is and should remain very small; but in this class of inductions the reported fetal mortality is far from small, being again about 50 per cent., a statistical result which is moreover supported by the opinion expressed in the more recent text-books.

CRANIOTOMY.

Since craniotomy to the living child is practically never performed until after the failure of determined attempts at extraction by high forceps and version, its maternal mortality is necessarily a little higher than where these operations succeed. Its fetal mortality is, of course, 100 per cent.

THE CLASSIC CÆSAREAN SECTION.

Until very recently it has been generally held that the maternal mortality of the Cæsarean section was still not less than 25 per cent., and if all the reported cases are viewed together, this opinion is probably a true one; but a division of the cases into the favorable and unfavorable classes defined above yields surprisingly different results. Thus an analysis which I made a year ago of 150 reported cases—15 of my own and the remainder from foreign sources—shows that there were 89 cases in the favorable and 61 in the unfavorable class.*

Among the 89 favorable cases there was no maternal mortality, while the mortality of the unfavorable cases reached the prohibitive figure of 33.3 per cent.

The fetal mortality of the Cæsarean section is, of course, the smallest mortality known, amounting to nothing in the favorable class of cases.

PORRO'S OPERATION.

This extirpation of the pregnant uterus has been almost invariably confined to the unfavorable class of cases. There is perhaps not yet enough material for estimating its maternal

* Estimating an unduly prolonged labor at the arbitrary limit of 24 hours.

mortality when done early in labor and in selected cases. It is probably but slightly greater than that of the uncomplicated section. Its mortality in the unfavorable cases is somewhat lower than that of the Sänger section, but reaches about 30 per cent. Its fetal mortality is that of the Cæsarean section; that is, it is never fatal to a child which is in good condition at the time the operation is undertaken.

SYMPHYSIOTOMY.

When the reported cases of symphysiotomy are separated into the favorable and unfavorable classes, the operation is found to have a somewhat larger maternal mortality than the section in the first set of cases, those in which women were in good condition, the small mortality which exists being due to an occasional improper selection of cases, *i.e.*, to the performance of symphysiotomy in pelves of too high a degree of contraction to admit of easy extraction after it had been performed. Its fetal mortality is practically confined to the same mistaken cases; but though this is a mortality of mistake, the fact that it has been frequently made by men of world wide reputation makes it necessary to consider it. In contrasting symphysiotomy with the classical Cæsarean section in the favorable class of cases it must, moreover, be remembered that even if it attains an equally low maternal mortality its morbidity is much higher than that of the Cæsarean section, *i. e.*, serious injuries to the soft parts occur not infrequently, and loss of locomotive ability from permanent mobility of the pelvic bones is not unknown. In the unfavorable class of cases, however, the maternal and fetal mortality of symphysiotomy both compare favorably with those of any other operation, and in my opinion it here finds its chief indication. It is unattended by shock, it does not open the genital canal and can therefore be performed in infected cases; it makes the subsequent extraction by forceps or version easy instead of difficult.

The conclusions to which I have been forced by my study of the subject, which have since been supported by the results of every reported case that has come under my observation, and which have led me to an unbroken success in dealing with all the major cases which I have seen since I finally formulated them (23 cases in four years), are as follows:

1. When the conditions are such that the child can be delivered with anything like reasonable ease by forceps or version, one of these operations is preferable to any cutting operation.

2. When the mechanical relations would render forceps or version unusually difficult, forcible and prolonged, and when the mother is in the favorable class, the equally low maternal mortality and the far lower fetal mortality of the Cæsarean section renders it the operation of choice.

3. When the mechanical conditions make the intra-pelvic delivery of an intact child at term impossible or unduly difficult, the great superiority of the Cæsarean section over the induction of premature labor in fetal mortality and its extremely low maternal mortality render it again the preferable operation.

4. When the ordinary operations fail and the woman is in the unfavorable class, symphysiotomy is the operation of choice, and may be expected to lead to a favorable result for both mother and child in the great majority of cases, provided always that the degree of mechanical difficulty permits of its application.

5. When in the unfavorable class of cases, the degree of relative disproportion between head and pelvis is too great to admit of a safe symphysiotomy, craniotomy to the living child should be unhesitatingly chosen, since the maternal mortality of either form of the section is so enormous, and because I cannot doubt that the life of the potential mother of many children is of more value than that of any one unborn fetus.

If these principles be true, it follows that there are but few if any cases of uncomplicated mechanical obstruction in which a happy outcome for both mother and child is not easily within the power of ideally prompt and intelligent medical care, if applied at the beginning of labor. I believe this to be a fact, and I think that this happy state of affairs is sufficiently possible of accomplishment to encourage us in every effort toward its attainment.

The method which is commonly laid down as a necessity to this end is the routine measurement of every case at the time it first comes under the practitioner's care. I am far from underestimating the value of routine pelvimetry, and hope to see the day when it will be a part of every obstetric examination, but I believe that there is no use in disguising from ourselves the fact that it is not now, and for the present is not likely to be generally practised; if only from the fact that the attainment of an accurate conception of the mechanical possibilities of a given pelvis by mensuration is not an easy matter to any one, and that, moreover, the active general practiser of to-day has not been educated in it, and can hardly be expected to perfect himself in this particular. The popularization of pelvimetry must be expected from the graduation of students who have been carefully taught it during their course in the medical schools. Valuable as menstruation is, however, it is fortunately not essential to the attainment of very fair results in mechanically obstructed labor. Every day of increasing experience makes it more certain that the supreme test of the adaptation between head and pelvis is the test of actual labor, and that the all-important thing is the clinical recognition of a mechanical obstruction early in the course of labor.

The variations in the size and hardness of the fetal head are so great that there are, in my opinion, but few cases of contracted plevis in

which anyone is justified in performing a major operation without applying to the case the supreme test of an actual labor or the history of past labors, and this clinical test is easily within the reach of the general practictioner if he will conceive the case properly. Let us, then, discuss his duty in the course of his care of pregnancy and labor from the standpoint of the cruder methods, which are possible to everyone.

The importance which attaches to the actual clinical test necessarily places primiparæ and multiparæ in widely different clinical classes, and it is natural to discuss the primiparæ first.

PRIMIPARÆ.

I would then advise the general practictioner that when a primipara comes under his care, during the course of her pregnancy he should always include the possibility of marked mechanical obstacles as among the contingencies to be considered in his mental estimate of the case. If the woman be especially small, if she has a history of early caries, either of the hip or spine, or if any other symptoms point to a possible dystocia, he should take her to an expert for the estimation of the size of the pelvis, in consultation, early in pregnancy, precisely as he would treat any other certain grave surgical complication in his practice. Even if no such threatening symptoms exist, he should, preferably a few weeks before labor, and at all events at his first visit in labor, notice whether or not the head is unusually high. This, though not ideal, is, I think, the best test which we can expect, at present, to have applied to general practice in the case of primiparæ; it is, moreover, a fairly good one. If the head is, at the beginning of labor, well crowded down into the brim, it will very rarely, if ever, happen that the case is beyond a possible delivery by forceps, and if such a delivery results fatally to the child, the question of choice of operations can be taken up at the next pregnancy. On the other hand, if in a primipara with the rigid abdominal and uterine walls which belong to her condition, the head is, at the beginning of labor, high above the brim, the question of serious relative disproportion between the head and pelvis is always prominent. The point which must now be remembered is that the chance for a successful Caesarean section is limited to the early part of the labor, and that the choice must be made then and cannot be deferred to a later time. What the practictioner should do in such a case must depend upon varying factors, such, for instance, as his methods of practice, his relation to the individual patient and the locality in which his practice is situated. He may choose between an immediate and careful measurement of the pelvis, externally and internally, himself, if he feels competent for it, or an immediate consultation with an expert, not necessarily on the subject of an immediate delivery, but on the question of whether there is a sufficiency of room, and this consultation will seldom be objected to by the family if it is put before them in this way. If a contraction of the pelvis is found, preparations for a section should be made on the chance that its performance may be necessary. If, then, the dilatation of the os progresses with fair rapidity, and without the appearance of any exhaustion of the patient, nothing is done until toward the termination of the first stage. If the first stage is tedious and exhausting, the patient is etherized while still in good condition and the os gently dilated manually. The hand is then passed into the pelvis, under anesthesia, of course, and made to palpate and measure it with the greatest care; it is next passed up to palpate the head, both to ascertain its size, and the relation which its greatest diameter bears to the pelvic brim when it is strongly crowded down into the pelvis by a suprapubic hand. If this test is inconclusive, the forceps are applied to the sides of the head with the greatest care, and a few gentle tractions made in order to determine the amount of resistance which is to be expected, and to study the application of the individual head to the individual pelvis by the introduction of the fingers alongside the forceps during the traction. At the same time the fetal heart is carefully watched to judge of the effects of the tractions upon the child. It is manifest that this method of studying the case requires an extended obstetrical experience for a due appreciation of its results, and I believe that in case of doubt, the decision should be given in favor of the lesser operation, in primiparæ at all events, since in the present state of our knowledge it is better that we should risk losing one child than perform an unnecessary Cæsarean section; but with due care and caution and in sufficiently skilled hands, I believe that this test will yield close-to-certain results, and that the doubtful cases will consequently be rare. I believe that the adoption of this simple rule (that an unusually high or inaccessible position of the head at the beginning of labor should be regarded as ground for a consultation) will lead to greatly improved results.

In the present condition of medical practice we cannot doubt that the children of primiparæ will occasionally be lost, who might have been saved by an early resort to a cutting operation, and that symphysiotomy will be done in other cases where the preferable Cæsarean section might have been selected, had the gravity of the case been recognized earlier, but when the primiparæ has become a multipara, the case is much more simple.

MULTIPARÆ.

Once the general practitioner realizes what the public is already beginning to realize, that the loss of a child in labor from mechanical obstacle is a loss which might probably have been avoided; once he recognizes what will in my opinion before many years be recognized by the profession far and wide, that the mortality and morbidity of the major operations done at the beginning of labor, is no greater and probably less than that of vio-

lent and prolonged forceps extraction; very few children of multiparæ will owe their death to any mechanical cause. The rule which will save them is again a simple one. When a woman has once lost a child in labor from mechanical obstacle—*i. e.*, from difficult delivery by forceps or version—the question of a major operation at term should always be taken up during the next pregnancy of that woman—*i. e.*, a consultation should be held, at latest, a few weeks before delivery. The pelvis will then be measured and the relative size of the pelvis and the individual head will be estimated by the hand. If distinct disproportion already exists, the case may conceivably be treated by Cæsarean section at the beginning of labor, or at a date set just before it. In a large number of cases, the estimation of relative size will be repeated at term and the woman will be allowed to go through the earlier hours of labor, but with every preparation for the performance of a Cæsarean already made, and with an operator at hand, so that in the event of another failure of the powers of Nature the favorable moment can be seized and another death in labor avoided.

Is not all this a simple and rational application of our recent advances to ordinary general practice? It may be objected that I have insisted too much on the employment of an expert wherever the question of relative disproportion is a prominent one. I would reply that every great advance works harm by the over-enthusiasm and rashness of the ill-prepared. That the decision in favor of or against a major operation in a given case is, in my opinion, in most cases a very delicate and difficult one; one which should be submitted to a man with a professed proficiency in the subject. Obstetrics is rapidly reaching a position in which its best exponents are able to exhibit as definite results as are obtained in other branches of modern surgery; and I believe that, before many years, the profession will be compelled by the public to feel its obstetrical responsibilities with the same seriousness which has long been accorded to surgery.

Once the public and the general practiser feel that almost every fetal death from mechanical obstacle must be charged to the want of exceptional skill on the part of the attendant, we shall have far fewer deaths in labor. In every center the men who are ready to consider this question are plentiful, and when cases of the sort occur at a distance from the center, they must be settled by the best man accessible.

I wish finally to repeat my firm belief that in all cases of doubt we should be guided by the general proposition, that a manufactory is always of greater value than any simple sample of its products, and that the potential mother of many children is always of more value than a single child; though I believe that in well-handled cases, the interests of mother and child are to-day almost invariably identical.

In illustration of the position which I am supporting I wish to close my paper with a short history of the twelfth case on my list, one which illustrates unusually well that position.

Early in the winer of 1898 and 1899, Dr. O. F. Johnson of Winthrop, Mass., wrote to me that he had a primiparous patient whose small size had led him to apprehend difficulty in labor, a fear which had been encouraged by the slightly small external measurements which he had taken. He informed me of the calculated date of delivery, and asked that I would make a note of it and come to his assistance prepared for any method of delivery if the early part of labor did not progress satisfactorily. On July 18, 1899, he telephoned me that the patient was in labor, and later in the day telephoned that the progress of labor was not quite satisfactory to him, and asked me to see her. I went at once prepared with assistants and instruments for any form of delivery, including the Cæsarean section.

The patient was a primipara, fifteen years married, and a very small woman. She had had moderate labor pains for about eighteen hours, but in excellent condition, with slow pulse, and not exhausted. The membranes were unruptured, the os about the size of a fifty-cent piece. The pelvic measurements were as follows: Spines of the ilium, 21 cm.; iliac crests, 26 cm.; external conjugate, 18 cm.; diagonal conjugate, 9.5 cm. The symphysis was erect, the promontory high, the form of the pelvis justo-minor, and I estimated the true conjugate at not over 8 cm. It was thus decidedly a small pelvis; but on dilating the os, which was done with the greatest ease, the patient being under ether, and seizing the child's head with the hand, it was evident that the head was not large, the fontanelles and sutures were wide, the bones were soft, and I was inclined to believe that an intra-pelvic delivery was possible. The occiput was anterior, O.L.A. I easily applied the forceps and easily brought the head into the brim, but two strong tractions failed to advance it further, and on listening to the fetal heart, which had previously been strong and regular, I failed to hear it. The forceps were at once removed, the head pushed back, and the hand passed into the uterus, in search of the cord, which was found to be beating faintly and intermittently. I felt that even the few tractions which I had made had been too powerful for the soft head, and feared that I had lost the child; but after a few minutes spent in watching the cord with the fingers its pulsations became good and regular, having steadily improved during the interval. The hand was then removed, and some minutes spent in watching the fetal heart with the stethoscope. It continued good and strong. The child's condition was evidently reëstablished, and, as the mother's pulse was slow and good, and I was confident I had done no harm to the soft tissues with the forceps, I felt warranted in still considering the Cæsarean section. I informed the doctor and the husband that I had no question but that I could deliver an intact child by forceps without material danger to the mother, but I was

equally sure that the child would be a dead one, and that I thought the Cæsarean section could be performed without essentially increasing the risk to the mother. Both of them assenting, my assistants were called up, the necessary preparations rapidly made, and a classical Cæsarean section done. The child had passed meconium into the liquor amnii and was somewhat asphyxiated, but was resuscitated without great difficulty and has done thoroughly well ever since. The mother's recovery was uneventful. I criticise myself as having in this case gone a little too far in the use of forceps in so small a pelvis, but I believe that if a mistake is made it is better to make it on the side of conservatism, and I hoped to be able to deliver safely with forceps.

The case is, with this exception, a fair illustration of what I consider a rational method of deciding between the Cæsarean section and the forceps.

THE RACIAL FACTOR IN HYSTERIA.

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BEFORE discussing the racial and national factor in hysteria, it is my desire to make a few general remarks concerning hysteria in its broader sense. This disease, ever coming to our attention by the very accuracy with which it may simulate organic nerve diseases, is confined to no latitude, country or people, and if we would use comparative methods of studying it, we might find well authenticated examples of its existence as noted, by competent observers, in the lower animals.

M. Aruch, an instructor of veterinary surgery at Milan, has reported three interesting cases of hysteria occurring in the dog. The first, an affectionate, intelligent female dog, became moody because a baby was born in the family of the master. There developed dysphagia, polyuria, a capricious humor, an alteration of the voice (aphonia), and progressive paralysis of the legs. There was anesthesia, but no atrophy. The dog was given nux vomica and died in convulsions, but on autopsy no lesion was found in the nerve centers.

The second was a dog eleven years old, domesticated, affectionate and intelligent. He developed convulsions without the loss of consciousness, occasioned by the master scolding him. Since the first attack he was subject to the same attacks every time the master entered the house.

The third case was that of a bull-terrier, two years old, which previously had a paraplegia, of which he was cured over a year. His mistress procured a companion bitch and afterward the dog lost appetite and gaiety. There developed dysphagia with no loss of either bladder or rectum function. The dog was cured by a separation from the companion dog.

Hegier recently described two very good examples of hysteria in the lower animals.

The first case was that of a kitten which was bitten in the back by a dog and at once became paralyzed. When seen by the author five or six weeks later, it moved the forelegs but dragged the hind ones. The hind legs and the posterior third of the trunk on the ventral, dorsal and lateral aspect were completely anesthetic. The tail also was paralyzed. The rectum and the bladder were not affected, however. A servant desiring to test the fallibility of the saying that a cat possesses nine lives, threw the kitten from the window on the pavement below, where it alighted on all four, and ran away. It was permanently cured of a paralysis which had lasted two months.

The second case was that of a canary which became much frightened and shocked by reason of seeing a cat attempting to get into its cage, became aphonic for a number of months, after which it sang again.

Concerning hysteria in the human species, it does not belong to any one time. Although the word "hysteria" does not occur in the Bible, it must certainly have been entertained there, and in the New Testament in which so many allusions are recorded of the miracles performed by the Nazarine in the light of our present knowledge we believe that hysteria must then have existed. The Greek derivation of the word hysteria, meaning a morbid condition having its seat in the uterus, leads us to the belief that the Greeks must have known much of this affection and it is a curious fact that for nearly two thousand years the idea was prevalent that the uterus was the seat. This was entertained by Hippocrates, Plato, Galen and even to Sydenham's, and later Charcot's time. It shows that during this time it was most seen in the female and this fact present statistics also verify. It was common in Sydenham's day and in Cromwell's time, but many disorders no longer considered belonging to this disease were mentioned.

There are certain etiologic factors, classified by Gilles de la Tourette, which if allowed to play a role will overwhelm the individual and will cause definite symptoms of this disease to appear in any race, be it Caucasian, Mongolian, American, Ethiopian, or Malayan.

1. Influence of the emotions, including moral passions, such as disappointment, anger; influence of education, (*a*) higher civilization being conducive to the disease; (*b*) religion, with its furors and frenzies.

2. Traumatism.—Physical and Mental. The traumatic neuroses of the Germans.

3. General diseases: Typhoid, pneumonia, scarlatina, tuberculosis, grip, rheumatism, diabetes mellitus, malaria, syphilis and chlorosis.

4. Influence of the sexual organs. As the term implies, the uterus was supposed to be the seat, but as Charcot later showed the ovaries seem to be a factor also.

5. Influence of intoxications.—Lead, alcohol,

mercury, sulphur, carbon, and tobacco. The effects of chloroform, ether, morphine, and lastly ptomains.

From the above classification we note that there are two factors, the physical and the psychological. The psychological factor is very important in hysteria, and is in fact dependent upon the physical condition of the individual. As an example we often see hysterical phenomena in those suffering from anemia and autointoxication of phthisis, or the physical traumatism in producing the traumatic neurosis of hysteria. Here the physical injury is also accompanied by the psychical insult.

If we are then to consider a racial or national factor in this disease, we must study the emotions, temperament, and surroundings and habits, all of which are referable to the history and civilization of a race. Hysteria is almost unknown in the savage and barbarous states, and as Fere says, in the less cultured races where fear, superstition, and a tendency to imitation are seen under their most primitive forms, hysteria is often encountered in epidemics. The savages of our own time, as will be shown later, reproduce the strange scenes which were so frequently seen in Europe during the Middle Ages, namely the dance of Saint Guy's in Luxembourg.

In ancient times and even now among the savage tribes of Africa, if a nation or tribe were conquered, little heed was given to the personal feelings of the subjected. In Rome the prisoners were led captives by the conquering host. They were jeered, scorned, beaten, and led into slavery. Was not this treatment indelibly written upon their higher psychical beings, and are not there many to-day bearing the effects of the ill treatment of their progenitors?

De la Tourette states that all races are subject to the disease, and among the Caucasian race, the Israelite gives proportionally the largest number. M. Raymond states that in Warsaw, in Poland, masculine and feminine hysteria are frequent and most frequently encountered among the Israelites. In Europe it is seen as well in Finland as in the islands of the Mediterranean, and among the nations it is seen more in Russia and France than among the Germans and English. The national temperament must, therefore, also be a factor, as well as the social and political conditions.

The Jew in Europe and more especially in Poland and Russia is, as already stated, very liable to hysteria. Let us analyze, if possible, the cause.

The Jew has always shown a fertile mentality. He was the writer and transcriber for all times. He translated from Hebrew to Arabic, Greek, and Latin. The most esteemed and most despised of all races, now enjoying a golden era of peace and happiness, then suffering the greatest oppression and persecution, becoming but the chatels of those inferior in intellect and morals. Numerically weak, and isolated, he could not physically take up the gauntlet and strike the oppressor back. Denied the privilege of travel, heavily burdened with taxes, shut up in the ill ventilated ghettos, excluded from trades and professions, their physical sufferings were great, but their mental sufferings were greater.

The religion of the Jew does not allow his intermarriage with the gentile. The laws of the Middle Ages did not allow a free interchange of the people, and marriages were not only performed among the same people, but between near relatives, so we have added to other causes the element of consanguineous marriages in the production of hysteria, and hysteria being easily simulated it was contagious to the Jew thus restricted. The present generation of Jews, although in some countries, as in America, little persecuted, show the stigmata of this disease because of the suffering of their ancestors. It has then been transmitted by heredity in the sense that the child would have to simulate the disease from the mother. In European countries, namely, Russo-Poland, Galicia, Roumania, Servia, and Bulgaria where religious tolerance is not enjoyed and where persecution and oppression are common, the Jew is markedly hysterical, and in this country we, therefore, find hysteria more common in those recently emigrated and especially from those countries where they are most persecuted, namely, Russo-Poland, Roumania, and Galicia.

He who has visited the foreign climes has seen the patriarch Jew. He is not unknown in our larger cities. Denied the education of the State school, he has learned from the Rabbi, in the dimly lighted and poorly ventilated schoolroom, to interpret the Talmud and mourns and bemoans the destruction of his Jerusalem.

Despised, hoping in vain with a sturdy faith, reading of the grandeur of his ancestors, and comparing his present sordid lot has made an impression upon him, which if you doubt, is only verified by looking at the physiognomy of the Russo-Polish or Galician Jew of to-day. A semitic feature with a ghetto expression. Prof. Kraus, now of Graz, describes a peculiar type of Jew called the "Juif errant," a peculiar, rather hopeless individual who wanders over Europe from neurological clinic to neurological clinic. They often have a greater form of hysteria. In Kraft Ebing's clinic at Vienna there was a good example of this type of Jew who suffered from atasia-abasia. It would be indeed surprising to us if these unceasing persecutions through periods of centuries should not have had their effects upon this people. It was not of short duration, but a continuous oppression, and in this regard they have suffered mental tortures as no other people in history.

The Latin races are said to be hysterical and it is dependent on their mode of living and environment and as descendants of the Roman Empire which descended like Lucifer. The Slav is also regarded as being very hysterical. This is also to be attributed to his condition of serfdom which

was but little better than slavery. Unlike the continued exciting causes which have existed to make hysteria and other nervous diseases frequent among the Israelites, there are conditions which give rise to epidemics of this disorder. The religious furors have affected many races and peoples, but from this the Jew seems to have been free. I allude again to the St. Guy's dance of Luxembourg where the hopping became contagious and the entire community was affected. The same may be said of people less civilized, like the snake dances of the Indians, and the weird dances of the Dervishes.

Witchcraft and demoniacal possessions are based on superstition and religion. It is based upon a hysterical background, and though fortunately of the past, may still occasionally be seen in the ignorant lower classes and among the savage blacks of Africa. It apparently had its origin in Germany, and was of three degrees. (1) Man renounced God and went over to the devil offering an oath of allegiance. This was the method of witches; or (2) the devil took possession of the man during life converting him into one possessed; or finally, a man might make a compact of mutual obligation, assigning his soul to the devil.

In 1484 to 1492 there was a wholesale burning of witches, and it continued well into the eighteenth century. Religion so outrageously abused by the clergy who invariably were the inquisitors (and as each inquisitor received a fee for every witch convicted, there is no wonder that there were so many accusations), the trial of witches was carried on against poor cracked brain creatures (demoniacs). Many of those supposed to be possessed as well as the accusers must certainly have had the stigmata of hysteria, for, as Fere says, undoubtedly hysterical anesthesias held the first place among the marks of the devil.

In England witchcraft was made a capital offence by statute of Queen Elizabeth in 1562, and between 1640-1644 there were 3,000 legal executions. When the Puritans came to this country to escape their religious oppressions, they brought with them seeds and culture ground of a psychological condition which made the Salem witchcraftery possible.

As atavistic tendencies may slumber for generations only to arise in some future day under some other guise and in more resplendent garb, so we of to-day are not surprised that in that same New England, among the progeny of believers in witchcraft, there should arise from the ashes of a hopeless delusion another manifestation of a religious furor, hysterical in nature, but garbed in more alluring and inviting foliage, but nevertheless just as delusory and subject to a similar end, namely, Christian Science.

In studying the black race we must go first to Africa. They are found in a wild and savage state, superstitious, living in tribes, each with its chief. Their religious belief was filled with superstitions; no evil occurred but was the work of some malignant spirit, and because of their belief, like more civilized communities, they devised charms and amulets. Witchcraft was common. Those accused were tortured and often buried alive, or underwent tortures of ordeal from which if they survived they were free from the evil spirit. The natural temperament of the negro is emotional. As Booker Washington aptly remarked, the negro unlike other emigrants who came to this country, had the advantage of having his passage paid, but the horrors of that frightful journey across the high seas in the slave ship, so admirably described by Spears (*Scribner's Magazine,* Aug., Sept., Oct., 1900), must have, like the persecution of the Jews, left indelibly impressed a psychical trauma which has been transmitted to the negro of the slavery days, and in a lesser sense to the generation following the emancipation.

Although Hammond says that hysteria was almost unknown during the slave period, May strongly contradicts this assertion, for he found the most typical cases of hysteria in the negro during religious excitement, and these scenes were very common during slave time. The statistics of hysteria among the negro are very difficult to obtain. There can be no doubt that it manifests itself very frequently in the religious excitement attending revival meetings. It is frequent among Hottentot women of the Cape and in Abyssinia. Retomgeon of Brazil has seen it among the children of half breeds, and very frequently among slaves. In hospital work it is occasionally seen among the females. In order to obtain a better knowledge from those who have seen many negroes, I addressed letters of inquiry to Drs. Shadd and Reyburn of Washington, and Dr. Daniel Williams of Chicago, and Osler and Thomas of Baltimore, and from answers received from these gentlemen, am inclined to believe that the negro is as subject to hysteria as the white race with the same intelligence, education and environment. It is more frequently seen in the mulattoes and also in the descendants of slaves, and less in the illiterate than in the more civilized.

The Indian is supposedly the first inhabitant found here by the settlers. They lived a foraging life, and like other primitive and savage people, their beliefs were full of superstition. Many of their superstitious rites were accompanied by undoubted hysterical seizures and manifestations which resembled those of the Middle Ages (St. George's Dance).

Dr. Charles Buchanan, a physician who has had much experience among the Indians at the Tubalip Indian Agency in the State of Washington writes me of a quasi religious, quasi medical sect or cult of Indians (peculiar to Puget Sound), termed the Shakers, which sect according to the writer, represents the aboriginal idea of Christian Science.

Unless through their superstitions they become imbued by a religious furor which became epidemic, few individual cases of hysteria were noted.

It would seem that the squaw, who in reality was regarded as the beast of burden, should have become hysterical, but the many cases in which the parturient woman isolated herself a week before and a week after labor, with absolutely no other care or attention than she could bestow upon herself, would certainly disprove the above statement.

We can, therefore, say that individual cases of hysteria could not have been common among the Aborigines until the pioneer settlers as an advance guard of civilization commenced the benevolent assimilation and taught the Indian much of the good, but more of the vices of the civilization then extant. We have previously referred to the effects of alcohol as an exciting cause of this disease, and see an excellent example of its effects, the deterioration of the American race, physically and morally, so much so that the government has had to enact laws prohibiting under a penalty of fine and imprisonment, the sale of any liquors to Indians. As the Indian becomes more and more civilized, he becomes more subject to the disease, for education conduces to a larger occurrence of hysterical manifestations. Dr. A. D. Lake, physician to the Thomas Asylum for Indians, situated in the Cattaraugus Reservation, near Cowanda, N. Y., has observed the Indians of this State for 25 years. In his earlier acquaintance with them the disease was unknown, but in the past ten years he has frequently seen both neurasthenia and hysteria. They seem to characterize themselves among the Indians especially among the girls, in some of whom he has seen convulsions, but often in the manifestation of a moral perversion. No other reason can be assigned for the production of this disease among the Indians than in the change which civilization has procured in their habits and mode of life.

As yet I have not been able to ascertain much concerning the frequency of hysteria among the Chinese, but I do not believe that it is so frequent. Hirsch states that Hindoo women are not much disposed to hysteria, and that the European races living in Hindoostan are as much disposed to the disease as those resident in European countries.

We have, therefore, come to the conclusion that hysteria is seen among all people, and in all countries, and the fact that it affects certain races more often than others, like the Jewish and the Latin races, may be attributed to causes of environment rather than inherent qualities of a race. As an example, if, as Jacobs says all Johns and Maries were to be shut up in ghettos for a couple of centuries, they would undoubtedly show peculiarities in habits, and would develop a peculiar psychology. Heredity plays a role only in that the child may learn to imitate certain traits of its parents, the environments and habits remaining the same.

In conclusion we must not forget the hysterical background which may be an epiphenomenon in certain organic diseases, in certain races such as the Slav, Latin, Israelite, nor on the other hand to slight the fact that though the symptoms of hysteria are well marked as they usually are among Russo-Polish women, that they may at the same time be suffering from organic disease.

Better therapeutic results will therefore often be obtained among the susceptible races, of those among whom hysteria is most common, by drugs, suggestion and mechanical means of treatment directed against a latent hysterical condition in addition to treatment for organic disease if it be present.

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INTRASPINAL COCAINIZATION FOR SURGICAL ANESTHESIA

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WHILE intraspinal cocainization may as a method of producing general local anesthesia displace nitrous oxide, ether and chloroform for operations in the abdomen, pelvis, lower extremities, and to some extent the chest, I do not doubt it will, if nothing more, find a place in selected cases where for any reason it is found undesirable to administer a general anesthetic. That it will be used to the exclusion of other anesthetics I do not believe; for from much experience in the administration of these agents I find that superior results do not lie in the use of any single anesthetic agent and method to the exclusion of others, but in their proper selection to the case in hand. This the operator has come to place largely in the hands of the skilled anesthetist, realizing that the best interests of the patient are subserved by permitting him to use his own discretion.

Medullary narcosis is now subjected to a rigid criticism; if of questionable efficacy the sooner decided the better; if of value in spite of all objections (and so far they have been largely theoretical), it will take its place as one of the methods of anesthetism.

It was rather a unique experience to see the uterus and appendages removed through abdominal section, the patient being perfectly conscious, completely relaxed and anesthetic. This impressed me so forcibly that as an anesthetist the subject had for me more than an ordinary interest.

That to Dr. J. Leonard Corning of New York belongs the credit of first introducing anesthesia by the injection of cocaine into the spinal column in 1885, I think none will deny; in an interesting series of papers he describes experiments upon

the spinal cord of animals followed by the use of cocaine injected in the human subject for certain painful affections of the cord which up to that time had not, from the methods then in vogue, given very satisfactory results. At first at a loss how to bring his medicament as close to the cord as possible without injuring it, he devised a technic derived from definite measurements of the spinal vertebræ by which he could deposit his solution close to the membranes with the most satisfactory results, differing in no essential particular from the results obtained by more recent investigators.

Dr. Corning supposed that the cocaine was carried to the cord by means of the veins to a certain extent, localized by the sluggish circulation known to exist at the lower part of the cord. He did not use the very practical method of first obtaining the subarachnoid fluid. What he probably did was to deposit his solution partly into the subdural space; this while anatomically separate is in all probability one with the subarachnoid. That his solution only partly entered the subarachnoid space is proven by the absence of toxic symptoms, as he injected in most of his cases 1½ grains of cocaine. Quincke, in 1890, devised the present lumbar puncture for the removal of cerebrospinal fluid in cases of hydrocephalus; while he injected other fluids into the subarachnoid space he did not inject cocaine. Bier, in 1898, finding cocaine unsatisfactory in the more major operations, thought it possible by the lumbar puncture to produce anesthesia throughout greater areas; a patient presenting himself, he used the subarachnoid puncture and injection with entirely satisfactory results; the operation consisting of injection of a tubercular capsule and bones of the foot, and this may be said to be the first operation performed with intraspinal cocainization. Bier at this time reports altogether six cases, all satisfactory, then gives an interesting account of the lumbar puncture upon himself; as the syringe did not fit the needle and as there was much loss of cerebrospinal fluid it was decided to defer the injection. The spinal puncture and injection of cocaine was then made upon Dr. Hildebrand; his well recorded symptoms were much the same as those developed in other patients at the present time. The very complete and interesting papers describing the technic, with report of cases of intraspinal cocainization, which attracted general attention, was due largely to the efforts of Tuffier, to be followed later by Kreis and many other investigators in Europe and America.

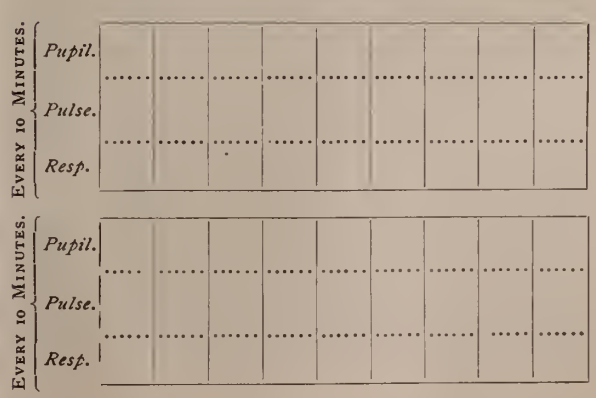
As the most serious theoretical objection to the method I have up to the present time heard is possible injury to the spinal cord itself, the consideration of a few anatomical facts will not be without interest.

The spinal cord, by means of its surrounding membranes forming its ligaments, is contained in a bony cavity much larger than the cord itself. It extends from the lower part of the bulb above at the upper border of atlas to the lower border of the first lumbar vertebra, where it ends in the conus medullaris, descending a short distance as gray matter into the filum terminale of the pia, which descends in the center of the cauda equina to the upper part of the sacrum. The cord is capable of movement from one-half to one inch; three membranes surround it and are prolonged for a short distance onto the nerve trunks as they emerge from the cord. The pia mater is the highly vascular and closely adherent membrane which surrounds the cord and is separated from the central delicate membrane, the arachnoid, by an ample space containing a clear fluid, the subarachnoidean space and fluid. Many trabeculæ covered with epithelium unite the pia and arachnoid, but to a less extent than the brain. Between the parietal layer of the arachnoid and the external membrane, the dura mater, is another space, the subdural, containing a slight amount of fluid only. The two outer membranes extend much lower than the cord itself, that is, to the second vertebral section of the sacral bone. We have simply to remember that the cord is entirely surrounded by a water jacket; the subarachnoid fluid and outer membranes, which also extend much lower than the cord itself, forming, as it were, a cul-de-sac.

I believe the determination of value of any new method depends largely upon the completeness of the observations recorded. For this reason I would propose the use of some such blank as the following:

HISTORY OF ANESTHESIA BY INTRASPINAL COCAINIZATION.

No ..... Date..... Age.. ..... Sex.....
Name.....Type of Patient.....
General Condition.....Probable Weight.....
Previous Narcoses.....Temperament.....
Respiratory System.....Tactile Sense.....
Circulatory System.....Reflexes.....
Temperature..... .....Pupil.....
Urine Analysis..... Reac. Light.....
" Accom.....
Drugs before Puncture..... .....
.....
Sol. Cocaine.....% How and when prepared.....
Site of Punct.....Quantity Injected.....
Time " .....Needle Removed.....
First Sympton.....
Complete Anesthesia at.....Ended at.....
Operation..... .....
Begun .....
Operator.....
Ended.....



Nausea.....Vomited.....
Subj. Symptoms.....
Obj. Symptoms .....
Headache.....
Untoward Sympt. and Treatment.....
Extent of Anesthesia; how determined.....
Reac. to Heat.....
" " Cold.....
" " Pressure.....
Reverse for Remarks.

The technic of intraspinal cocainization is essentially Bier's and consists of a sterilized 2-per cent. solution of cocaine, syringe and long needles. It may be said there is no operation in surgery in which more rigid asepsis is necessary. The method being so simple I prefer making the solution myself, and always fresh before using, at the same time seeing that all instruments, etc., are properly sterilized. The armamentarium I use consists of a 120 M. graduate, small shallow glass for the cocaine solution, test tubes, spirit lamp, glass flask with sterilized water, syringe and needles, test tubes containing sterilized cotton, a variable number of papers, each containing 1¼ gr. hydrochlorate of cocaine. These papers are covered with foil and are carried in a wide mouth glass stoppered bottle. All the glass material is sterilized in plain water twelve minutes. The syringe, either glass or metal, is of the solid piston variety and is entirely separated, which, with the needles and stylets, are likewise boiled. It is suggested that the needles and syringe should always be kept, separate and never used for any other purpose.

As upon the needles, I believe, often depends the success or failure of the method, it is important to say a few words regarding them—they should, according to Tuffier, consist of from 7 to 10 cm. in length, having an external diameter 1-1 mm.; internal diameter .8 mm. In general terms it may be said that the finest needle through which the cerebrospinal fluid will slowly drop is the best to employ; the ordinary large-calibred aspirating needle is, I have found, too large, and no doubt often the cause of failure in these cases in which anesthesia is not produced, though there is no difficulty in obtaining the spinal fluid. The needles should have a short bevel and as sharp an edge as possible. While steel needles will answer they have the disadvantage of rusting inside and out. To prevent this, after use they should be passed through the flame to heat and so dry the interior. The external part of the needle may be gold or silver plated; being smooth they pass through the skin and avoid rusting which always follows repeated boiling.

The platino-iridium needles answer well. They do not rust but, being softer than steel, they bend though do not break. They are, however, too soft to be used repeatedly with satisfaction. It occurred to me that I might find in gold a needle occupying a place between steel and platinum. This I have succeeded in doing by having them made with an entirely original feature based upon the anatomical arrangement of the spinal canal. From the examination of several series of lumbar vertebræ I find the distance from the mid-point of the lamina obliquely across the spinal canal to the point where the transverse process joins the body, averages 2 centimeters. It occurred to me that the essential part of a needle would be in no case greater than this distance, but actually one-half or one cm., which probably never exceeds the distance from the bony lamina to the subarachnoid space. If the spinal puncture were made with the tissues separated down to the bony lamina an ordinary hypodermic needle would answer, but as the puncture is made with the tissues in place, we must allow for the distance from the surface of the skin to the edge of the lamina of the spinal canal. Upon these points I had after considerable difficulty made what I term attenuated needles, which from every standpoint leave nothing to be desired. These may be of two lengths, 8 and 10 cms. from the point, which has a short bevel. I allow 3 cms. for attenuation. This permits of repeated sharpening and beveling of the tip without diminishing the part of the needle which enters the spinal canal. The needles, of one piece, are made of 14 karat gold, which not only avoids rusting but permits the tip being sharpened by using a piece of jeweler's oil stone. The stylet made of gold is also attenuated—by this means any foreign material may be removed without withdrawing the needle from the tissues.

The measurements of needles are:

Attenuation, ext. diam. .82 millimeters
Attenuation, int. diam. .41 millimeters
Large part, ext. diam. .96 millimeters
Large part, int. diam. .80 millimeters

The cocaine solution is always made freshly by myself as follows: A sterile test tube is partly filled with water from the flask and boiled five minutes—the excess over quantity required is poured off, in this case all over a drachm—the powder of cocaine is then introduced and the solution maintained just below the boiling point for one minute. This insures a sterile solution without any deterioration of the cocaine. The solution should never be kept from day to day.

The patient should be placed in preferably the sitting position, though the side posture may be used when necessary. The back should be prepared as for operations from the lower dorsal region above to the upper part of sacrum below, and laterally as far as the iliac crests. The hands being thoroughly prepared, the iliac crests are determined and an imaginary line taken uniting them; this line at the mid-point of the back passes through the spinous process of the fourth lumbar vertebra; a point below, that is, between the fourth and fifth vertebræ, about 1 cm. external to the spinous process is selected as the site of puncture. The patient is instructed to bend forward, which separates the vertebræ to a slight extent, when the unattached needle without the stylet is quickly introduced through the skin—the patient may be prepared for the slight temporary pain of the needle, or if desired the site of puncture may be first anesthetized with cocaine. The needle is then very slowly pushed

in a direction from without inward, and from below upward, and passes without difficulty through the tissues of the back and outer membranes of the cord into the subarachnoid space. As soon as the needle is in the subarachnoid space and not until then, the cerebrospinal fluid will flow, usually drop by drop. This may, if desired, be permitted to enter a sterile test tube; from 5 to 10 drops may be permitted to flow, when the syringe, previously filled with the required quantity of the cocaine solution, is adjusted and the solution slowly injected, consuming from thirty seconds to one minute. The needle should not be removed for two minutes after injecting the solution. It may be said that no case is a success should cocaine be injected where the cerebrospinal fluid has not been obtained. The needle is then quickly withdrawn, the site of puncture covered with collodion and gauze and strapped. The patient may then be prepared for operation.

In time varying from four to twelve minutes, if the puncture has been successful, the patient will be anesthetic and ready for operation. The first symptom indicative of successful injection will be a paralsthesia of the lower extremities, indicated by remarks from the patient such as a feeling of pins and needles, or being asleep or dead, as they express it. A history of each case with remarks will perhaps indicate the symptoms likely to be manifest, better than a general statement.

Case 1.—Lumbar puncture between the fourth and fifth vertebræ; spinal fluid dropped freely; 15 m. of 2 per cent. cocaine solution injected. Absolutely no result so far as anesthesia was concerned.

After seeing no fault in the technic I could only attribute failure to the cocaine. I then learned the solution had been made fresh the day before. Having decided to use a second injection I prepared the solution myself. The puncture was again made, this time upon the left side, when the spinal fluid easily flowed. After the injection of 20 m. of a 2 per cent. solution of cocaine which likewise resulted in failure, the operation, dilatation and curettage of the uterus, was performed without an anesthetic.

The patient's pulse rose to 120; respiration, 24; temperature, 99.2° F. The pupil was somewhat dilated, the room being rather dark.

Being unable to account for the failure, I took both solutions of cocaine and tested them upon myself in the eye and mouth, as did also the operator. The anesthetic properties of both solutions were not in the least altered. At this time the explanation of the absence of results was inexplicable.

The explanation I believe to be the large-sized needle employed, for the membranes of the cord are tense, and after perforation with a large needle the fluid may pass out between the membranes and bony wall of the canal, exerting no anesthetic influence.

Case 2.—In the second patient the cocaine solution was prepared by myself. Only one puncture was made, the surgeon not wishing to subject the patient to unnecessary delay. The fluid dropped freely. Anesthesia was a complete failure. In this patient 20 minims of 2 per cent. solution was used. In this case as well as in the first the precaution was taken to see whether the fluid was lost at the end where needle was adjusted to syringe. Absolutely none appeared, and to all indications it was injected into the subarachoid space.

The patient had no subjective symptom attributable to the injection, except very slight dilatation of pupils. Chloroform was administered throughout the operation. This cocaine solution, tested upon myself, produced local anesthesia when injected beneath the skin and also applied to the mouth.

Remarks on the First and Second Cases.—Seeking for an explanation of the absence of effects in these cases, which to me was inexplicable at this time, I had recourse to Tuffier's article and found that the needle he used was very much smaller than mine. I then provided myself with a smaller needle, to be used in Case 3.

Case 3.—Pelvic abscess. Spinal puncture. Fluid flowed freely.

Injected 20 minims 2 per cent. solution cocaine. The patient, five minutes after injection, complained of dead feeling in feet, which quickly extended to the waist line; sensation slightly abolished. Operation extremely painful, but no anesthetic employed. After the patient was returned to bed I remained one hour. She was completely analgetic from the middle of thighs down; as she expressed it, you might take her foot or leg off and she would not feel it, though paresthesia extended to her waist.

No nausea or vomiting.

Respiration, 26; pulse, 110; pupil very slightly dilated, reacted to light and accommodation.

Profuse perspiration; patellar reflex, and ankle clonus present.

Case 4.—S. H., 22. Male, type anemic, very thin and emaciated. Pulse, 118; temperature, 99.6° F.; had several operations; dilatation of sphincter and stricture of the rectum. The patient, according to the surgeon, could never permit examination without anesthetic.

Lumbar puncture 4.40 P. M. between fourth and fifth vertebræ. Fluid obtained in test tube; injected 20 minims 2 per cent. cocaine solution. Feeling of weight and heat in the feet, also like pins and needles in the left foot particularly. Slight headache 4.50. Pupil normal; no sensation to heat and cold. Anesthesia up to the iliac crest. The stricture was dilated, and all manipulations were made without causing pain. The patient when taken to his ward twenty-five minutes after the operation, vomited excessively. In bed, afterward, his pupil was normal. Profuse perspiration; no headache; analgesia still persistent at 5.15. Left the hospital next morning.

No temperature at any time; sensation fully restored at 7.20. Following morning he had severe headache. When he left the hospital he was given $^1/_{100}$ gr. of nitroglycerine.

Case 5.—F. F. Somewhat anemic. Spinal puncture between the fourth and fifth lumbar vertebræ; fluid dropped slowly. Injected 20 minims 2 per cent. solution, prepared as in Case 3.

Time consumed in injection, thirty-five seconds. Ten forty-six, tingling sensation to contract, though pain diminished.

Abdominal oöphorectomy, incision 10.50. No pain during the entire operation. 10.35, pulse, 100; respiration, 28. 11.15, pulse, 100; respiration, 26. 11.25, pulse, 110; respiration, 26; temperature, 98°. Profuse sweating; no nausea or vomiting or headache at any time. This patient subsequently developed a bronchitis and localized pleurisy, and had a rapid pulse, respiration and temperature.

First day after operation temperature varied between 100.4° and 101°; pulse, 88-104; respiration, 24-28. Pain in side; no headache; cough; urine negative; amount of urine, 27 ounces.

Second day, pulse, 84 to 104; temperature, 100° to 100.2°; respiration, 24 to 36; urine, 23 ounces; no headache.

Third day, temperature, 100.2° to 101.4°. respiration, 24 to 36; pulse, 94 to 102. Pain in chest.

Remarks.—Anesthesia was a complete success in this patient, extending to axillæ. The case is also interesting to those who always attribute bronchial and pulmonary complications after operations, as due to the anesthetic agent. I have not been able yet to connect the spinal puncture with the patient's chest condition. Symptoms: Temperature, pulse, etc., gradually approached the normal after the sixth day.

Case 6.—L. M., age 30. Plethoric type. Temperature, 98°; pulse, 80; respiration, 18. Varicose veins. Lumbar puncture between the fourth and fifth vertebræ, 3.20. Injected 20 minims 2 per cent. solution cocaine. Dead feeling in feet immediately after the patient had laid down; sensation to pin prick was felt as a dull though not sharp pain. 3.26, anesthesia absolute to axillæ. 3.28, nausea and vomiting, lasting to 3.30, then ceased entirely. Respiration, 28; pulse, 110; sweating much. The operation began at 3.30, and was finished at 4 P. M., when the patient was still completely anesthetic. No difficult breathing; no headache. Pulse full; pupils normal. Sensation at 4.35 began to return in the right leg first; was complete at 5 P. M. Frontal headache that night, which phenacetin and caffeine seemed to relieve; dull feeling about the head all next day. No headache since.

	3.30	3.45	4.00	4.30	5.00
Pupil	N.	N.	N.	N.	
Pulse	110	120	120	110	110
Respiration ..	28	28	26	26	26

Day following temperature was 100°, after which it returned to normal. Pulse, 18; respiration, 20; pupil normal. Reflexes not involved during anesthesia.

Case 7.—Mrs. L., age —; weight, 130; anemic. Pulse, 70; respiration, 20; labor, normal presentation; puncture 3.50 A. M., between fourth and fifth lumbar vertebræ; 3.54 paresthesia, toes and feet cold; buttocks numb; no pain to examination; feeling of warmth up and down legs. Wished to go to bed, but felt she could not because of dead feeling in lower extremities. She did so, however, with help. No sensation to pain. Pulse, 128; respiration, 28; vomited at 4.20, and retched considerably. Fetal heart normal; uterine contractions, I was told, were undiminished; perspiration profuse; mouth dry; muscular tremors; at 4.25 respiration was increased in rapidity to 60, short and gasping; pulse, 140, small; patient blanched, profusely perspiring; restless; she had every symptom of shock about ten minutes; she gradually improved; felt better and pains returned. A second injection was not made, but a whiff of chloroform was given when the head was about to be born; in twenty minutes the placenta was expressed, when I left. The operator told me shortly afterward the patient went into collapse, with no pulse and blanched color; she was inverted, and hot saline enema given, when she gradually improved. I saw her shortly afterward, when her pulse was 106; respiration, 26; I subsequently was told she had very severe headache for two days following confinement, for which nitroglycerine, caffeine and phenacetine, etc., were given without lessening its severity to any extent. This patient was distinctive for the short anesthesia, forty minutes, and great amount of systemic effect from the cocaine.

Case 8.—M. H., 32. Type somewhat anemic. Pulse, 78; respiration, 18; temperature, 98°. Operation, dilatation and curettage, and repair of cervix. Whisky 1 oz. Lumbar puncture 5.01 P. M., between fourth and fifth vertebræ; injected 20 minims 2 per cent. solution cocaine. 5.03, left leg dead first; at 5.05 both legs to hip, then to axillæ; movement; unimpaired reflexes knee jerk to ankle clonus present; 5.10 vomited. Operation 5.15, ended 6.00; patient still anesthetic. Felt absolutely nothing. Sensitive to touch; felt good throughout.

	5.10	5.20	5.30	5.45	6.00	6.30
Pulse	100	110	110	small 60	full 100	100
Resp. ..	24	28	28	28	24	24

At 6.10 sensation began to return; was complete by 6.30. Slight headache day following; stopped without drugs. Following day, temperature, 99.4°; pulse, 86; respiration, 18.

Case 9.—Is rather interesting. Mrs. G., aged 34; stout; colpoperineorrhaphy and ventral suspension. Puncture 9.00 A. M., between fourth and fifth lumbar vertebræ. Fluid dropped slowly; injected during forty seconds 22 minims 2 per cent. solution of cocaine. Within ten minutes the operation was begun. The patient was sensitive; no analgesia present, though vaginal opera-

tions were finished; chloroform given for abdominal operation. After opening the abdomen chloroform was discontinued, to see if patient felt anything. She became immediately conscious, and said she felt nothing. The suturing of uterus and closing of incision was absolutely painless. Testing the sensation with pin prick, the patient was found analgetic up to and including breasts. All the operations were completed in forty minutes. Analgesia lasted thirty minutes after patient returned to bed. This was a delayed case of anesthesia, showing we should always wait twenty minutes for anesthesia. Patient vomited slightly; profuse perspiration. Respiration, 28; rapid pulse; temperature, 120; no headache. During administration of chloroform pulse fell from 110 to 60, became very irregular, then rose to 110 again and remained so.

	9.00	9.15	9.25	9.30	10.00
Pupil	N.	N.	N.	N.	
Pulse	110	110	60 full irregular	110	100
Respiration ..	24	26	26 deep	26	24

Vomited slightly after going to ward. No headache at any time.

Case 10.—R. J. F., age 39; weight, 165. General condition good. Very nervous for fear of pain; every examination and manipulation heretofore had been extremely painful; had also been operated on; given whisky before puncture. Puncture 3.27 P. M., between fourth and fifth lumbar vertebræ. Injected 20 minims 2 per cent. solution of cocaine. Paresthesia in lower extremities 3.28; anesthesia 3.30, extending as high as axillac sphincter, dilated, and stricture of sigmoid dilated, with absolutely no pain; also large tubes passed without sensation; absence of sensation to heat and cold; knee joint and ankle clonus normal; at 3.25 pulse 26, respiration 90; at 3.45 pulse 90, respiration 28; 3.55, pulse 90, respiration 26; 4.10, pulse 90, respiration 26; 4.35, pulse 90, respiration 26. Still completely anesthetic. He then rose from table and could walk to another room to dress; his gait was awkward, and he seemed to walk on his heels, this seemed to tire him. After dressing he seemed to walk better, though somewhat shaky; anesthesia still absent; at 5.15 anesthesia commencing to return slightly, when he left for home. He reported to me the following day, saying sensation had fully returned at 7.30 the day before. At 7.45 passed voluntarily about ℥viii urine; complete control over bladder; had a very intense headache that night, occipital temporal regions. I had prepared him for this, having given him two tablets of $^1/_{100}$ gr. nitroglycerine. These had no effect; headache had disappeared in twenty-four hours, excepting for a dull feeling about the forehead. He also felt drowsy during the entire day. Temperature, 98.8°; pulse, 72; respiration, 16.

The noticeable feature about this patient was the entire absence of all symptoms immediately after the injection. All he mentioned was feeling warm. He also had the slightly transitory nausea. He expressed himself as particularly pleased at the absence of all sensation, and did not know when the surgeon had finished with him.

Case 11.—J. P. Thin, anemic, extremely hyperesthetic; pulse 114, small; temperature, —; respiration, 20; given ℥i of whisky; supposed malignant growth of bladder. The patient could not endure 2 ounces of water injected into bladder. Because of unbearable discomfort from his apparent bad condition, it was not thought advisable to inject the usual amount of cocaine solution. Lumbar puncture between fourth and fifth vertebræ obtained cerebrospinal fluid into sterile test tube, then injected not more than 13 minims of a 2 per cent. solution; no anesthesia; as it was too late, the surgeon did not wish to have another injection on this day. The second day following I determined to use the regular quantity.

Having carefully preserved the spinal fluid removed from him at the last puncture, I decided to make my cocaine solution with it instead of the plain water; this was first thoroughly boiled and then the cocaine added in the usual manner.

First puncture between the third and fourth lumbar right side, after fluid dropped, thumb was held to prevent undue loss. Injected 20 minims 2 per cent. solution of cocaine, consuming forty seconds in injection. After five minutes the patient said his feet were asleep; he, however, was sensitive to pain up to fifteen minutes; his feet up to ankles were completely anesthetized. Abdomen sensitive at 4.46 P. M. Made a second puncture, between fourth and fifth lumbar vertebræ, left side; fluid dropped slowly, only a few drops lost. Injected 15 minims sterile 2 per cent. spinal fluid solution of cocaine in about thirty seconds. Anesthesia in four minutes quickly extended from feet upward to umbilicus. The patient said his entire legs were dead. No sensation to pin prick or knife, from feet upward to axillæ. Catheter introduced, and bladder easily filled with 6 ounces of water, without any knowledge of patient. 4.59, operation of epicystotomy performed. Trendelenburg position, with absolutely no evidence of pain or discomfort to the patient from opening of abdominal incision, suturing of bladder, and closing of abdominal incision; during suturing of bladder, 5.15, patient vomited and retched for ten minutes, considerably interfering with suturing; when not retching, reaction was complete. Pulse, 120; respiration, 30. Patient sweating profusely; no headache; pupil normal; feels good, though pulse small. Paresthesia in hands, though not anesthetic to pin prick. Anesthesia complete to axillæ. 5.30 abdominal operation finished. Operation of external urethrotomy was then done and patient returned to bed at 6.10. At no time was the patient conscious of any pain or discomfort.

Puncture at 4.46; operation 4.59. Anesthesia to umbilicus, 5.02; 5.05, morphine gr. ¼ hypoder-

mic; to axillæ, 5.08. Vomited and retched, 5.15, lasted to 5.25.

	4.46	4.50	5.00	5.10	5.20
Pulse	100 small	120	128	130	100 small
Resp.	36	28	28	30	36
	5.30	5.40		5.50	6.10
Pulse	90 small	90 small		90 small	90 small
Resp.	28	30		28	28
	6.30				
Pulse	90 small				
Resp.	26.				

Given whisky at 6.30, pulse improved, patient said he felt good; no headache. Anesthesia still complete to axillæ. Pupil was decidedly contracted after hypodermic of morphine.

Case 12.—R. D., 27. Plethoric; temperature, 98.4; pulse, 76; respiration, 16; reflexes normal, hemorrhoids; whisky, 1 oz.; lumbar puncture at 8.30 A.M., between fourth and fifth vertebræ, injected 20 m. two per cent. solution of cocaine—paresthesia in feet 8.32; 8.35 extending to waist, insensitive to pin prick; operation at 8.50; dilatation sphincter and removal of hemorrhoids, clamp and cautery; operation finished at 9.20; still anesthetic to mid-chest; thirsty, gave water, slight nausea, no vomiting, perspiring profusely at 9.50 sensation commenced to return; at about 10.30 it was complete; temperature following day was 100, pulse 90, respiration, 20, then returned to normal—no headache, pupil normal.

During anesthesia

	8.40	8.50	9.00	9.15	9.30	10.00
Pulse	100	120	80	80	100	100 full
Resp.	22	28	28	26	26	24

During application of cautery patient felt the heat as warm, but no pain at any time.

Case 19.—M. B., 31; nervous, temperature, mid—plethoric type; closure of inguinal colostomy; whisky, oz. 1, 3.25; lumbar puncture between fourth and fifth vertebræ injected 20 m. 2 per cent. solution of cocaine; 3.30, dead feeling in feet; anesthetic to pin prick; operation begun 3.45; during incision patient apparently felt some pain, rest of operation was done with no pain though traction on intestine caused nausea, resection and suturing of intestine caused no pain though traction seemed to. Sensation to pin prick abolished up to lower rib—patient occasionally loked at operation; sight of scissors seemed to cause pain whereas when her eyes were covered she had no such sensation. She seemed to feel traction of intestine and packing of gauze; at the end of operation, 4.50, sensation had fully returned to feet.

	3.30	3.40	3.50	4.15	4.30	4.45
Pulse....	100	120	120	110	130	110
Resp.....	24	28	30	32	26	26

No headache next day or at all; pupil at no time dilated.

Case 14.—Mrs. F., 26; stout though pale; pulse 90, respiration 18; nephlirites; complete rupture of perineum; whiskey oz. ; lumbar puncture, 9.05 A.M. between fourth and fifth vertebræ, no anesthesia in feet at all or anywhere; after 15 minutes second puncture injected between third and fourth vertebræ left side, likewise no result as far as anesthesia was concerned; perspiring freely; the operation caused undoubted severe pain; gave chloroform under which she did well; pulse from 120 small; fell to 90 and became quite full. Became conscious very quickly after chloroform was discontinued, at 9.20.

	9.10	9.20	9.30	9.40	10.00	10.15	10.30
Pulse....	100	100	120	60	80	90	115
Resp.	22	22	28	28	30	34	34

Pupil normal throughout.

Case 15.—A. S., 34; somewhat anemic, very nervous temperament; closure of inguinal colostomy, second case. Whisky, 1 oz. Injection, 3.20 P.M., of 20 m. 2 per cent. solution. Immediately feet felt dead; after lying down she was absolutely insensitive to pin prick up to ankles, up to hip sensation limited; after 18 minutes' operation was begun. She seemed to feel slightly the incision and fretted very much, testing sensation she was found to be painless though she felt contact no doubt; when operation was begun seemed to feel incision; a second puncture and injection at 3.40 made; anesthesia did not extend; patient very nervous; operation continued and finished 4.40; seemed to feel traction on intestine; sensation to pin prick felt as dull pain probably contact simply; no headache; slight feeling of nausea though no retching, vomiting, or perspiration.

	3.30	3.40	3.50	4.00	4.15	4.50
Pulse	120	110	120	120	120	120
Resp.....	26	28	28	28	28	28

The surgeon told me he considered both these patients excessively nervous and more frightened than actually suffering.

Case 16.—J. L., male; type, mid-plethoric condition, good reflexes, respiration, pulse, temperature, tactile sense, pupil normal; has mitral obstruction. Operation femoral herniotomy with incarceration of omentum simulating a tumor. Puncture between fourth and fifth lumbar vertebræ, fluid dropped, slowly injected, 20 m. 2 per cent. solution of cocaine; needle removed 2.02 paresthesia almost immediately; anesthesia complete to umbilicus at 210; blunted sensation above this to axillæ; anesthesia ended at 3.50. Pupil mostly normal, occasionally dilated, then contracted.

Respiration varied between 20 and 30.

Pulse varied between 56 and 120.

Slight nausea, no vomiting. Day after slight headache, had slight chills and general uneasiness. Temperature 101, pulse and respiration normal.

DEDUCTIONS AND CONCLUSIONS.

The explanation of the failure to produce anesthesia in the first two cases I believe due to the large needles employed, the removal of which permitted the solution to eke out into the bony wall of the sacrum exerting no influence on the patient

in any way whatsoever. In the other cases too small a dose even after a second injection though the first case may also have been due to this cause also. In the first patient altogether ½ gr. of cocaine was injected. The somewhat tense condition of the membranes of the cord and the entire absence of any symptoms would indicate that the explanation mentioned is the true one. The fact that Bier advises that the needle be not withdrawn for two minutes after injection would indicate the possibility of the loss of the solution before it disseminated itself in the sub-arachnoid fluid, was not unknown to him. In the third case where a smaller needle was employed, anesthesia was complete from the middle of the thighs down; here a second injection would no doubt have produced complete anesthesia. This must be taken as a case of individual insusceptibility. It shows that cocaine injected into the spinal canal differs in no way from its introduction into the general circulation though I believe its toxic symptoms are decidedly less developed by the spinal route.

Case 7, 20 min. was injected and produced well marked physiological symptoms showing the susceptibility of this patient.

Case 11, but 10 min. were injected at the first puncture and produced anesthesia almost entirely throughout the distribution of the sciatic nerve—also note this patient had a severe headache the entire day following.

In Cases 6, 10, 12, large plethoric types 20 m. respectively were injected and produced surprisingly rapid and complete anesthesia. From these varying and interesting results we must deduce that a quantity which in one patient will produce anesthesia in another would result in failure, in others again resulting in but partial success, further as we cannot anticipate the necessary dose for the large and plethoric patients, as we have seen they are sometimes easily influenced by small doses whereas at times the small thin and anemic require large doses. We may formulate the only safe and practical plan to be used in all cases; that is the intraspinal injection in any case should never exceed 20 m. of a 2 per cent. solution of cocaine or its equivalent. Where this does not produce anesthesia it neither affects the patient physiologically. At least this has been my experience up to the present time; a second injection may then be made with perfect safety. When the first injection has produced but partial anesthesia, the second injection should be made, this, however less in quantity than the first.

I do not believe that the circulation is any factor in the production of anesthesia when cocaine is injected into the sub-arachnoid space; its effects are in all probability due to the passage of the cocaine from the sub-arachnoid space along the perivascular spaces in the tunica adventitia of the blood vessels to the sensory columns of the cord also directly into the lymph spaces of the nerves themselves which have been shown by Key and Retzius to be continuous with the sub-arachnoid space.

Corning believed the circulation was the means of anesthetizing the cord in corroboration of which he quotes Harley from Ringer's work to the effect that strychnine injected into the canal of the cord, produced well marked physiological symptoms, but when placed in direct contact with the nervous elements of the cord divested of its vascular supply the solution remains entirely inert. Hardly any other result could be expected to occur if, however, the sub-arachnoid space and its fluid had been artificially replaced his results would in all probability have been different. The physiological symptoms more or less produced in all patients are probably due to the direct active cocaine upon the important centers of the cerebrospinal system, and also, but to a lesser extent, the circulation. There is every reason to believe that the dilution of cocaine by the cerebrospinal fluid is not great, as this fluid in any individual is very small in amount though none the less of physiological importance—the fluid is in greater amount in the region of the bulb, and its *direct effect* when *containing cocaine*, upon the *respiratory* and *vaso-motor centers* can very easily account for the alteration in these functions. Besides effecting the heart and respiration efferently through the sympathetic, which also accounts for the very profuse perspiration which frequently occurs. Hill has shown in his very perfect experiments that the cerebro-spinal fluid pressure never exceeds that of the cerebral veins, any tendency to increased pressure fluid thoroughly before introducing the cocaine exactly the same as when making a watery solution. If the headache complained of in this patient was due to the introduction of saline or sterile water or a reduction of cerebrospinal fluid tension by replacing this fluid I might eliminate it, at the same time I might determine if cocaine itself was the cause of the symptom. This patient had injected into the sub-arachnoid space the cerebrospinal fluid differing from his normally, only in the addition of cocaine. Again more fluid was injected than was lost by the puncture. This may have increased the tension slightly but this as we have seen is of no consequence. The patient in two injections received one-half grain of cocaine and strange to say had absolutely *no sign of headache* at any time after the puncture. It may be contended that as some patients suffer from little or no headache these punctures may simply have acted in this manner. It is rather significant, however, that in the second puncture the total quantity of cocaine injected was three times that of the first. I do not believe that the spinal fluid solution of cocaine will ever become popular, for unless the greatest precautions are taken much harm may result differing greatly in this respect from the water solution.

We must conclude from Biers and my own experiences that the removal of the sub-arachnoid fluid should be restricted to the fewest drops, that is after being certain that the needle is in the sub-arachnoid space by a few drops of the clear fluid, the tip of thumb should be placed over

the end of the needle until the syringe is adjusted.

In conclusion I would suggest that as the cerebral circulation is directly dependent upon the general circulation a remedy for the headache may be found in simple analgetics but drugs exerting their influence upon the circulation direct either in an increase or decrease in the general blood pressure. Increasing the blood pressure in the arteries favors an increased secretion of cerebrospinal fluid with an increased tension in the veins retarding absorption.

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Sufficiency of Proofs of Cause of Physician's Death.

A policy of accident insurance issued to a physician contained the following clause: "This policy covers septic poisoning resulting from accidental incision or abrasion of the cuticle, and the simultaneous infection thereof, while the insured is performing a surgical operation or autopsy." It was conceded that the testimony produced at the trial was sufficient to sustain a finding by the jury that the insured died of septic poisoning, which resulted from an accidental abrasion of the cuticle while performing a surgical operation, and that the facts proved established a claim within the meaning of the policy. But it was contended that the proofs of death furnished the company were not in substantial compliance with the requirements of the policy. The Supreme Court of Pennsylvania says, however, case of Braymer vs. the Commercial Mutual Accident Company, that the only defect in the proofs which the most critical examination developed was that they did not show that the abrasion of the skin which made infection possible occurred during the operation, which objection was not raised, the only objection stated being that it did not appear that infection occurred during the performance of the operation, which objection was not well founded. Under these circumstances, the court holds the proofs sufficient, as it thinks it might well be inferred from but the one objection last mentioned being raised that in all other respects the proofs were accepted as sufficient.—*Jour. Amer. Med. Assn.*

A Thousand-Dollar Reward for Evidence of a Deformity Cured by Christian Science.

Dr. Oscar Carrabine, of Chicago, in a lecture given at Tremont Temple on July 24th, for the purpose of exposing the methods of Christian Scientists, announced that he had been authorized by a Chicago physician, whose name he did not mention, to offer a reward of $1,000 for any case of deformity healed by Christian Science treatment.

Venereal Warts.

For a corona of small warts just back of the glans penis, and traced to the irritative action of the vaginal secretions on a surface weakened by too much venery, use the following dusting powder, and insist upon continence for at least three months:

℞ Hydrargyri chloridi mitis... ʒ ss
Acidi tannici..... gr. xx
Bismuthi subnitratis..... ʒ ss
M. Sig. Use locally as a dusting powder.—*Jour. Amer. Med. Assn.*

For Local Application of Tonsillitis.

As a local application the following may be found of service in such cases:

℞ Iodi..... gr. iij
Potassii iodidi..... ʒ j.
Glycerini, q. s. ad..... ʒ j.
M. Sig. Apply locally to the tonsils three times a day by means of a brush or cotton swab.—*Medical Fortnightly.*

Abortive Treatment of Boils.

Dr. Jorrissene, a French physician, states that a good application for aborting boils consists of:

℞ Hydrarg. oxidi rubri..... ʒ j
Lanolini..... ʒ x.
M. Sig. To be rubbed in well once a day, or oftener on large ones. Acne and whitlow can be subjected to the same treatment.—*Pract. Revue.*

The New York State Journal of Medicine.

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THE NEW YORK STATE JOURNAL OF MEDICINE is published on the first day of each month by The New York State Medical Association. It supersedes the annual volume of *Transactions* formerly issued by the Association. It aims to be a direct medium of communication between the members of the Association, and to widely disseminate Association news. Scientific Articles, Clinical Memoranda, and News Items of interest are solicited for publication. Communications should be typewritten. Reprints of Original Articles will be furnished at cost price, provided a request therefor accompanies the manuscript. Price-list on application. The Committee on Publication does not hold itself responsible for individual views of correspondents.

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THE NEW YORK STATE MEDICAL ASSOCIATION.—The eighteenth annual meeting of the New York State Medical Association was held at the Academy of Medicine on October 21st, 22d, 23d and 24th, and was in every respect most successful. The attendance of physicians from the State was very large, as was that from the Greater New York. The plan of having the business and scientific sessions separate did away with much of the confusion so often associated with meetings of this kind.

Dr. J. A. Wyeth presided in a dignified and impartial manner, and delivered a very timely address of welcome to the delegates and another to the fellows on the needs of the Association, with a brief résumé of its remarkable growth during the past year. The business session was short and very harmonious, the chief result being the nomination and election of the appended list of officers. It was generally expected that Dr. A. A. Hubell of Buffalo would be elected to the presidency; but many of the other nominations were surprises, not only to the Association, but to the nominees themselves. A careful perusal of the list of officers elected will convince every one that the selections were well made. The scientific side of the meeting was both varied and well sustained. We present to our readers several of the papers read, and the best of the remainder have been secured for our columns. Particularly interesting were the papers respectively by Dr. Deaver on "Appendicitis," and Dr. Cabot on "Iodophilia," a new subject which will be alluded to in another column. Both provoked general discussion, and the first developed some very decided differences of opinion among the various speakers.

Aside from the scientific character of the meeting, the social aspect was perhaps the most noteworthy feature. Many out-of-town physicians, in addition to delegates from other States and regular members, took advantage of the general invitation that was extended to all who desired to attend the sessions.

The interest taken by these delegates in the practical working of the reorganized Association was marked, and all were generous in their approval of the innovation.

Great credit is due the Committee on Arrangements for the admirable way in which it provided for the entertainment of those attending the meetings. The collations were appetizing and well served, and no detail concerned with the comfort of the visitors was forgotten. The annual dinner, which was given at the Murray Hill Hotel on the evening of Wednesday, October 23d, was especially enjoyable, largely due to the presence of many ladies, not as spectators, as is usually the case at such functions, but as participants. Dr. Wyeth, the retiring president of the Association, was most happy as toastmaster, and the speakers who responded to the several toasts were well fitted for the pleasant task. Dr. Jacob Gould Schurman, president of Cornell University, spoke on "Liberal Culture and Medical Education"; Dr. George H. Simmons, editor of the *Journal of the American Medical Association,* on "The American Medical Association"; the Hon. George W. Brush, M.D., on "The Necessity of Legislation for the Relief of Those Afflicted with the Drug Habit"; Dr. William M. Polk, dean of Cornell University Medical College, on "Coöperation in the Medical Profession," and State Senator Samuel S. Slater on "The Relation of Physicians to Medical Legislation and the Public Health."

It was our intention to have produced in this number a complete report of the meeting including the reports of all committees. Owing to the fact that, while many of these reports were in shape to be read, they were not ready to print, and that others have not even now reached the

secretary of the Association, we have thought best to defer to the December number the publication of the proceedings, since this is a matter in which completeness and accuracy are much more desirable than hasty publication.

We desire to give the widest possible publicity to the resolution passed by the Council and Fellows at the late meeting of the State Association, which reads as follows: "Whereas there exists widespread misunderstanding as to the interpretation of Section 1, Article IX. of the By-Laws of the New York State Medical Association, it is hereby declared that the words "Physicians in good standing" have been, and are held to mean, under the Code of Ethics of the American Medical Associatiin, legally registered physicians, who make no claim to base their practice upon an exclusive dogma, and who maintain no professional relation with organizations or institutions representing such dogma." The following are the officers for the year: President, Alvin A. Hubbell, 212 Franklin street, Buffalo; vice-president, William H. Biggam, 1197 Dean street, Brooklyn; vice-presidents *ex-officiis,* Charles B. Tefft, Utica; E. D. Ferguson, Troy; Elias Lester, Seneca Falls; Charles A. Wall, Buffalo; Emil Mayer, New York; treasurer, Edward H. Squibb, P. O. Box 760, Brooklyn; secretary, Guy Davenport Lombard, 6 East Thirty-second street, New York; counsel, James Taylor Lewis, 120 Broadway, New York; business manager, William Starr Bullock, 64 Madison avenue New York. Committee on Arrangements, Irving S. Haynes, chairman, 1125 Madison avenue, New York; Alvin A. Hubbell, Buffalo; Guy Davenport Lombard, New York; H. H. Morton, Brooklyn; Bernard Cohen, Buffalo; J. V. Putnam, Lyons; A. A. Sterns, Rondout; John Edwards, Gloversville; F. W. Higgins, Cortland; E. Eliot Harris, New York; Samuel A. Brown, New York; S. S. Klein, Rockland; W. E. Swan, Saratoga. Committee on Legislation, E. Eliot Harris, chairman, 33 West Ninety-third street, New York; Chas. B. Tefft, Utica; E. D. Ferguson, Troy; Elias Lester, Seneca Falls; C. A. Wall, Buffalo; Emil Mayer, New York. Committee on Library, J. W. S. Gouley, chairman, 97 Central Park West, New York; Charles Ellery Denison, New York; Thomas F. Reilly, New York. Committee on Public Health and Medical Charities, Alexander Lambert, chairman, 125 East Thirty-sixth street, New York; F. W. Loughran, New York; M. G. Burgess, Herkimer; H. C. Gordinier, Troy; F. W. Higgins, Cortland; Julius Ullman, Buffalo. Committee on Publication, J. Riddle Goffe, chairman, 29 West Forty-sixth street, New York; Ellice M. Alger, New York; E. Eliot Harris, New York; J. W. S. Gouley, New York; Guy Davenport Lombard, New York. Committee on Nominations, Charles E. Quimby, 44 West Thirty-sixth street, New York; W. H. Biggam, Brooklyn; E. Eliot Harris, New York, Fifth District; A. G. Bennett, Buffalo; Z. J. Lusk, Warsaw, Fourth District; J. G. Orton, Binghamton; C. D. Ver Nooy, Cortland, Third District; W. B. Read, Rome; Douglas Ayres, Fort Plains, First District. Delegates to the annual meeting of the American Medical Association, June, 1902, E. E. Harris, New York; E. D. Ferguson, Troy; C. A. Wall, Buffalo; Charles E. Quimby, New York; H. O. Arrowsmith, Brooklyn.

Investigation of Vice in New York.—Several months ago one of the local medical organizations appointed a committee consisting of some of its most prominent men, to investigate the basis for the common belief that vice and the venereal diseases have enormously increased in this city during the past two years. The committee had placed at its disposal the statistics of a very large number of physicians as well as the records of many of the hospitals and dispensaries. Both the profession and public have awaited the report with interest all the greater that the matter with which it deals is thought by some entirely respectable people to be a principal issue in the present municipal campaign. We judge, however, from an item in the columns of a contemporary that the committee will not present its report till after election. We can see no excuse for such delay. If the present administration has been such that vice and venereal diseases have actually decreased, it is certainly entitled to credit for the improvement. On the other hand, proof of increase would offer one of the strongest reasons for change of administration, and, at this juncture a committee having information of the utmost value in illuminating the point, prefers to wait till the issue has been settled in the dark, lest, forsooth, it be accused of affording information useful and therefore partisan. The time when the women of the city have become sufficiently aroused to disregard their natural distaste for public investigation of such a subject, is no time for the distinguished men of this committee to try to evade their plain duty as citizens under the pretense of maintaining their dignity as physicians. They have information which the public needs to perform a public duty, and the withholding it will only be another evidence that to be a good physician is not by any means tantamount to being a good citizen. We suppose the members will feel all the pleasures of duty nobly done when they have tabulated for the world at large facts too precious to be prematurely disclosed for the benefit of a single city.

Cortland County Medical Association.—The October meeting of the Cortland County Association was held on the 18th, at the office of Dr. F. D. Reese. An interesting paper on "Veratrum Viride" was read by Dr. S. J. Sornberger, and one on "An Original Method of Operating for Epithelioma of the Lip," by Dr. Reese. In the method advocated by the last named, the sutures are inserted from the mucous surface outward, wide of all diseased tissue, before the removal of

the growth. While this method is not applicable to all cases, it is an advantage in those in which it can be employed, as it adequately controls hemorrhage, which in all these conditions is very troublesome. Both papers were discussed by all the members present, and the meeting then adjourned, to meet November 15th.

* * *

Physician Wanted.—A recent number of the *New York Herald* devotes half a column to an experience meeting of one of the local organizations which derives a large annual income from its boasted facilities for healing by prayer. The head financier was asked what was the proper course to pursue when a patient under the care of one of his followers died, in order to escape the embarrassment imposed by the Board of Health in refusing to permit burial without a certificate of death. The *Herald* quotes him as follows: "The alliance has always managed to avoid embarrassments of this kind. We must recognize the law of the State. What I advise is, that when a case is critical we should be in touch with a *reasonable, considerate Christian* physician [italics ours], so that we can call him in to give this needed certificate. Thus we shall be able to respect the law and yet trust the Lord."

We do not recall amongst our acquaintance a single physician "reasonable" enough to commit informal perjury on request, or "considerate" enough to sympathize with an impostor menaced by the recoil of his own imposition. We take it, however, that the Christianity specified is of the garden variety, which passes current in such circles, and should be well within the compass of any one qualified in the first two particulars. It has occurred to us, nevertheless, that there may be some physician, though we shall be disappointed if we number him among our regular readers, who has had his lucrative income threatened and his select clientèle scattered by the recent activities of the Committee of Fifteen, and to him we are sure such an appeal will not be made in vain.

* * *

Tuberculosis and Immunity.—Years ago it was widely believed that tuberculosis was a hereditary disease, and, when the rarity of true inheritance was shown, we took refuge in the fascinating theory that if the disease was not itself hereditary, the predisposition to it was. Herbert Maxon King, in a paper before the British Congress on Tuberculosis, and published in the *Medical Record* for October 12th, not only produces statistics in opposition to this theory, but tentatively suggests that parents transmit not a hereditary tendency but a partial immunity. The basis for his theory is an analysis of 242 cases of consumption. More of these traced their infection to a brother or sister than to parents, while two-thirds of those infected through a brother or sister could trace no possible inherited predisposition. Parental infection required a longer time to develop after exposure than that derived from a brother or sister, and of 103 fatal cases the average duration of life after infection was one-third longer in the patients infected through the parents. The cases cited are too few to be conclusive, but they open up a very suggestive field for further study.

* * *

Varying Virulence of Tubercle Bacilli.—It has often been academically stated that the progress of tuberculosis depended not only on the amount of tissue resistance, but also on the varying virulence of the bacilli present. Jerome Lartigau, in the *Journal of Medical Research* for July, 1901, details some experiments to prove the latter proposition. They definitely indicate that the bacilli from different patients vary widely in virulence when inoculated into animals, as well as in cultural peculiarities. One culture from a human being showed very marked morphological resemblances to the bacilli of bovine tuberculosis, and had the same virulent action when inoculated. Further study along these same lines would be desirable before we prefer the statement of Koch as to the complete distinction between human and bovine tuberculosis to the more conservative conclusions of Theobald Smith.

* * *

Iodophilia.—At the recent meeting of the State Association Dr. R. C. Cabot read a very interesting paper on a phenomenon first described by Theodore Dunham, under the name Iodophilia. The reaction was at first supposed to occur in pneumonia only, but has since been observed in various diseased conditions, but not in health. It is developed by exposing a dried film of blood to the action of a mixture consisting of three parts potassium iodide, one of iodine and one hundred of water, brought to the consistency of syrup with gum arabic. In normal blood the lymphocytes and eosinophiles are not affected, while the polymorpho-nuclear neutrophiles are either unaffected or become a faint pink or brown. Under a variety of pathological conditions they take on a deeper color or show a granular network, or a collection of large or small refractive granules, varying from pink to red. The intensity of the reaction is in direct proportion to the severity of the disease. "The patient is sick," says Dr. Cabot, when this reaction occurs, and ranks it in value with the thermometer and urinometer.

* * *

Sterility Among American Women.—In a paper on this subject read at the last meeting of the American Medical Association, Dr. George J. Engelman reaches some conclusions that are simply startling, supported as they are by a mass of statistics from varied localities, nationalities and classes. At the end of the last century Malthus astonished the world by showing that, at the then natural increase, within a century the earth would not be able to support its population, and in proof of his theory he instanced the birth-rates of America and China as the highest known. From an average fecundity of five chil-

dren to a family at that time, and a sterility of less than 2 per cent., we have gone to the opposite extreme till the fear is, not that the earth will be unable to support its population, but that the educated and intelligent classes will die out in direct proportion to their education and intelligence, while their places are taken but not filled by a stock less capable but more virile.

Not only has the birth-rate among American born women enormously diminished, but the rate among Americans by adoption has suffered a corresponding drop. The German American, while not so neglectful of her duty as her native-born sister, is still decidedly less prolific than the German. Even the French Canadian, the most prolific stock known, shows a marked deterioration when she crosses the border.

Further than this, Engelman shows conclusively that there is a direct ratio between the fall in local birth-rate and the increase in the number of divorces and the amount of immorality.

Just compare the figures he gives and see what food for study they offer.

In Norway at the present time the percentage of sterility is two and a half; just about that of the American Colonies at the close of the eighteenth century. At the close of the nineteenth the American average, which is far below that of the pure American stock, is 20 per cent., while that among college graduates is 25 per cent.

The average number of children per family in Norway to-day is 6.4. Contrast this with the fecundity of 1.8 prevailing in America. The ratio of miscarriages generally considered normal is 1 to every 5½ full-term labors. In the United States the rate is just double the normal.

In Canada, one marriage in every 63,000 results in a divorce. In the United States, one in every 185 is a failure, while in Rhode Island, founded as an asylum from religious persecution, and as a haven for liberty of the intellect and of conscience, the rate of divorce to marriages is one to eight.

The causes for these marked changes cannot be physical; they must be moral, since everything indicates that voluntary sterility constitutes the vast bulk of the total.

We are neither prepared to accept the common conclusions as to the future of a country with such a tendency, nor to champion the other side without reserve. We may be permitted to observe, however, that despite their fecundity, it will be long before either Norway or Quebec transcends in influence the descendants of the old New England stock, desirable as it might be to have that stock more prolific. After all, the family, not the individual, is the unit of society, and just as the country with the greatest aggregate wealth is not by any means always the one with the highest average of contentment and happiness, so may the prosperity of a family or even a nation with a high birth-rate be more fictitious than real. With the increasing demand for head work and the diminishing one for hand work, the superiority of the prolific parents has been steadily growing less, till to-day the small family has the distinct advantage of better preparing its members for the conflict of life. In one sense, too, the increasing number of divorces indicates an aspiration for a higher and closer domestic companionship than was common in the last century. In the olden time there was often but little in common between husband and wife but the bond of physical attraction. He led his life apart from and above hers, and her duty was to minister to and bear him children. She might admire but had not the education to appreciate his thoughts, while his love had too little of the spiritual to appreciate her suffering. She now has other interests besides her home and children. He now shares with her other joys besides those of parentage. The true test of civilization is the ability to appreciate and sympathize with human suffering, and in these days it is nowhere more often exemplified than in the husband's desire to spare his wife the pain and danger of bearing a large family. Being so much to each other, he expects his wife to have far more than a perfect body, and she requires in her husband far more than a mere provider, and when these aspirations fail, small wonder that divorce is frequent. We cannot think such a condition wholly bad, whether from the standpoint of the individual or the family, whatever it may portend to a monarch or the operator of a cotton mill.

The Canadian Medical Act.—Our attention has been called to a bill presented to the Dominion Parliament by Dr. Thomas G. Roddick, which seems to us worthy of the most careful study of the medical profession in the United States. The chief conditions which make a Dominion Medical Act desirable are these: In Canada the regulation of the practice of medicine is by their Constitution entirely under the control of the constituent provinces, having the differing standard of qualification which must always be found between communities differing in wealth and density of population.

The right of a physician registered in one province to even occasionally visit patients in another has been the subject of much dispute and vexatious annoyance. Canadian physicians having only a provincial license are debarred from practice in Great Britain and her crown colonies and are not eligible to appointment to government service either in Canada or abroad, since by act of the British Parliament these privileges are carried only by licenses granted by the imperial government or its crown colonies and not permitted of those provinces which have an autonomous government.

This distinction has been keenly felt, as it gives privileges to the physicians of Australia or Cape Colony, which are denied the physicians of the Dominion, who are at least fully as competent. Dr. Roddick's bill seems to us a very ingenious

solution of a seemingly insoluble problem. The bill creates the *Medical Council of Canada,* the purposes of which are stated as follows:

To effect—

(*a.*) the establishment of a qualification in medicine, such that the holders thereof shall be acceptable and empowered to practice in all the Provinces of Canada;

(*b.*) the establishment of a register for Canada of medical practitioners and students, and the publication and revision from time to time of such register;

(*c.*) the determination and fixing of the qualifications and conditions necessary for registration, including the courses of study to be pursued, the examinations to be undergone, and generally the requisites for registration;

(*d.*) the establishment and maintenance of a board of examiners for the examination of such persons and for the granting of certificates of qualification;

(*e.*) the establishment of such a status of the medical profession in Canada as shall ensure recognition thereof in the United Kingdom, and enable Canadian practitioners to acquire the right to registration under the Acts of the Imperial Parliament known as the "Medical Acts";

(*f.*) the enactment, with the consent and at the instance of the medical councils or boards of the various Provinces of Canada, of such Provincial legislation as is necessary to supplement the provisions of this Act and to effect the foregoing purposes.

The number and method of appointment of the members of this Council, the salaries paid and fees collected are of no particular interest to us though they may rightly be of great interest in Canada, but the powers of the Council are very carefully defined and provision made for due representation of Homeopaths and all other practitioners having at present any legal rights.

It will be noted that the first purpose of the Council is to establish a qualification in medicine such that the holders thereof shall be acceptable in all the provinces of Canada, and the establishment of a register of all those having such qualifications.

The Council, however, can confer no right to practice in any of the confederated provinces, since this would curtail their constitutional rights. Its registry would, however, be recognized in the appointment of medical men in the government service.

Each province must then be asked to pass an act permitting physicians holding the Dominion license to practice in its borders. There can be little doubt that sooner or later each province would pass such an act, since the standard established must by the terms of the bill be high enough to be acceptable to any province and the passing of such an act could not interfere with the local practice of physicians holding a provincial license. As fast as these acts are passed the field for practice is extended, till finally it includes all Canada.

Inasmuch as the Council is a crown body its registry will also confer the right to practice in Great Britain and her colonies and eligibility to governmental service everywhere. Provision is made that physicians of several years' practice may be registered without examination and the Council is also given power to revoke the registry for cause, thus giving a power for discipline, which cannot fail to be of great value, while it is so restricted that it cannot be exercised in a narrow or sectarian spirit.

Each province retains by its constitution the right to license physicians according to the standard demanded by the civilization of the community. Thus the bill takes away none of the existing right of either provinces or individuals. It simply seeks to confer impartially increased rights to all who can prove themselves deserving.

The bill, which in its amended form seems likely to pass, is worthy of careful study, since its general features are just as applicable to the United States as to Canada and would realize for us ambitions as a profession that we have for years been wont to consider utopian. Such a bill would create for us a national body of power and influence, competent both to advise and secure national medical legislation.

It would better the position of medical men in the public service and greatly increase the value of a medical degree when properly registered by extending the field of individual practice. The power to withdraw its registry would be a potent means of discipline and all the more valuable because it would if anything affect the leaders of the profession even more than the rank and file. Above all it would gradually elevate the standard of medical education all over the Union, and thus confer unappreciated benefit on the whole community.

Above all there could hardly be any opposition. The individual States could not object because the standard established must be higher than that of any State. The profession could not object because registry without examination would be secured to all those who had practiced a certain number of years, and representation would be secured to Homeopaths and Eclectics as at present.

The irregular practitioners, Osteopaths, etc., could not object since it would take away the power of individual States to license locally such individuals as the local grade of intelligence seemed to demand.

* * *

Special Meeting at Newburgh.—A special meeting of the Fifth District Branch of The New York Medical Association will be held at the Palatine Hotel, Newburgh, New York, on Wednesday afternoon, November 20th. Important papers will be presented by Dr. John P. Deaver of Philadelphia and Drs. Chas. E. Quimby and William Rice Pryor of New York.

These papers will be followed by discussions. A large attendance of physicians is anticipated from among the members residing in the Fifth District Branch, which includes the Counties of Dutchess, Kings, Nassau, New York Orange, Putnam Queens, Richmond, Rockland, Suffolk, Sullivan, Ulster and Westchester.

For the accommodation of the physicians in Manhattan who wish to attend this meeting a special car will be attached to the 11.50 A.M. train on the West Shore Railroad, Weehawken Ferry. Luncheon will be served at Newburgh at 1.45 P.M. The meeting is called for 2.30 P.M. All physicians are cordially invited to be in attendance

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A BUREAU OF INFORMATION.—Pursuant of its constant purpose to be of benefit to its members in every proper manner, both professionally and materially, the Council of The New York State Medical Association has decided to establish, at its Editorial and Business Offices, 64 Madison Avenue, Manhattan, New York, a Bureau of Information, every facility of which will be at the service of all members of the Association entirely free of expense.

It will be within the province of this Bureau to furnish the most accurate information obtainable relative to the price and quality of any desired article, whether for medical, surgical or general use. As will be seen, the scope of the Bureau of Information is wide, and applies with equal directness to materia medica, surgical instruments, library, office furnishings, carriages, or house equipment. In short, the Bureau will act as agent, without recompense, for any member of the Association who may desire information relative to commercial products of whatever nature.

The Council *does not desire, however,* that the Bureau of Information shall act as purchaser, or handle monies in the fulfilment of its functions. It is deemed advisable that all financial transactions shall be between member and seller direct, the Bureau using its knowledge of the well-nigh limitless commercial facilities of Greater New York to secure for members the most satisfactory quotations from the largest and most reliable commercial establishments in their respective lines. No commissions or other remuneration of any character will be accepted by the Bureau for its labors, either from seller or purchaser.

The Council, in deciding upon the establishment of the Bureau of Information, is guided by commercial rather than philanthropic considerations. It is at once apparent that in no other way can the value of THE NEW YORK STATE JOURNAL OF MEDICINE and the Medical Directory of New York, New Jersey and Connecticut be brought so favorably or so forcefully to the attention of the business community as to demonstrate in this practical manner the sustained and widespread interest of the members in their Association or in its publications. The business office of THE NEW YORK STATE JOURNAL OF MEDICINE is in a position to carry forward the work of the Bureau of Information in a manner which would be impossible of accomplishment for any medical or other journal published primarily for profit.

To summarize, the benefits to be derived from the Bureau or Information are mutual. Through it, members may secure accurate data as to new and approved commercial products, together with the best obtainable quotations. At the same time they greatly strengthen the position of THE NEW YORK STATE JOURNAL OF MEDICINE and the Medical Directory of New York, New Jersey and Connecticut by demonstrating in the most forceful manner the truly great power of organization as exemplified by The New York State Medical Association.

The following letter, from Dr. N. B. Bayley, secretary of the Rockland County Medical Association, is one of the many received approving of the Bureau:

"The establishment of a central office or bureau is a most excellent plan. Something of the kind ought to be in working order in a State having as many physicians as New York State. Such a central office will help to unify the profession and give a coherency to its members who now largely feel that medical organizations are a good thing, but do not see any direct results flowing from their membership, which is largely a matter of professional love and pride. A central bureau where everyone can go and be welcome for what he needs in a professional line will help to unite the profession throughout the State and result in great benefits to the whole profession, and frequently in benefit to individual members."

BROOME COUNTY ASSOCIATION.—The quarterly meeting was held in the rooms of Dr. J. G. Orton, Tuesday, October 18th, at 10:30 A. M. The meeting was called to order by the president, Dr. L. D. Farnham.

The committee appointed at the last meeting, to prepare by-laws for the association, gave their report, which was accepted, and the by-laws adopted as read, with the exception of a few slight changes.

A motion was made and carried that Dr. Orton, delegate to the State Association, be instructed to use his influence at the coming meeting to have the membership fee of the State Association abolished.

The president gave an interesting address on the subject, "Principal Aims of the State and County Association."

The president appointed a committee to draft resolutions upon the recent death of the only daughter of Dr. William H. Knapp. Drs. C. W. Green, J. W. Sheffield and J. M. Farrington were named as committee.

A motion was made and carried that Drs. J. M.

Farrington, J. H. Martin and J. W. Sheffield prepare the program for the next quarterly meeting.

The following committees were appointed by the president: Committee on Ethics: Drs. J. M. Farrington, J. H. Martin, J. D. Guy. Committee on Legislation: Drs. J. G. Orton, J. W. Sheffield, L. H. Quackenbush. Committee on Public Health and Medical Charities: Drs. William A. White, F. H. Hough, R. L. Lounsberry.

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Columbia County Organized.—The physicians resident in Columbia County recently met and organized a County Association with the following officers: President, Thomas Wilson, Hudson; vice-president, H. Lyle Smith, Hudson; secretary and treasurer, Otis Howard Bradley, Hudson.

* * *

Westchester County Association.—At the October meeting the following committees were appointed: On Public Health and Medical Charities: W. D. Granger, chairman, Bronxville; Walton J. Carpenter, Katonah; John N. Small, North Tarrytown. On Legislation: H. Ernest Schmidt, chairman, White Plains; William L. Wells, New Rochelle; Edward F. Brush, Mount Vernon. On Ethics and Discipline: Richard B. Contaut, chairman, Tarrytown; Thomas J. Acker, Croton-on-Hudson; H. Eugene Smith, Mount Vernon. Executive Committee: Benjamin Jerome, Portchester, for two years; H. Ernest Schmidt, White Plains, for one year.

* * *

Saratoga County Association.—The last meeting was held at Mechanicsville, September 18th, with the president, Dr. F. J. Sherman, in the chair, and a good number of physicians in attendance. Dr. P. C. Curtis read a concise report of an epidemic of 147 cases, resembling both scarlatina and rubella, at Round Lake. The cases resembled very closely the so-called Fourth disease of recent literature. Dr. F. J. Sherman reported a fatal case of septic infection of the hand and arm, with multiple abscesses over the body.

A symposium on chronic parenchymatous and interstitial nephritis followed, Dr. J. T. Sweetman opening it with a paper on the etiology and pathology. Dr. F. H. Palmer read the paper on the symptomatology; Dr. F. E. Bullard one on the complications, and Dr. D. C. Moriarta concluded with a paper on the treatment of the disease in question.

Drs. Sherman, Comstock, and Hudson were appointed a committee to draft resolutions concerning the death of Dr. T. B. Reynolds of Saratoga Springs.

Dr. M. E. Varney was elected a third delegate, with Drs. Allen and Humphrey, to the meeting of the State Association. The next meeting will be held at Ballston in March, 1902.

* * *

Kings County Association.—The regular monthly meeting was held on Tuesday evening, October 8, 1901, with the president, Dr. H. Arrowsmith, in the chair, and about fifty members and guests present.

The scientific session was opened by Dr. Henry H. Morton, in the presentation of a specimen of a vesical calculus of ovid shape, of quite half an inch in its long diameter. He stated that it was removed by suprapubic cystotomy from a boy eight years old. The wound healed in four weeks' time and the boy is reported to be now in his normal condition. He was brought to the dispensary by his mother primarily to be treated for a persistent and uncontrollable masturbation, which was finally differentiated from a true masturbation by looking more closely for a cause, as the practice was undoubtedly being carried on wholly to relieve the pain, and not for sexual gratification. The pain was found to be due to the irritation produced by the stone rolling about in the bladder, and was referred, as is usual, to the head of the penis. The boy rather rhythmically pulled at his penis, than manipulated it in the orthodox fashion, thus obtaining relief from the pain by establishing an agreeable sensation.

In discussing the report, Dr. B. Onuf emphasized the fact that a diagnosis of masturbation should not be too quickly made in children of that age, before such causes as the one described be excluded, and more care and attention should be given to rather classify a true masturbation as one where the evident object to be attained is an orgasm rather than the relief from pain. The second specimen presented was that of the seminal vesicles removed with the surrounding organs and other parts from a cadaver, in order to illustrate not only to himself but to the members of the association the exact relative position of the vesicles. He explained that he himself, and surgeons in general, were more familiar with the relative position of these vesicles by the touch than by actual observation, and their actual dissection in the living subject is so difficult that it would be useful to see the actual relations when removed with their related parts attached. This specimen excited considerable interest.

Dr. Joseph F. Todd next read a clinical report on five cases of puerperal eclampsia, and the cases were discussed by Drs. L. Grant Baldwin, Patrick J. Prendergast and Joseph E. Wells.

The regular paper of the evening was by Dr. Charles D. Napier, on "The Treatment of Congenital Clubfoot." Before reading the paper, he presented two patients in illustration. One was a baby in arms in whom the treatment had been carried on for some months, and the other one a child of four years, who could therefore exhibit the mechanical devices used while walking and who had now been under treatment for several years. The paper was discussed by Drs. J. M. Clayland and Burr B. Mosher.

A short executive session followed, in which Dr. Skidmore Hendrickson, of 1275 Bergen street, Brooklyn, was unanimously elected a

member. The usual social intercourse followed adjournment, which was somewhat later than usual owing to the interest in the scientific session.

* * *

Sullivan County Medical Association.—The semi-annual meeting of the Sullivan County Medical Association was held at the New Liberty House, Liberty, N. Y., Wednesday, October 9th, at 2 o'clock p. m. Luncheon was served at 1 o'clock, to the physicians and their wives, after which the ladies took a ride to the Loomis Sanitarium in carriages provided by the Physicians' Wives' Club. At the sanitarium they were entertained by Mrs. Stubbert. The meeting of the association was called to order by the president, Dr. C. S. Payne, of Liberty.

There were present: Dr. C. S. Payne of Liberty, president; Dr. S. W. Wells of Liberty, second vice-president; Dr. J. L. C. Whitcomb of Liberty, secretary; Dr. C. W. Piper of Wurtsboro, treasurer; Drs. B. W. Stearn of Long Eddy, S. D. Maynard of Roscoe, H. Levien of Liberty, A. B. Sullivan of Liberty, L. C. Payne of Liberty, J. E. Stubbert of Liberty, W. G. Steele of Mongaup Valley; Dr. Emil Mayer of New York, president of the Fifth District Branch Association; Dr. Parker Syms of New York, president of the New York County Association, and Dr. M. C. Connor of Middletown, president of the Orange County Association.

The minutes of the last meeting were read and approved. After some discussion on the applications of new members, a resolution was presented to change the dates of our meetings, from the last Wednesday in October and April to the second Wednesday in October and April, so that it would not conflict with our State Association.

A resolution was also presented to be voted on at our next annual meeting in April: That we hold a meeting on the second Wednesday of January of each year.

The following papers were then read and freely discussed: "The Relation of Diseases of the Upper Air Passages to the General Health," by Dr. Emil Mayer of New York; "Some Notes on the Use of the Prophylactic Screen in the Treatment of Tubercular Throat," by Dr. S. W. Wells of Liberty; "Operative Treatment of Obstructing Hypertrophy of the Prostate Gland," by Dr. Parker Syms of New York; "Technic of Accidental Surgery," by Dr. B. W. Stearns of Long Eddy. The papers were highly interesting and appreciated by all present. A vote of thanks was extended to the speakers for their interest in our association, and their very instructive addresses. Upon invitation of Dr. Stubbert, the association adjourned to meet at Loomis Sanitarium the second Wednesday in April, 1902.

* * *

Obituary.—Dr. Herman J. Dean, of Brockton, N. Y., died October 11, 1901. He was one of the founders of the New York State Medical Association, and had practised medicine at Brockton for forty-six years.—Dr. Charles Henry Brown died at his home, 48 Hamilton Terrace, Borough of the Bronx, October 15, 1901. He was forty-five years old.—Dr. Horace Bigelow, twenty-nine years of age, died at his home, 17 East Thirty-eighth street, New York, October 15, 1901, from typhoid fever. He was graduated from the College of Physicians and Surgeons, New York, in 1896, and afterward was an interne at Bellevue Hospital for two years.

* * *

Doctor J. Mortimer Crawe.—This distinguished physician died at his home in Watertown, N. Y., October 29th, in the 71st year of his age. His health had been impaired for something over a year from disease of the heart and one week ago a cerebral hemorrhage hastened his death.

Dr. Crawe was a son of the late Dr. Ithemar B. Crawe, and was born in Watertown May 23, 1831. His preliminary education was received in private schools and in the Jefferson County Literary and Religious Institute. He studied medicine under the late Dr. H. G. P. Spencer, attending medical lectures at the Jefferson Medical College. Previous to the Civil War he practised in Hamilton, Madison County, and in Champion, Jefferson County, N. Y. In September, 1862, he went to the front as assistant surgeon of the 157th New York. In February, 1864, he was promoted to the rank of surgeon in the 128th New York Volunteer Infantry and served with distinction until mustered out in August, 1865.

He was one of the founders of the reorganized Jefferson County Medical Society and held every office of honor therein. He was made a permanent member of the New York State Medical Society in 1879, and being a delegate in 1878 to the American Medical Association was made a member thereof. He was for many years United States examining surgeon for pensions, both as single surgeon and as a member of the board at Watertown. In 1884 he was one of the many who withdrew from the State Society and he became the first vice-president of the New York State Medical Association.

His professional life was beyond reproach, and he was the promoter of all that is pure and noble in the practice of medicine and was always ready to champion the cause of his worthy professional brethren and to sustain the dignity of the calling which he honored. On one occasion, being asked by an attorney to loan some books whereby the said attorney could post himself so as to be able to prosecute a physician for alleged malpractice, he promptly refused and suggested that a library located where books were necessarily bound in asbestos would be the proper source of information for such a cause.

Dr. Crawe is survived by two sons—Dr. J. M. Crawe, Jr., of Watertown, Edwin P. Crawe of Syracuse, and one daughter, Mrs. Frederick H. Moore of Utica.

THE NASOPHARYNGEAL ORIGIN OF GOITER.—From the study of 209 cases of goiter, H. Du Fougeray (*Le Progrès Médical*, May 25, 1901) believes that chronic catarrh of the nasopharynx is probably one of the causative factors of goiter. By proper treatment of this region, the goiter disappeared in 52 cases, diminished notably in 133, and was only slightly affected in 24. One of the cases presented exophthalmos, but a slow pulse and no definite sign of Graves' disease, and both exophthalmos and goiter yielded to intranasal treatment. In two cases of true exophthalmic goiter, great benefit was obtained, but the results are too recent to be conclusive. It is a fact that rhinopharyngitis is the rule among goitrous patients, and lately it has been shown that the thyroid and pharyngeal veins anastomose and have but few valves, so it may be possible that a congestion of the pharynx may be such as to relieve itself on the thyroid system, and so produce there a hyperemia, and then a goiter. The author's routine treatment has been to paint the oropharynx three times a day with 10 per cent. mentholated oil, to spray the nose with the same oil five or six times a day, and to cauterize the affected parts of the nasopharynx with a 50 per cent. solution of chromic acid.—*Medical News.*

Book Reviews.

DISEASES OF THE SKIN. By George T. Jackson, M.D., Chief of Clinic and Instructor in Dermatology at the College of Physicians and Surgeons, New York; Consulting Dermatologist to the Presbyterian Hospital and the New York Infirmary for Women and Children, New York, etc. With eighty illustrations and three plates. Fourth edition, thoroughly revised. Lea Bros. & Co. 1901.

This book was first published in 1892, and such has been its popularity that the present edition is the fourth brought out since that date. In its arrangement, as in previous editions, the author has made no effort to conform to any of the different classifications of disease which have done so much to confuse the student of Dermatology. Instead he arranges them alphabetically, which is certainly more convenient for reference, and not much less scientific, present knowledge considered. We pay no attention to the author's claim that he has added to his book descriptions of several rare and recent diseases, since these are likely to be of little use to those for whom the book was primarily designed. Its real test lies in the clearness of its symptomatology and diagnosis and the good judgment of its therapeutics, in fact, in its adaptability to the use of students and general practitioners. In this respect the book merits great praise. It reads more smoothly than most of the more pretentious books, and yet it is surprising how little of value about the every day diseases has been omitted. A spirit of fairness pervades the whole book, and it is evident the author rides few hobbies. He wastes no time in the discussion of doubtful questions of pathology, but the portions devoted to differential diagnosis and treatment are particularly complete and satisfactory. In a subject like Dermatology comprising a very large number of rare conditions, an abridged edition carefully edited is often very much less confusing and more helpful than one of the large volumes, and of these smaller works we do not remember seeing one which pleased us in so many respects and offered so little to criticize.

Original Articles.

INTRATHORACIC NEW GROWTHS.*

BY ALEXANDER LAMBERT, M.D.,
New York.

IN considering intrathoracic new growths the subject naturally divides itself into affections of the pleura, of the lungs and of the mediastinum. In all three localities the carcinomata and sarcomata greatly predominate over any other form of tumor. While this is particularly true of the lungs and pleura, the non-malignant tumors of the mediastinum are so rare that they practically can be omitted from the present consideration.

Of 112 instances of mediastinal primary tumor, reported by Strauscheid, but twenty-five are non-malignant growths. Of these twenty-five tumors, dermoid cysts composed about one-half and fibromata and ecchinococcus cysts were next in frequency. A few other and rare forms of tumors composed the remainder.

Any tumor, if of sufficient size, may cause symptoms by compression of the adjacent structures. But the malignant tumors by their growth and extension around the various tissues and infiltration of these tissues cause a continuously progressive set of symptoms.

Beginning with tumors of the pleura, these tumors in the vast majority of cases, are secondary to growths in some other parts of the body. Primary tumors in this position are exceedingly rare. A special kind of endothelioma of the lymph vessels in the pleura has been described by various authors. These giving symptoms of pleurisy with effusion, with the formation of serum and fibrin, clinically do not offer any signs or symptoms by which they can be differentiated from pleurisy of ordinary bacterial infection.

Secondary tumors give symptoms either of a dry pleurisy or pleurisy with effusion and the exudate is usually blood stained. This kind of fluid being also common in primary tubercular pleurisy, it practically reduces the diagnosis to one of these two conditions. If in the fluid withdrawn from the chest one may be able to prove either the presence of tubercle bacilli or of degenerative epithelial cells or cells freed from the breaking-down tumors, one may be able to make a differential diagnosis. Under other circumstances the diagnosis must remain only a more or less probable one, the probability depending upon whether it is a metastatic growth from some other tumor or whether the chances point to a primary tubercular pleurisy.

Considering the malignant tumors of the lung, carcinoma is the form which here predominates. Secondary tumors are much more common than primary ones. In primary cancer of the lung men are more frequently the victims than women and it is usually given as occurring most fre-

*Tenth paper read at the Eighteenth Annual Meeting of the New York State Medical Association in the Symposium on Malignant growths.

quently after middle age, other authors, however, saying between the twentieth and thirtieth years of life. Exceptionally it has been found in children. Sarcoma of the lungs is said to be seven times less common than carcinoma. Primary carcinoma of the lung usually begins in the hilus and extends along the bronchi. It more often affects the right than the left lung, and more commonly the right upper lobe than the middle or lower. It may take a diffuse or nodular form, and the size of the nodules may vary from a very large mass to fine, miliary nodules, which may, indeed, be scattered throughout the entire lung and give all the signs and symptoms of miliary tuberculosis. The process may involve an entire lobe and the lung become solidified, or the mass may be so great as to cause a stretching of the chest wall and enlarging of one side of the thorax. From the form of growth one can readily understand the symptoms which follow.

The symptoms may be those of dyspnea which at first comes on only after exertion, with cyanosis and feelings of oppression and often intense pain in the chest. Or the disease may take the form of a chronic inflammation of the lung with its bronchial catarrh and with a cough and mucopurulent or bloody expectoration. This expectoration has been described, when characteristic, as like raspberry or currant juice. At times profuse hemoptysis may be an early symptom, though, as a rule, when hemoptysis does occur it is late in the disease.

When the pulmonary pleura is involved it may take on the form of pleurisy with effusion. In some cases where a whole lobe is solidified, the process may break down and the clinical picture be one of rapid tubercular pneumonia; the only differential signs given in this last form are those which Dr. Roberts has designated, that in such cases of carcinoma of the lungs the fever does not run so high and the emaciation is not so rapid and there is much less abundant expectoration than in tubercular pneumonia, also one would not find tubercle bacilli in the sputum, but might find, as has been done, bits of disintegrating tumor.

The physical signs here of carcinoma, are dulness; this is often of a very irregular character as to its position, being in uneven areas, and its resistance feel to percussing is one of remarkable firmness, and in the regions of dulness one hears either the tubular breathing or there is diminished breathing, due to compression or occlusion of the bronchi. The vocal fremitus, however, is present and may be increased. Where there are inflammatory processes going on in the lungs one finds the physical signs of bronchitis as well as those of consolidation.

An accurate diagnosis of this condition is one of great difficulty. If profuse hemoptysis and currant-juice expectoration are present with a hemorrhagic pleurisy, with effusion, and if by chance there are metastatic swellings of the lymph glands in the axillæ, remittent fever and a continuously increasing cachexia, a diagnosis may be made as one of great probability. But the differentiation of primary carcinoma of the lungs from primary mediastinal tumor which has extended into the lungs is often an impossibility.

Considering tumors of the mediastinum, it is usually given that carcinomata are more frequent than sarcomata, but it is found from the statistics collected by Dr. Irving Haynes, of this city, that the early statistics did not separate the two forms of malignant growths and that the more recent cases where this differentiation was made show that sarcomata are the more common, almost in the ratio of three to one. Men are more often affected than women and the sarcomata develop during young adult life, whereas the carcinomata appear at a later period.

According to these same statistics primary sarcomata are about seven times more frequent than secondary, and primary carcinomata are about nine times more frequent than secondary. Of secondary growths there are more sarcomata than carcinomata. This bears out what one would expect to find from a study of the structure of the tissues contained in the mediastinal spaces. The sarcomata give rise to secondary growths through the medium of the blood vessels and the carcinomata through the lymphatics. It also follows from this that the secondary carcinomata are more apt to be close to the primary ones, whereas the secondary sarcomata may be more distant from the primary lesion. Sarcomata more often start in the anterior mediastinum and carcinomata in the posterior.

In considering the symptoms we must constantly bear in mind the tendency of these tumors to surround and infiltrate the neighboring structures, as well as to compress them by the extension of their growth. Thus it is that in some cases such marked symptoms of venous obstruction occur, for even when the vein may not be entirely obliterated by compression the wall of the vessel itself may be so infiltrated that the clotting of blood occurs and causes a plugging of the vein.

The symptoms of mediastinal tumors vary according to their position, those in the anterior mediastinum causing greater predominance of circulatory disturbances, while those in the posterior mediastinum cause more the symptoms of interference with respiration, compression of the lungs, interference with the esophagus and involvement of the nerves.

One peculiarity of the various symptoms which seems to be a noticeable characteristic, is the spasmodic character of the occurrence of the various symptoms. For instance, pain and uneasiness may occur in paroxysms, at times being intense, at times disappearing; the dyspnea may come on only after exertion or may come in paroxysms without apparent cause; or there may be paroxysmal asthmatic attacks. The cough may in some cases be of that peculiar paroxysmal character which has been designated by the

French as "pertussis-like," resembling so closely the well-known paroxysms of whooping-cough. The dysphagia and aphonia, when due to nerve irritation, may occur in the same paroxysmal manner.

The symptoms of any kind of tumor will, of course, vary with its location in the mediastinum. If the symptoms of vascular compression predominate there may be involved either one or both of the innominate veins or the vena cava superior and cause cyanosis or even edema of the upper extremities and face. Or the azygos veins may be interfered with, giving localized cyanosis of the chest and abdominal walls. These localized cyanoses or edemas are often very striking symptoms. If the tumor is on the floor of the mediastinum so that it interferes with the point of entrance of the vena cava inferior through the diaphragm, the first symptoms that may appear would be simply those of obstruction to the return of blood from the abdominal cavity, with a very misleading picture of ascites. When the tumor presses upon the arteries it may give rise to a stenotic murmur which would be difficult to differentiate from an aneurismal murmur. When the predominating symptoms are those of compression of the nerves, we see, when the vagus is pressed upon, a varying picture. There may be, if irritation alone is caused, a slowing of the heart action, or if the pressure is great enough to paralyze the cardiac branches, a great increase in the pulse rate will be noted. If the branches of the pneumogastric going to the stomach are irritated, the first symptoms may be those of indigestion, gastralgia and vomiting, and with these symptoms a constant and rapid loss of flesh and great muscular weakness with fatigue following the least exertion. So the picture given is one of carcinoma of the stomach.

If the recurrent laryngeal nerve is affected there will be change of voice, and one or both vocal cords may be paralyzed, so that a brassy cough develops which will render the diagnosis from aneurism of the aorta one of great difficulty. Furthermore, pressure on the recurrent laryngeal nerves may cause greater danger, in that the act of deglutition is disturbed by the paralysis of the epiglottis and lack of closure of the entrance to the larynx, this in turn giving rise to the danger of food entering the lungs and causing "foreign-body" pneumonia which may be fatal, often through gangrenous processes.

The pressure on the nerves going to the esophagus may in the very beginning cause difficulty or pain in swallowing. In tumors of the posterior mediastinum the actual pressure on the esophagus may render difficult the diagnosis between carcinoma of the esophagus and a tumor pressing on this tube.

Pressure on the phrenic nerves would cause singultus and paralysis of the diaphragm.

We are thus able to appreciate how difficult the correct diagnosis of mediastinal tumors may be, but it seems fair to say that if some one symptom draws our attention to the possibility of such a tumor, the diagnosis can be made in the majority of cases. In the short limits of this paper it is impossible to go fully into the details of all the symptoms and physical signs; mere mention of the more characteristic must be sufficient.

The disorders of respiration should come first as being one of the most common and prominent symptoms. The dyspnea generally comes on in an insidious and progressive manner until it ultimately becomes very severe and assumes grave characters. Not infrequently paroxysmal at first, occurring only at intervals which may be prolonged, even when constant dyspnea is established, it may present paroxysmal exacerbations so intense as to amount to partial suffocation. While in the beginning it may amount to but shortness of breath or breathlessness on exertion, in advanced cases the least effort may cause great distress. The noisy or stridulous breathing or wheezing and whistling due to obstruction in the trachea or bronchi, or to implication of the vagus or inferior laryngeal nerves, is especially characteristic.

With the dyspnea, cyanosis is often observed and the hidden secret of the cause often may be found by a careful observation of the limits of this cyanosis and vessels which are obstructed.

Some degree of pain is rarely absent, varying from oppression or discomfort to pressing and grinding or even to the sharp, lancinating, darting pain of intense agony. This may be poststernal or referred to the other side or to the back of the chest or it may shoot to the neck, abdomen or loin or to the opposite side of the chest. Pain in the head is not uncommon.

Cough is another symptom that is almost always present during some period of an interthoracic growth and not uncommonly is an early symptom. It varies from the dry, teasing cough to the loud, clanging, brassy cough so characteristic of the involvement of the laryngeal nerves. With this come the changes in the voice from hoarseness to aphonia. The peculiar spasmodic cough has already been referred to and this spasmodic, dry cough is often a most suggestive point in diagnosis.

Dysphagia, when present, should always direct the attention to possibilities of a new growth and is a more common and abiding symptom than in aneurism, and with or without the special nerve symptoms already referred to, should invariably lead to a most careful examination for the physical signs that may be present in the chest.

Intrathoracic growths are very apt to affect the shape and size of the chest, though there may be no obvious change in these respects, even when other signs of tumor are well marked. Local prominence or bulging in some part of the chest is especially to be looked for, though there may be general enlargement or retraction of one side when the tumor involves the lung. Roberts de-

scribes the dulness on percussion in mediastinal growth as follows: As a rule, the dullness which is absolute is observed in the upper and anterior region. It is often mainly post-sternal, and in all cases crosses the middle line, though it encroaches more towards one side than the other, so that it is unsymmetrical. The dullness varies much in size, its shape is irregular, and it may present a distinctly sinuous border. On careful percussion toward the lung, the circumference of the dull area is bounded by the pulmonary note, which is considered very characteristic of mediastinal tumor as distinguished from primary lung disease. In some instances the dullness is not observed in front but posteriorly; and occasionally it is limited to the interscapular region. At times in lymphosarcoma, the upper part of the chest, both front and back, is extensively dull. In exceptional cases the percussion sound, elicited over a localized tumor, whether pulmonary or mediastinal, is high pitched, tubular or amphoric, either owing to conduction of the sound from the trachea or a main bronchus, or in connection with the cavities resulting from the breaking down of cancerous growths in the lungs, especially in the infraclavicular region. The sensation felt on percussion over a tumor or growth within the chest, which reaches the surface, is usually one of remarkable hardness and resistance.

The auscultatory sounds, if the bronchi are compressed, may be simply diminished breathing, even when the percussion note may be normal or hyper-resonant over that lung, or if the bronchi are occluded there will be absence of breathing. If the lungs are compressed, or if the tumor extends into the lung there will be bronchial or may be amphoric breathing. The voice will likewise vary with the condition of the lungs. However, in connection with a definite tumor, whether within or outside the lung conducting vibrations from the main air passages, the vocal resonance may be very intense and sometimes of egophonic or amphoric quality. It is a striking fact that the vocal resonance may be thus exaggerated when the fremitus is greatly impaired or even altogether absent. Occasionally distinct whispering pectoriloquy can be heard over a tumor.

The heart beat may be slowed or greatly increased in rapidity, but the chief feature about the heart is its displacement downward or toward the ensiform cartilage. The apex beat is often indistinct from over-lapping lung or because the heart may be pushed backward from the chest wall. Murmurs, generally systolic, have been described over an intrathoracic tumor or along the course of the aorta or pulmonary artery. Double murmurs are of very uncommon occurrence.

Such, then, are the more characteristic symptoms and signs on which we must depend for a diagnosis. The conditions most likely to be confused with mediastinal tumor are pericarditis and aneurism.

In the differentiation of a mediastinal tumor from pericarditis, one has to remember that in pericarditis the apex beat of the heart lies within the extreme limits of dulness to the left, and that with the patient sitting up and bending forward, the heart impulse in pericarditis is increased, the apex beat being inside the lateral limit of dulness, and also the limits of dulness on both sides of the fluid area are broadened, while with mediastinal tumors the dulness does not change with change in position of the patient, and the impact of the apex beat is at the extreme limit of the edge of the lateral cardiac dulness.

In deciding between tumor and aneurism in any given case, age, sex and occupation are to be considered. Youth, and if the patient is a woman, would favor tumor, while occupation requiring severe physical exertion, and if the patient is a man, would favor aneurism. A history of syphilis must also incline one's judgment toward aneurism. Severe continued pain, especially in the back, is more common in aneurism, though this cannot be too implicitly relied upon. Severe paroxysmal pain, on the other hand, is more common in tumors. In aneurism the pressure symptoms are more apt to be single, in tumor more apt to be multiple. The effects of pressure upon the larger intrathoracic veins are more common and more pronounced with solid tumors than with aneurisms. Pressure on the right innominate vein alone is given by Leube as occurring only in tumor and not in aneurism. Some tumors do pulsate of themselves, or seem to do so by the communicated pulsation of the aorta, or pulmonary artery, but in both cases the pulsation is the even rise and fall of a thrust while aneurisms have the general expansile heave and often possess a thrill. Other signs pointing to aneurism are limitations of the signs to the region of the arch of the aorta; a marked diastolic shock; accentuation of the second sound over the prominence of the tumor or a diastolic murmur; and marked retardation of the pulsation of the distant arteries. Cardiac hypertrophy without displacement points also to aneurism, while displacement without hypertrophy points to a tumor. The development of pericardial and pleuritic effusions is in favor of malignant growths.

As to prognosis and treatment of malignant growths within the chest, there is little to be said. The prognosis consists in the probability of how long life will last under the circumstances, and the limit has been given from a few weeks to seven years, depending upon the character and rapidity of the growth of the tumor. In the majority of cases the length of life is a matter of months rather than years.

The treatment is purely symptomatic and resolves itself into an endeavor to relieve the suffering and to make the existence of the patient as comfortable as possible.

ADDITION TO HOSPITAL.—Plans are being drawn for a new pavilion to St. Luke's Hospital. The addition will contain rooms for private patients, and will cost $300,000.

SURGICAL MALPOSITION OF THE GALL BLADDER

BY E. D. FERGUSON, M.D.,
Troy.

NORMAL anatomical conditions are not to be expected in a considerable proportion of operations, for morbid processes, particularly in tumor formations, tend to such displacement of parts as to allow only the application of general principles in determining the relation of the anatomical elements in the operative field.

But distortion due to disease is not the only factor in the creation of topographical puzzles to be solved on the operating table, for the vagaries connected with embryonal development are liable to produce problems often as unexpected as they are embarassing.

The troublesome experience of our school days when, in our grammatical studies, no sooner had we learned a rule for Latin construction than we faced a discouraging list of exceptions is measurably paralleled in acquiring a knowledge of anatomy, for there often it seems the office of certain exceptions to prove the rule.

In calling attention to the fact that the gall bladder may have an unusual location or direction I am impressed with the fact that the several books on anatomy in my library give no reference to the subject, nor do I recall any record of malposition similar to the cases I shall relate on the part of any of the great number of operators who have contributed to the recent and copious literature of gall-bladder surgery. That the gall bladder may be contracted, hedged about by adhesions due to local inflammation, or fail to appear at the anterior edge of the liver is well known, but the special feature of the unusual anatomical position I have recently observed on three occasions seems to relate to developmental conditions.

The liver has its beginning in two buds from the duodenal portion of the forming intestine, and grows so rapidly that it soon constitutes one-third of the weight of the two months old embryo, an anatomical ratio commensurate with the ideas of the pathological importance of the organ held by our professional forebears. These two centers of development represent what are known as the right and left lobes, from each of which comes an excretory duct, the union of which makes the apparatus for storing and transmitting the bile as it is held in the gall bladder or passes into the duodenum, for the gall bladder is but a diverticulum of the main gall duct. This biliary reservoir and the associated ducts find lodgment on the under surface of the liver in the vicinity of the line of union of the two lobes, though on the right side of that line. The relation of the peritoneal coat of the intestinal canal as it passes on to the gastro-hepatic omentum is well known, as well as the important surgical landmark known as the foramen of Winslow, wherein the surgeon's finger finds a place to indicate to him by touch the locality of the common duct and the other important structures in the vicinity. Though in its growth the liver fails to carry before it a complete envelop of peritoneum, the biliary ducts for present purposes may be considered as surrounded by that serous membrane, but as mesentery and omentum are but two layers of this serous sac, outside of but still enclosing certain organs, it is quite clear that in the fold extending from the intestine to the liver there may be not only protrusion of some portion of the liver from its serous envelop, but portions of the biliary ducts may be so developed as to extend beyond the omental fold, and be outside of the peritoneum. Such at least has appeared to me to be the explanation of these curious cases of malposition of the gall bladder, though fortunately no post-mortem verification was available, nor, as previously indicated, could I find aid from a fairly extensive collection of works on anatomy.

The following details of the cases are from the record books of the Samaritan Hospital of Troy, N. Y., and the patients were all men, an unusual coincidence, in view of the greater frequency of cholelithiasis among women.

The first patient was forty-five years of age, of medium height and fairly stout, though not obese. For three or four years he had suffered from gall-stone colic. Recently the associated fever and the frequency of the attacks had prevented attention to business, and the jaundice had become continuous, though varying in degree with the recurrence of the paroxysms of pain. On April 18, 1900, the usual vertical incision in the right rectus muscle was made, over five inches in length, as the layer of fat was more than two inches in thickness. The usual digital search for the gall bladder was without result, a fact that seemed curious, as no inflammatory adhesions were present to complicate the examination. The depth of the wound through the belly walls was such that a complete view of the operative field could not be had until the upper extremity of the incision had been extended along the costal cartilages well towards the sternum. Even this free incision failed to reveal the gall bladder, a situation that was decidedly puzzling, after the entire under surface of the liver had been exposed to sight and touch by the free incision, aided by gauze pads and retractor. The great depth of the operative field added naturally to the difficulties of further search, but, after failing to locate by sight or touch the biliary ducts, the liver being well held up, I began a systematic hunt for the gall bladder, starting with what seemed to be the common duct near the duodenum, a spot not easy to locate in view of the fact that the duct was not enlarged nor was the foramen of Winslow recognizable. I followed what seemed to be the general direction of the duct upwards and backwards, until finally I felt behind the posterior border of the liver a body that seemed to me like the lower extremity of a gall bladder filled with calculi. This was only palpable by the whole hand being in the wound, and the manipulations necessary for even a cholecystotomy would manifestly have been very difficult. The area was

exposed as fully as was practicable and the posterior layer of the peritoneum at the deep part of the wound was opened so as to admit the finger to the retroperitoneal tissues and to the posterior border of the liver. Then the gall bladder was felt extending from the vena cava upwards, backwards, and outwards. Wishing to make a reasonable effort to extract the stones, an aspirating needle was with difficulty guided through the cyst walls among the stones and a small amount of bile removed. It was impossible to conduct the manipulations by sight, hence no incision could be made into the gall bladder, for in no way could it be brought into view, and the proximity of the large venous trunks made care in cutting imperative. With my fingers, and the aspirating needle in the gall bladder, I made reasonable efforts to tear a hole that would allow the removal of the stones, but the walls seemed firmer than usual, though I stirred up the stones freely and gave exit to some bile. At no time could I touch the stones directly, though I caught the tissues about my needle with forceps, and, by carefully tearing, thus sought to enter the cavity. Realzing that a wound of the great veins at that depth would be a very serious and probably fatal accident, I concluded to drain the wound and, should symptoms continue, advise an effort at removal through the loin above the kidney, an extra peritoneal procedure. A small amount of bile was on the dressings for a few days, and the drainage was maintained for about a week. The wound progressed favorably and the patient has remained without attacks of gall-stone colic to the present, and I have remained without my fee, though richer in a puzzling experience. He has evidently passed into the ranks of that 95 per cent. of gall-stone cases without symptoms, at least for the present.

The next patient was a man, seventy-five years of age, who for eight years had been a great sufferer with gall-stone colic, and for the last year had frequently recurring chills, apparently due to cholecystitis. Though feeling that an operation at his age was very hazardous, he was anxious to find relief at any risk. The operation was done at the Samaritan Hospital on January 17, 1901. There was a thick layer of fat in the abdominal parietes requiring a long incision to allow of an exploration of the under surface of the liver, for the gall bladder could not be seen or felt in the usual position, and was finally located at the posterior edge of the under surface of the liver, behind the peritoneum and in a transverse direction relative to the body. It was contracted on numerous calculi and could not be brought at any point towards the anterior abdominal walls. As the fundus was sufficiently removed from the great vessels to be safely incised, it was opened and a large number of stones removed, the largest being the size of a hickory-nut. The peritoneum at the abdominal incision was then separated so as to allow of suturing in a funnel form to the incision in the gall bladder; drainage, gauze packing and partial closure of the belly incision were made; the patient passed through an uneventful convalescence and recently called on me to give assurance of complete recovery. The technical difficulties, due largely to the thick abdominal walls and the location of the gall bladder, made the operation tedious, the actual time in operative work being an hour and twenty-five minutes.

The third and last case occurred in a man forty-eight years old, who was admitted to the hospital on September 7, 1901. About six weeks before his entrance he received a severe blow in the epigastric region from a piece of machinery, from which time he began to suffer pain in the region of the injury, though he did not fully quit work until about two weeks later. A few days after the injury he became jaundiced, and in about two weeks he began to suffer severe epigastric pain, extending to the right hypochondrium, the right lumbar region, and occasionally to the right shoulder. The jaundice became very deep, almost bronze-like; there was occasionally some fever, strength rapidly diminished, and the pain grew so that the use of morphine was a necessity. The diagnosis of biliary obstruction was apparent, but whether due to calculi, to inflammation following the blow, or a neoplasm, was a problem that did not allow the venturing an opinion. In spite of the well-known risks attendant on cholecystotomy in the presence of cholecystitis, the sufferings of the patient and the rapidly deteriorating physical condition from the extreme cholemia gave little hope of improvement without operation, so it was decided to open and drain the gall-bladder, even if work on the common duct should be required as a second operation after improvement of the general condition. On September 9th the operation was undertaken, and here again a thick layer of adipose tissue added to the difficulties of the procedures. On entering the abdominal cavity, there was an absence of the gall-bladder from the usual site, but finally an elastic, somewhat elongated, tumor was felt extending from the lower surface and posterior border of the liver downwards to the right of the spine and behind the colon. By drawing the hepatic flexure of the colon well down and to the left, it seemed apparent that the retroperitoneal cyst was the greatly distended gall-bladder. After walling off the adjacent parts with gauze pads, the cyst was entered by an aspirating needle, but the intracystic pressure was so great that the penetration of the needle started a rent, through which rapidly poured thick bile, the quantity of course not being determined, but conservatively estimated at over a quart. The cavity extended upward to the under surface of the liver, and there bent towards the left. No gall-stone could be felt nor could the foramen of Winslow be located. A prolonged search for the cause of the obstruction was not deemed advisable from the weak condition of the patient and the probably infectious character of the bile, though the impression given to the finger was of thickening at the head of the pancreas, or possibly a

nest of lymphatic glands enlarged by inflammation. After emptying the gall-bladder it could not be brought to the anterior abdominal wall, so the peritoneum was detached, sutured to the opening, and rubber drains with surrounding gauze packing were arranged. The flow of bile through the tubes after the operation was prompt and continued very free, but only twice appeared in the stools. The icterus only slowly diminished, showing a probable cholangitis, though fever did not return. On the tenth day he was taken with a very profuse hemorrhage from the wound that for over a week was only kept in control by very firm packing with gauze, though suprarenal extract was used locally, and in 2-grain doses each two to three hours, an accident that would doubtless have been fatal had the operative field embraced the common duct, and, as it was, placed him in a very precarious state, though it originated in the vessels of the abdominal walls, none of which gave trouble at the operation or required ligation.

Though the icterus has nearly disappeared and his general condition has greatly improved, the stools are still like pipe clay, and the ultimate result is in doubt. My opinion favors a diagnosis of inflammatory obstruction that may eventually be overcome, hence no second operation will be advised unless he greatly improves and the closure of the sinus shows continued obstruction. On October 12th he went home to wait developments, it being my purpose to allow the drainage to continue until the occasional appearance of bile in the stools gives reasonable ground to conclude that the common duct is pervious, when the tube will be removed. Should the bile fail again to appear in the stools, the sinus may be plugged and the patency of the duct demonstrated by making the sinus the line of greater resistance to the escape of the bile.

COMPLETE UTERINE PROLAPSE.

BY FREDERICK HOLME WIGGIN, M.D.,
New York.

OF the various local chronic diseases to which women are liable, complete uterine prolapse produces the greatest disability and discomfort.

The condition is best described as a reducible hernia through the pelvic floor, the sac, which is the inverted vagina, containing besides the uterus, tubes and ovaries, a large portion of the small intestines, the bladder and rectum.

The causation of the disorder, as is well known, is primarily a separation—often submucous—of the tendons of the muscles forming the pelvic floor where they unite in the median line; this is usually due to the passage of the child during parturition. This separation of the tissues which hold the rectum in its proper position, allows the lower and anterior portion of the gut to bulge upward and forward into the vagina, pushing the vaginal tissues before it. This mal-position of the bowel is more or less increased by lifting heavy weights, but more particularly by every act of defecation and straining at stool. As the muscular force expended follows the line of the least resistance, it tends in these cases not to expel, as it should, the bowel contents through the anal opening, but to force the gut through the hernial opening into the vagina. The difficulty experienced by the sufferer in emptying the rectum causes her to exert an ever increasing force, and gradually and steadily, day by day, the rectocele increases in size, and as it does so, force is necessarily applied to the attached uterus in a downward direction. It also gradually begins to sag, and its ligaments, which in normal conditions serve simply as stays to hold it in place, are gradually stretched and lengthened by the weight of the descending organ upon them. The descending uterus must necessarily take the bladder with it.

The process is hastened, after it has fairly begun, by the added weight of the small intestines, which, being contained largely in the pelvis, find their way by gravity to the lowest point. Thus, after a period of longer or shorter duration, varying usually in accordance with the natural vigor of the patient and the amount and character of the work, she is called upon to perform by reason of her environment, a complete inversion of the vagina occurs and a hernial sac of large size appears outside of the body, and we have the condition known as complete uterine prolapse to deal with.

This complete form of the disease does not, as a rule, appear until rather late in life, although the patient has suffered more or less discomfort for many years.

In the treatment of this disorder in its various stages, gynecic surgeons have displayed much ingenuity and recommended various operations on the anterior and posterior vaginal walls, and have also advocated the radical operation of hysterectomy, but, unfortunately, without very satisfactory permanent results.

In the writer's opinion these disappointing results have been due to the failure to recognize the fact that the vaginal wall is practically a hernial sac with other contents than the uterus, tubes and ovaries, and that consequently the simple repair of the external perineal body, the removal of a larger or smaller portion of the vaginal walls or even removal of the uterus itself, would not correct the greatest cause of the difficulty, namely: the mal-position of the small intestines.

In view of the foregoing facts, the treatment writer's observation, suffering from this disease, the uterus has not been abnormally enlarged, and consequently could not be considered a factor in the causation of the trouble, and in many of these cases the tumor was of large dimensions.

In view of the foregoing facts the treatment required for the successful management of the class of cases under consideration evidently calls for an operation which will obliterate the hernial sac—the inverted and stretched vaginal wall—and a restoration of the damaged perineal struc-

tures as nearly as possible to their normal condition. The treatment which has, in the writer's experience, best answered these requirements, has been as follows:

The patient on coming under observation is placed in bed in the recumbent posture and the tumor is reduced. Gravity being employed to help retain the parts in their normal position by raising the foot of the bed about six inches. Tampons moistened with glycozone are also placed in position, and the parts are treated until all ulcerations of the vaginal walls are healed, the general condition of the patient during this time being carefully looked after.

The next step in the procedure is to perform a laparotomy on the patient after the usual preparations have been made, anesthesia being produced by the use of ether or chloroform or spinal cocainization. Before the abdomen is opened the patient is placed in the Trendelenburg position for the purpose of obtaining the aid of gravity in drawing the bowels out of the way. They are usually found in these cases more or less attached to the peritoneal lining of the vaginal wall by adhesions, which must be broken up. The uterus, which, as has been previously stated, is, in old women, usually small, is found and pulled upward by the aid of bullet forceps, thus drawing upward also the attached vaginal wall. When this has been accomplished a needle armed with kangaroo tendon is passed through the fibres of the uterus about at the point of its attachment to the round ligament, and is carried up and down the broad ligament in the form of a purse-string suture, the needle being finally made to emerge about at the point of entrance, so that when the two ends of the suture are drawn upon the broad ligament on that side is folded up and drawn together so that its excessive length is done away with and the uterus has a new point of attachment near the insertion of this ligament to the pelvic brim. The same process is repeated on the opposite side, the abdomen is flushed with saline solution, a quantity of which is left in, and the abdominal wound is closed rapidly in the usual manner. The patient is again placed in bed, the foot of which is slightly raised, and after the wound has healed and the patient has fully recovered, four or five weeks later, she is again placed on the operating table and the separated tendons of the perineal muscles are brought together with submucous sutures of catgut or kangaroo tendon.

At the time of this second operation it will be found, if the first operation has been properly performed, that the redundant vaginal walls have practically disappeared and the operator is in a position to find the separated tendons and can easily bring them together.

The operation just described has been performed by the writer a considerable number of times on aged women, and it has been his experience that the operation is well borne by such patients because it can be quickly performed in both of its stages and does not involve any considerable loss of blood. The following cases serve to illustrate these statements:

Case I.—Mrs. M. L., aged seventy-three years, was admitted to the Gynecological Division of the New York City Hospital on April 25, 1901, suffering from a complete uterine prolapse. The patient stated that an operation had been performed upon the anterior and posterior vaginal walls. This operation had evidently been a failure, since when she was seen by the writer an external tumor was present, about six inches in diameter.

June 24, 1901, after the patient was prepared in the usual manner, ⅙ gr. of cocaine was injected into the spinal canal; this failing after half an hour to produce satisfactory anesthesia, it became necessary to allow the patient to inhale a moderate quantity of ether; after a little while, however, it was apparent that the action of the cocaine was effective and the administration of ether was discontinued during the rest of the operation. The abdomen having been opened, the operation of suturing the broad ligaments, as already described, was performed, the abdominal wound was closed and the patient returnd to bed. Her convalescence was uneventful, and four weeks later the separated tendons of the perineal floor were found and brought together with buried sutures. The patient made a rapid and satisfactory recovery from the second operation, and when examined two months later seemed to be entirely cured of her difficulty and was getting about with comfort.

Case II.—Mrs. B. R., aged eighty-three years, was admitted to the same service at the City Hospital, April 13, 1901, suffering from complete uterine prolapse. She stated that when she was thirty-eight years old, she had given birth to one child. Ten years prior to admission she first noticed a prolapse of the vaginal wall, and within eighteen months after that time the tumor had reached its full size, which was about 5 by 6 inches, notwithstanding the fact that she had been treated by means of various pessaries.

June 24, 1901, the patient was prepared in the usual manner, and ⅙ gr. cocaine injected into the spinal canal. In about twenty minutes the patient was sufficiently anesthetized to permit the performance of a laparotomy, she having first been placed in the Trendelenburg posture, and the broad ligaments and redundant vaginal wall were sutured as described. On completion of the operation at 3 P.M., the patient was returned to bed suffering slightly from nausea and headache. These symptoms, however, soon disappeared, and she was able three hours later to take and retain nourishment. Her convalescence was uneventful, and four weeks later perineorrhaphy was performed in the manner previously described. She was seen and examined two months later; her trouble had disappeared, and she was able to walk about with reasonable comfort.

These cases, with many others which have come under the writer's observation, would seem to prove the statement that abdominal operations

not involving loss of blood and not requiring much time for their performance, can be safely undertaken, when necessary, even though the patient is nearing the end of life.

Further experience with spinal cocainization may demonstrate that it is particularly suited to this class of patients. If, as in the cases just narrated, no injurious effects follow its administration and the patients recover promptly from its use, being able to take and digest nourishment a few hours after the performance of a serious operation, the field of application of this procedure and others to elderly people will be very much widened.

55 West Thirty-sixth street.

THE PRESENT STATUS OF THE INFECTIOUS THEORY OF MALIGNANT NEOPLASMS.

BY GEORGE BLUMER, M.D.,
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A STUDY of the history of the infectious diseases shows that in most of them the proof of their infectious nature has been developed in two ways: first, through indirect evidence, such as their method of spread and geographical distribution; and secondly, by direct evidence, *i.e.*, the discovery of their inoculability or of the specific organism causing them. It seems logical, therefore, to consider the evidences in favor of an infectious origin of malignant neoplasms from these two points of view.

If malignant neoplasms are of an infectious nature we would expect that they would be inoculable, possibly, though not necessarily, from one species to another, probably from one individual to another of the same species. This question of inoculability can be studied both from a clinical and an experimental standpoint.

The frequency of carcinoma of the uterus would lead us to believe that if the disease were inoculable we should see with relative frequency cases in which carcinoma of the uterus in the wife co-existed with carcinoma of the penis in the husband.* Such cases have been reported, but are of such extreme rarity that we are forced to the conclusion that we are dealing merely with coincidences.

The experimental work referring to the inoculability of carcinoma† has consisted in the transplantation of tumors from one part to another of the same individual, or to another human being; transplantation of portions of human tumors to the lower animals, and transplantation of tumors originating in some of the lower animals to others of the same species.

The transplantation of tumors from one part to another of the same individual, has, fortunately for the credit of medicine, been but occasionally performed. The experiments of Hahn and Cornil have shown that it is quite possible for the transplanted tissue to grow and produce a tumor in all respects similar to the original growth.

Transplantations of tumors from one individual to another have necessarily been rare. The celebrated experiments of Alebert, who inoculated himself and four others with carcinoma juice, are practically the only ones to be found in literature, the results being completely negative.

Transplantations of tumors from human beings into animals have also been negative. It is true that Firket and others have claimed to produce tumors in animals in this way, but their descriptions of the lesions produced are so meagre and careless that we are justified in entirely discarding their results.

When we come to the inoculation of animal tumors into other animals of the same species, we find that success has been attained by a few observers. Most reliable work on this subject has been done by Hanau, and more recently by Loeb. Hanau was able to inoculate cancroid tumors from the vulva of a white rat into the tunica vaginalis of other rats, and even had successful inoculations from the second to a third group of animals. Loeb also was able to inoculate into several series of white rats a sarcoma of the thyroid originating in an animal of that species.

It must be pointed out that even though we grant the success of these inoculations, which we must do, they cannot be considered as proof of an infectious theory of malignant new growths. Hanau and Loeb both disclaim that inoculability means infectivity, and it would be just as logical to claim that a skin graft transferred from one individual to another was infectious, as to claim that these tumor grafts are. The negative results of experimental inoculation far outnumber the positive ones, and it is reasonable to assume that the positive results which occasionally occur are due rather to an unusual vitality of the transplanted material and unusually favorable surroundings, than to an infectious agent contained therein. Histological examination has shown, as a matter of fact, that the successfully implanted tumors generally showed well marked evidences of active cell division.

The literature covering the subject of the morphological evidences of tumor parasites has become in the last few years enormous. Necessarily only a brief review of the subject can be attempted. The bodies described as of a parasitic nature have been variously interpreted as coccidia, yeasts, rhizopods, and other forms of animal and vegetable life. This multiplicity of interpretation only faintly indicates the horrible confusion existing in the literature on the subject. In order to make the matter clear the various theories must be considered separately.

The coccidial theory evidently had its origin in the apparent similarity between the coccidial tumors of the liver of the rabbit and certain human tumors. In its early stages this theory was applied not so much to true tumors as to certain

*For a Review of this subject see Mundé, New York Medical Journal, vol. xxxviii., p. 457, 1883.

†For a Review of this work see Sailer, Amer. Jour. of the Med. Sciences, August, 1900.

diseases of the skin, notably to molluscum contagiosum by Pfeiffer, to follicular vegetating psorospermosis by Darnier, and to Paget's disease of the nipple by Wickham. Pfeiffer seems to have been the first who spoke of coccidia in carcinoma, but the first really accurate descriptions of the bodies interpreted as such were those of Thoma and Nils Sjöbring. Later Foa in Italy, Ruffer and Plimmer in England, and Gaylord in this country, described the same organisms. It is unfortunate that all of the authors describing these bodies did not follow the suggestion made by Virchow years ago and photograph their preparations, as it is rather a difficult matter at times to decide whether they are all describing the same bodies. Judging from their descriptions, and from the photographs of some and the illustrations of others, it seems certain that the same peculiar bodies were seen by all. The descriptions, though agreeing in the main, differ in minor points. The so-called parasite is usually intracellular. As first seen, it occurs as single or multiple rounded or oval bodies, usually nucleated, though not always so, and lying in the protoplasm of the cell. It gradually grows larger, and at the same time often develops a peculiar radial striation, the striæ running from the nucleus to the periphery of the body. The nucleus of the infected cancer cell is usually plainly visible, pushed aside by the parasite. The further development is variously interpreted by different writers. According to some, spore-like bodies are formed, according to others, sickle-like resting forms, similar to those of well known protozoa. Some writers claim that the parasites are very numerous in the intercellular tissue as well as in the cells, but they are in the minority.

The blastomycetic theory of new growths is so intimately related to the protozoan or coccidian that it may be well to consider this now, and discuss the two theories together. It is the Italian school above all who have advanced this theory, and especially San Felice and Roncali. A review of their work shows, as Borrel suggests, that they have not bothered themselves too much with an accurate study of the morphology of the so-called tumor blastomycetes. Anything that is round and seems to have a capsule is classed as a blastomycete. Judging from the statements of these authors, the objects which they have seen in their tumors, and interpreted as blastomycetes, are the same as those interpreted by the authors previously mentioned as protozoa. The supporters of the blastomycetic theory claim in fact that the bodies described by Thoma, Ruffer and others are blastomycetes. Most of their experimental work has been done with cultures of blastomycetes, and will be discussed later in connection with other cultural work.

The question which interests us at present is whether these appearances described as protozoa or blastomycetes can be satisfactorily explained in any other way. Aside from certain of the bodies pictured by the various observers, which can be explained as peculiar forms of cell degeneration or as changed leucocytes which have wandered into cells, there remain some forms which cannot be explained in this way. I refer particularly to the intracellular bodies, both small and large, which have apparently definite nuclei, and which sometimes seem to show very definite division. Up to a few months ago, the theory generally advanced to explain these bodies by those opposed to the infectious theory of cancer, was that they were the products of endogenous cell formation. This theory was not a satisfactory one to most pathologists. A recent paper published by Borrel clears up the mystery of these peculiar bodies completely, according to the writer's way of thinking. According to Borrel, all of the peculiar appearances described can be explained by disturbances in the development of the centrosomes of the carcinoma cells, associated with vacuolization of the protoplasm. Borrel's description of the changes is so clear and so admirably illustrated that it is extremely convincing.

A few words will indicate the remaining objects which have been described as parasites.

In 1890, Wm. Russell of Edinburgh described in carcinomata certain irregularly globular bodies, which on account of their staining reactions he called fuchsine bodies. These he considered the cause of cancer, notwithstanding the fact that he found them also in tuberculous, syphilitic and adenomatous tissue. The researches of Dean and others so thoroughly demonstrated the widespread occurrence of these bodies in various normal and pathological tissues, that they were regarded as forms of hyaline degenerated material and dropped into oblivion as cancer parasites. They have recently been resurrected by the blastomycetic school, who regard them as blastomycetes, and by Gaylord, who regards them as protozoa, but the evidence of their non-parasitic nature is so strong that they need not further be considered.

Recently Leyden and Schaudinn have described an amœba which they cultivated from the ascitic fluid in two cases of abdominal carcinosis, but which they were not able to associate etiologically with the new growth.

Sjöbring last year described bodies in new growths which he claimed belonged to the family of rhizopods. He claimed to have cultivated the organisms. His slides were exhibited at the meeting of the Pathological Society at Aachen, and totally failed to convince the pathologists who saw them. His rhizopods in culture were interpreted by so accurate an observer as Lubarsch as degenerated carcinoma cells.

From the bacteriological side the evidences of parasites in malignant new growth have been almost entirely of a negative character. Passing over the bacteria described by Scheuerlen, Koubassoff and others, which have been recognized as contaminations, the more recent work done under proper precautions has almost always led to the conclusion that new growths are sterile. The monumental cultural work carried on by Pease in

the Cancer Laboratory at Buffalo, in which all kinds of media were used and a very large number of growths examined, showed growths with great rarity, and when present there was good evidence that they were probably contaminations. The smaller series of observations published by Richardson were entirely negative.

There is good reason to believe that the blastomycetes said to have been cultivated from cancers of internal organs by San Felice and others, were merely contaminations. Mafucci and Sirleo, who made a study of the blastomycetes of new growths, showed by control plates that when they isolated blastomycetes from a new growth, they could obtain the same organisms from the air. The so-called tumors produced by the inoculations of these blastomycetes are not true tumors at all, but merely granulomata. This has been shown by Nichols, who worked with both San Felice's and Plimmer's organisms, and by Gaylord, who worked with Plimmer's alone. Of the observers who have claimed to grow cancer parasites other than blastomycetes, not one has succeeded in growing the parasites for more than one generation, and there is a curious haziness and lack of clearness about their accounts of the growth. It may, therefore, we think be safely concluded that no one up to the present has been able to successfully cultivate any specific organism or group of organisms from malignant growths.

Finally when we come to consider the indirect evidences of the infectious character of new growths we meet with some facts of a suggestive character. The undoubted increase in carcinoma is regarded by some as an evidence of its infectious nature. It must be confessed that the logic of this reasoning is not clear. Other diseases, notably certain forms of nervous and mental disease, are also on the increase, but nobody has claimed for them that they are of an infectious character.

The interesting observations of Behla in Germany, and Lyon in this country, bring forward more evidence suggestive of the infectious character of new growths than any of the work which has been done on so-called cancer parasites. Behla studied the house distribution of cancer in the little town of Luckau. This is a town of 3,000 inhabitants, with two suburbs, one lying to the east and one to the west. In his studies of the house distribution of cancer covering a period of 22½ years, Behla found that no cases of cancer were reported from the western suburb. Cases occurred occasionally in the main town (1 case to 30-50 deaths), and frequently in the eastern suburb (1 case to 9 deaths). It was further found that the cancer houses were distributed along a ditch which ran through the main town and the eastern suburb. The ditch contained foul, stagnant water with which the gardens were watered, and in which many of the inhabitants washed their vegetables. Behla believed that the vegetables became infected by the contaminated water, and in turn infected the people. Cancer of the stomach and liver predominated in the affected area.

Lyon's observations relate to cancer distribution in Buffalo, and bring out some very interesting points. He shows that there is a marked concentration of cancer in certain wards, which are mainly occupied by Germans, the race conditions evidently being the cause of the concentration, as there are no peculiar local conditions. He further shows that the Germans and Poles have a cancer rate nearly five times (4.81) as high as the native born. Amongst the Germans and Poles, the stomach was involved ten times more frequently than in the native born. Lyon states that such facts are hard to explain by the embryonic theory, and tentatively advances the explanation that possibly the peculiar diet of the Germans is more liable to contamination with the cancer parasite, if cancer be a parasitic disease, than that of other classes.

It cannot be denied that both these papers are suggestive in the extreme, and that the facts that they bring forward could be most easily explained by assuming a parasitic origin for cancer. Nevertheless the amount of material covered by these papers is too small to permit of definite conclusions being drawn. It is earnestly to be hoped that similar investigations will be carried on in other cities and will be extended to include whole States and countries.

To sum up, then, the results of the review of this subject we propose the following conclusions:

1. As a result of numerous bacteriological examinations no organism completely or even approximately fulfilling the requirements of specificity has been isolated from malignant new growths. Most of the cultures when taken by reliable methods have remained sterile.

2. Morphological studies of tissue from malignant growths have revealed many appearances which have been interpreted as parasites. In no instance have the majority of competent pathologists been convinced that these bodies were parasitic, and in all instances other and more satisfactory explanations than parasitism have been advanced to explain the appearances described.

3. Certain facts regarding the distribution of malignant neoplasms are suggestive of a possible infectious origin, but much more extended investigations along this line must be carried on before any definite conclusion is reached.

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PHYSICIAN'S FEE.—In the Orphan's Court, Pittsburg, Pa., Dr. J. O. Flower filed suit against the estate of the late H. M. Curry for $5,243 for professional services. Mr. Curry was one of the partners of the Carnegie Steel Company, and died two years ago. The physician's services covered a period of about five months. He claims that he treated Mr. Curry so successfully that the former's life was prolonged sufficiently to add at least $1,000,000 to the estate. Expert witnesses upheld the doctor in his suit.—*American Medicine.*

PROSTATIC OBSTRUCTION TO URINATION; NOTES ON ITS REMEDY BY ENUCLEATION OF THE DISEASED PARTS.

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FOR the better understanding of beginners, the following annotations on enucleation in mass of the diseased glands of the prostate, are premised by a brief review of the normal and morbid anatomy of the organ.

The vesical prostatic body, in form like a chestnut, with an antero-posterior diameter of one inch and a half, a breadth, near the base, of one inch and three-quarters, a thickness of seven-eighths of an inch, and a weight of five drachms,* springs from the antero-inferior part of the bladder and takes a downward and forward direction; its base embracing the vesico-urethral orifice and the anterior extremities of the seminal vesicles together with the ends of the spermatic canals; its apex being lost in the membranous region of the urethra. Its antero-superior convex surface, distant from the pubic arch about three-quarters of an inch, is covered by a closely adherent layer of muscle tissue derived from the anterior wall of the bladder. Upon and among these superficial muscular bands are many veins which end in the plexus of Santorini whose efferent veins pass along the sides of the prostate where the muscular layer is much thicker and gives attachment to the pelvic fascia and to the levator ani muscle. Its postero-inferior nearly flat surface, resting upon the lower end of the rectum, is invested with a prolongation of the thin layer of muscle tissue covering the seminal vesicles. This muscular layer is attached to the prostate by moderately dense connective tissue, and to the rectum by very loose connective tissue. Thus the prostate is securely encapsulated by layers of connective and muscular tissue. Its two lobes are united, from base to apex, by a superior isthmus and by an inferior isthmus, and this union forms the prostatic region of the urethral canal which is lined by a closely adherent mucous membrane. The posterior third of the lower isthmus, called by Everard Home the third lobe and by Auguste Mercier the supra-montanal region, is much thicker than the anterior two-thirds of that isthmus.

The prostate consists of from two-thirds to three-fourths of its bulk of smooth muscle tissue a part of which, together with a minimum of connective tissue, serves also as a frame-work for its vessels and nerves and for its aggregations of compound racemose mucous glands; the acini of the glands containing microscopic albuminoid sympexia that make their appearance during adolescence. These acini, in adults, are about the one-three-hundredths of an inch in

* Among the specimens of normal prostates dissected by the writer there were many varieties in form, dimensions, and weight; such as the short and flat, one inch antero-posteriorly, half an inch vertically two inches transversely; the long and disproportionately slender; the nearly globular, one inch and a quarter in mean diameter; the undersized of regular form; and those in excess of size and weight.

mean diameter. Some of them are round and others are oval or oblong. In disease they are often visible to the naked eye. The tubes of different bunches of acini unite to form larger tubes, and these coalescing make up terminal excretory ducts which open on the floor and sides of the prostatic sinus. The central mass of mucous glands is enveloped by layers of muscle tissue, thick superiorly, very thick laterally, thin inferiorly, and very thin along the lateral walls of the urethro-prostatic sinus. This central mass of glands with its network of connective and muscle tissue is enucleable with difficulty in diseased prostates of moderate size, but with comparative ease in cases of great "senile enlargement."

Only a few words are needed to elucidate the nature of "senile enlargement" of the prostate.* The phlegmasic theory, of the cause of this ailment, rejected more than fifty years ago, is well worthy of revival for, with present lights, it has a sound basis. In a paper on prostatic enlargement, published in 1896, the writer said: "A reexamination of the question, with the aid of modern methods of study, has led to the belief that phlegmasic action—often excited by persistent hyperlithuria, which is so common between the ages of forty and sixty—is a potent factor in the causation of this chronic enlargement.† Post-mortem evidences point to a low grade of inflammation in the prostatic parenchyma, and microscopic inspection of the soft enlarged prostate of elderly men shows that its structure is not identical with what is known as a new growth, but that the increase of bulk is due to dilatation of the acini with augmentation of muscle tissue bands. Such increase of muscle tissue seems to be an effect of violent and frequent contractions of the bladder and prostate in their efforts to expel retained urine.‡ Therefore, this increase of muscle tissue is secondary to the diseased state of the acini involved in the passive phlegmasia that yields an exudate suffi cient to distend them and float the sympexia which are soon incrusted with concentric layers of calcium phosphate and thus become irritant bodies serving to aggravate the existing condition. Many of these calcified sympexia are discharged through dilated ducts and are found in the urine, but others remain in the acini or are impacted in ducts, and the consequence is accumulation of secretion, further dilatation of the acini, and a general or local increase of the prostate. . . . Analysis of the record of every new case affords some evidence of the phlegmasic origin and slow development of chronic enlargement of the prostate. Mercier recognized the dilatation of the acini and the calcification of the sympexia, but was one of those that rejected the notion of the phlegmasic origin of chronic enlargement of the prostate; and yet he believed this enlargement to be due, in great part, to passive congestion. This admission is surely favorable to the phlegmasic theory. Some modern writers regard chronic enlargement of the prostate as adenoma, but this view is certainly not in accord with the present definition of an adenoma, which is: a new growth of adenoid substance with imperfectly elaborated and sterile structure. Adenomata, as well as other new growths, are found in the prostate, but their occurrence is very rare. In the great majority of cases of chronic enlargement, there is not the least appearance of new growth of glandular substance. The acini are not increased in number, but are greatly dilated —some of them from five to twenty times their normal dimensions—and ordinarily the muscle tissue is only slightly increased. Besides, there are, in and around these prostates, unmistakable signs of secondary phlegmasic action. The periprostatic veins are gorged with blood, and in some cases are occluded by phleboliths. Although the surrounding tissues are indurated, the substance of the prostate is soft and spongy."

Chronic inflammation of the seminal vesicles and spermatic canals appears to be frequently associated with chronic inflammation and progressive enlargement of the prostate. In seventy-five per centum of the chronicly enlarged prostates of elderly men dissected by the writer, there were marks of phlegmasic action between the base of the bladder and the rectum, such as induration of the ambient connective tissue, particularly that which bounds the seminal vesicles; and these vesicles were, in general, hardened and shrivelled, and in some cases their fluid was purulent. The absence of spermatozoids and the presence of many enlarged sympexia were conspicuous in the mucus of the vesicles. The sper matic canals were abnormally hard and sometimes were occluded. In a few cases, there were cystlike dilatations in the vesicles, due to the occlusion of their excretory ducts.

1. Of the many modes of radical treatment of prostatic obstruction to urination proposed in the past fifty years, the one in question seems to be the most rational, founded, as it is, upon a sound anatomico-chirurgical basis, and consisting, as it does, in enucleation of the masses of diseased glands through a perineal incision. At first it was thought that the whole prostate was enucleated, but further observation has made it clear that the diseased masses only are removed and that the enveloping layers of muscle tissue and perhaps a few glands are left behind. The operation is performed ordinarily when autocatheterism is very difficult or impossible, but there is no doubt of its indication in the early stages of "senile enlargement" of the prostate long before serious vesical implication.

2. About five years ago the writer, through the courtesy of Doctor Alexander, had an opportunity to examine a patient six months after

* The statements herein made relating to gross, minute, and morbid anatomy are based upon the careful examination and dissection of one thousand normal and diseased prostates.

† Any sort of urethritis is liable to affect the prostatic parenchyma and be the cause of enlargement of the prostate.

‡ While the human prostate is a urinary as well as a genital organ, it is only genital in those animals (notably certain ruminants) whose prostatic lobes have no anterior isthmus.

enucleation of the prostate. The finger, passed into the rectum, detected a firm body shaped like the prostate. The writer's conclusion was that the masses of diseased glands only had been "shelled out" and that the body felt through the rectum probably consisted of the greater part of the muscle tissue of the prostate. This view was lately confirmed by examination of a specimen, in Doctor Alexander's collection, obtained from a subject who died of aneurism within three months after enucleation of three large masses of diseased prostatic glands. The urethro-vesical orifice was intact, but the cavity, with thick muscular walls, left after removal of the masses had not had time to contract sufficiently to form a prostatic sinus of right dimensions. The patient had had full control of his bladder from the time of the operation.

3. The term prostatectomy, meaning literally the cutting out of the whole prostate, should not be used when the real act is enucleation of the diseased mucous glands, together with their network of connective and muscle tissue.

4. Enucleation of the diseased parts of the prostate is by no means an easy procedure which no young operator should undertake until, by frequent dissections, he has become well acquainted with the relative and gross anatomy and with the histology and pathology of the organ and has practised, on the cadaver, this enucleation of the diseased prostate. It need scarcely be said that enucleation is practicable only in cases of enlargement of the lateral and "third" lobes, and that Mercier's methods are applicable only to cases of urethro-vesical contracture and prostatic valvule.

5. The full details of the steps of the enucleating operation will not be given, and only a few points pertaining thereto need be mentioned. The perineal incision may be vertical or it may be crescentic. Ordinarily the vertical incision answers its purpose, but in the case of an inordinately fleshy subject or of a deep seated prostate, the Celsian crescentic cut renders the organ more accessible and the removal of large masses of glands more easy. The process of enucleation, if carried out with deliberation and gentleness is effected without serious injury to the parts, and quickly enough, provided the operator keep in mind the anatomical relations of the prostate. The clawed forceps is of much assistance in drawing forward the object to be removed in order to facilitate the detachment of its posterior extremity with the finger nail, or with a blunt enucleating spatula, and thus free and extract it. Oftentimes it is advantageous to enucleate the so-called third lobe before attacking the remaining lateral lobe, but there is generally no necessity to follow this order of proceeding; indeed the third lobe is occasionally brought out with the lateral lobe first extracted. The urethra is opened through the whole length of its membranous region (the bulb itself is often incised without ensuing mischief); and this step is generally taken before beginning the enucleation. The use of Parker Syms' bulbed rubber tube or of a rectangular metallic retractor has rendered entirely unnecessary the very objectionable epicystotomy heretofore employed. Assuredly the bi-manual operation, even if used after cutting upon but without opening the bladder above, as first suggested and first abandoned by Dr. Syms, is more likely to do hurt than the simpler perineal operation.

6. The masses of diseased glands having been extracted, the bleeding staunched, and the bladder irrigated through a large rubber drainage catheter (passed through the perineal wound) to be left in position five or six days, and the cavity formed by the removal of the glands lightly packed with gauze, the dressing of the wound is completed according to the art. Every four hours, or as often as may be needed, the bladder is syringed, not only for cleansing, but for ensuring permeability of the catheter. These washings constitute the first part of the after-treatment. On the third or fourth day the first dressing is made, and on the fifth or sixth day the drainage catheter and the packing are removed. Then, at least twice each day a soft rubber catheter is passed into the bladder through the perineal wound for drainage and irrigation although spontaneous urination may have occurred. In six or eight days a full sized steel sound may be introduced through the whole length of the urethra, and the process repeated once a week; from twenty to thirty days being allowed for cicatrization of the wound.

7. It is not always possible to enucleate the masses of glands without tearing open the prostatic sinus at its side or its floor, and, in point of fact, this occurs with more frequency than may be supposed, but no harm ensues if the mucous membrane is not torn away. In some cases the membranous part of the urethra is severed from the prostate. This has occurred in the practice of skilful operators when there has been more than ordinary difficulty in effecting enucleation in cases where the parts were very dense from old inflammatory action. The means employed to prevent stenosis at the point of cicatrization of the severed urethral end consist chiefly in the use of dilators.

8. Incontinence of urine, lasting from three weeks to three months, occasionally follows the operation, and needs no other attention than cleanliness.

9. The danger of the operation has been greatly overestimated. The pessimism of this view becomes apparent by contrast of the immediate and remote effects of the divers operative methods employed for the relief of prostatic obstruction to urination. In the skilled hands of discriminating clever operators, the mortality from the mode of enucleation in question is far from being discouraging.

A RECONSIDERATION OF THE PATHOGENESIS OF CONCOMITANT STRABISMUS.

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IN the brief study which I hereby offer, I shall limit myself to concomitant strabismus, whether it be vertical or horizontal, convergent or divergent, mono-lateral or alternating, constant or occasional, to the exclusion of all paralytic varieties. The subject is a very complex one, and, in its history, presents a variety of opinions and practices, all of which it would be impossible even to mention within the limits of this occasion.

Bannister, in 1622, said that squint was commonly "a maladie most incident unto children presently after birth, through the negligence of the nurse, who setteth the cradle, in which the infant lieth, on the side of the light, and not directly contrary unto it, which maketh the children looking to the light, to turne the eye on the side to it; and thus by continuance they are accustomed to turne their eye away, when the muscles have attained to a habit, because one sort of them doth so obey and follow the contrary, which draw them, that these do grow longer, the others shorter." (Section 3, Chap. 1.)

It was in this strain that the old authors in varying terms continued to define strabismus as a shortening or elongation of given muscles of the eye. A sort of neurotic explanation, however, was offered by St. Yves in 1722 (Traité, translated by Stockton), as follows: "This different inspection of squint eyes demonstrates a disparity of movement in one of the straight muscles of the eyes, the which is produced by the unequal influx of the animal spirits in all these muscles; this regards only those who squint from childhood." The animal spirits here referred to might be translated into the modern term "nerve force," or "innervation."

While defective vision in the squinting eye had long been noticed, the great French naturalist, Buffon, who, himself, had strabismus, was perhaps the first (1743, Mémoires de l'Académie des Sciences) to consider as the preponderating cause of strabismus an unequal acuity of vision in the two eyes. He said that it was ordinarily attributed to "a defect of the correspondence between the muscles of each eye, the difference of movement of each eye coming from the difference of movement of the muscles, which, not taking place in concert, produce the false direction of the squinting eyes." "There was no defect in the muscles," he said, "but the inequality in the (visual) power of the eyes (of which he had seen no mention) was, according to his opinion, the most general, the most common cause of strabismus." He adds: "A small degree of inequality (of vision) will cause the object when seen by the stronger eye to be perceived as distinctly as if it were seen by both eyes; a little more inequality will render the object when seen by both eyes less distinct than if seen with the stronger eye alone; and finally, a still greater inequality will render the object seen by the two eyes so confused that, in order to perceive it distinctly, one will be obliged to turn the feeble eye and put it in a position where it cannot obscure." (Javal, Manuel du Strabisme, pages 4 and 5.)

In 1854, that keen and philosophic observer, Mackenzie of Glasgow, not only discarded, with Buffon, the muscular theory of ordinary strabismus, but went farther and declared that its cause "must lie deeper than the muscles of the eye, and deeper even than the retina: namely, in the brain and nerves, the organs which govern the associated actions of the muscles of both eyes. It is, therefore, he says, "not to be wondered at, that when the thought first occurred to the minds of medical men, that the division of the adductor might perhaps prove useful in convergent strabismus, the plan of thus remedying a disordered exercise of a nervous function, by dividing one of the muscles, which, in consequence of that disorder, acted abnormally, should have been conceived with distrust, and allowed to fall aside." (Mackenzie, "Treatise on the Diseases of the Eye," Am. Edition, 1854, p. 558.)

Here is a clear enunciation of the neurotic theory of strabismus, but Mackenzie did not specifically apply it, leaving only the general inference.

In 1860, von Graefe, in a more searching and positive manner, gave a new impetus to the purely muscular theory of strabismus, concluding after elaborate investigation that "this affection should be considered as a disproportion between the mean length of the muscles. It is unimportant in regard to the symptoms whether this inequality results from an abnormal insertion of the tendons or from modifications of the structure of the muscles. In the first case, it will be the change of the relations between the force and the resistance (globe) which will produce a modification of the length of the muscle; in the second, the altered muscular tissue reacts with an abnormal tension against the nervous impulsion, which remains the same." Von Graefe at once found an able disciple in the learned Frenchman, Giraud-Teulon, and through these two powerful advocates, the "anatomical" theory of concomitant strabismus received an acceptance which has not been entirely relinquished even to the present day.

Scarcely had von Graefe's conclusions begun to fructify in the minds of European ophthalmologists, when Donders brought forward his theory of the relation between accommodation and convergence, and that of strabismus, based upon it. These theories were supported by such an array of fact and argument that every opposing doctrine was almost overwhelmed. They at once gained an influence that has dominated the majority of ophthalmologists ever since. Even now the authority of Donders is so thoroughly established, that it undoubtedly appears to some almost sacrilegious to question him at any point.

Certain it is that Donder's theory of strabis-

mus has, in a wide measure, been borne out by the treatment of it through the use of spectacles. But the muscular theory seems to be supported, too, by the effects of operative treatment, but these are explainable on other grounds.

At the outset, I wish to define concomitant strabismus as an absence of binocular vision, accompanied by a perceptible deviation in any direction of the visual axis of one eye from the point of fixation of the visual line of the other eye. The etiological factors of strabismus, if this definition be true, will then be resolved into those conditions which destroy so-called parallelism of the two visual axes, and the subsequent conditions which destroy binocular vision.

If we are to locate the primary disturbance, it seems to me that we must do so in the nerve-centers which ordinarily hold both visual lines simultaneously to the point of fixation. If one line becomes misdirected, or deviates, one muscle, or set of muscles undoubtedly receives too much or too little innervation, and the position of the eye is changed to correspond. Thus, in an inward deviation, there is either an excess of innervation to the muscles which rotate the eye inward, or a diminution of innervation to the outer muscles which counteract or co-ordinate the inward movement. The same is true of all deviations. Just what has happened to the nerve centers to unbalance their action, it is impossible to say. But, by exclusion, the trouble is definitely located in them. Usually, at first, the deviation takes place occasionally, the controlling centers for "parallelism" being relaxed in their action only for the time. After a while this change becomes more frequent and finally persists, thus giving at first "periodic" deviation, and finally, constant. These centers may be compared to the driver and a "four-in-hand" waiting for a drive. One rein may be held more tightly or loosely than the others by the driver, when one team will be "headed" in a different direction from the other, but as soon as the tension of the reins is equalized, the horses will be headed in the same direction. If one rein is, after a while, constantly held more loosely or more tightly than the others by the incapacity or carelessness of the driver, the horses will continue to be headed differently. In this crude way, the nerve centers may be compared to the driver, the muscles to the reins, and the eye-balls to the horses. In permanent strabismus the nerve-centers have simply established an innervation relatively unequal, and have created a relative adjustment of direction of the two visual axes out of parallelism. Concomitancy, however, is not lost.

Of course, in these cases there is no binocular fixation. Only one eye fixes, and while this is done, the retinal image of the other eye, if one exists, is suppressed or disregarded in consciousness. If there be vision in both eyes, the retinal reflex of direction may exist in both, but, like the retinal image, is operative in the fixing eye only.

In some cases of strabismus, the vision in both eyes is normal; in others it is subnormal, but equal; in others it is normal in one eye and subnormal in the other; in others again it is subnormal in both, but more so in one than the other; in others still one eye has vision more or less perfect, while the other is blind; or both eyes may be blind. Whether the vision of one eye be equal to the other or different, generally decides whether the strabismus be alternating or mono-lateral, an inequality of vision usually being present in the latter. Age, also, influences the form of strabismus. For example, the convergent form begins far more frequently before ten years of age than the divergent, the divergent form far more frequently than the convergent after ten years of age.

In infancy there is a comparative instability of the co-ordinating centers of ocular movement, the same as there is of all movements of the body. As all observers have noticed, there is, in babyhood, a special tendency to convergence, and it is only until the child has acquired much co-ordinating power that the eyes cease to occasionally squint. The reason why there is convergence rather than other deviations is that the center for this movement seems to have very slight antagonism in other centers. There is no active center for divergence of the eyes, as there is for convergence. To be sure the eyes may be made, artificially by prisms, to diverge slightly. Vertical deviation may also be produced in the same way. Any of these changes, whether up, down, or outward, are very limited, and the same would be true of inward deviations were it not that there was a special center superadded for this special purpose. The innervation for binocular association of movements of parallelism may, therefore, be slightly altered, and it may, also, be sufficient to bring the eyes from convergence to parallelism when innervation for convergence is relaxed, but it can go no further.

Thus, convergence has but slight antagonism, and stands out by itself as an independent function, with its action and relaxation operating, in spite of the other oculo-motor functions, in obedience to the retinal reflex of binocular fixation and in association, more or less intimate, with the retinal reflex of accommodation.

In the infant, therefore, when the visual effort is attended by movements of the eyes which are the result of unbalanced and misdirected inervation, it is but natural that momentary convergence should be of frequent occurrence, and that other deviations should seldom take place. As age advances and the visual consciousness becomes educated and the muscular sense becomes developed, convergence becomes adjusted to the retinal reflexes, and a co-ordination between this function and the other ocular movements continues to be more and more fixedly established, until after six or eight years of age, its stability is not easily disturbed.

Vertical deviation is of very rare occurrence.

It is undoubtedly due to some disease or error of development of the oculo-motor centers whereby a relatively unequal innervation is distributed to the upper and lower muscles of the two eyes. Quite a different problem presents itself in the lateral deviations. It is possible that these may be influenced by a similarly unequal innervation, relatively, of the lateral muscles as affecting parallelism; but the function of convergence plays by far the most important role. There is excess of it, as in convergent strabismus, or diminution, as in divergent strabismus. It is to this disturbance of function, therefore, that we are to look for the essential explanation of convergent and divergent strabismus.

In the first place, organic integrity of the nerve-centers for convergence is necessary to their normal function. This may be imperfect from faulty development through hereditary influence, or it may be impaired through disease. The influence of heredity is demonstrated by the fact that strabismus is frequently found in several members of certain families. Heredity may not only affect the development of the convergence centers, but may also transmit neuropathic tendencies which modify the activites of all nerve centers, these included. Heredity may further bear upon the development of strabismus through the transmission of errors of refraction and defects in the nervous elements of the visual apparatus, outside of its motor centers.

Among the diseases which especially reach out to the ocular motor centers are syphilis, cerebral and spinal-cord degenerations, many of which are of syphilitic origin, and certain inflammatory processes at the base of the brain. It may also follow hydrocephalus.

While inherited or acquired imperfection of the convergence centers may, occasionally, cause strabismus, the majority of cases must be accounted for in other ways. Perverted convergence, either excessive or defective, may be brought about by peripheral influences which act upon normal centers. These influences may excite such centers to over-action or may be insufficient to stimulate them even to normal action.

In the developing child, the converging function is especially active, as I have stated. Its antagonizing forces are not especially strong, and are easily relaxed. Now let such a child have convulsions, whooping-cough, or some other nervous disorder, and convergence may at once or by degrees gain the ascendency, and a convergent strabismus may be established. This may take place, even when the vision of both eyes is apparently acute, when refraction is nearly or quite normal, and when binocular fixation previously seemed to be exact. In many of the latter cases the strabismus will be alternating. Again, convergent strabismus may develop in the presence of hypermetropia, as has been so ably demonstrated by Donders and others, in which case the accommodative effort is increased, and with this increase there is communicated to convergence an increased stimulus to act. The instability of the oculo-motor co-ordinations peculiar to this age tending to yield easily, this increased stimulus to converge is obeyed and inward deviation takes place, at first, occasionally, then constantly. Another condition which may favor the development of strabismus, when superadded to either of the above, is defective vision of one eye as compared to that of the other. In such cases the stimulus to binocular fixation is weakened by the indistinct image of such an eye, the stimulus to converge is more potent, and the squint is more apt to follow. There are many people whose vision is congenitally defective. In some of them this defect exists in both eyes; but in most of them it is found in but one. A large proportion of those who are thus defective in one eye never squint. Did time permit, I could cite many such cases in my own experience. All other conditions, however, being favorable, such persons are especially liable to strabismus.

I know that in thus raising the question of congenital amblyopia, I open myself to controversy. But I am prepared to defend the assertion that the defective vision which is so often found in squinting eyes is not a consequent, but an antecedent to the squint; is not a result, but one of the etiological factors. Some of the defective vision in a given case may be due to refractive errors which glasses will improve, but much of it is genuine amblyopia. There are no appreciable structural changes in such amblyopia, and glasses or other treatment will not remove it. I may add here, however, that while I do not believe that essential congenital amblyopia can be overcome, the remnant vision of such an eye when forced to be exercised may be trained or educated into better adjustments and better sense of appreciation of form and color, but whatever improvement may take place is more apparent than real.

When the predisposing conditions are present, a child may also acquire convergent strabismus when the vision of an eye becomes defective or lost from disease, or when one eye, because of disease or otherwise, is closed or occluded for a long time. Here, too, the stimulus to converge without the counterbalancing stimulus to binocular fixation permits convergence to gain the ascendency, more or less permanently.

It is possible that other factors contribute to the development of convergent squint in childhood, and among them an unbalanced innervation of the upper and lower muscles by which one eye tends higher than the other—hyperphoria. In these cases the effort to maintain parallelism causes an extra stimulation to be carried to the center of convergence, and an inward deviation is the result. This inward deviation is often combined with an upward one in the same eye, giving an obliquely upward and inward squint. Dr. G. A. Stevens, of New York, believes that hyperphoria is thus an important if not a leading factor in the production of squint.

Convergent strabismus is sometimes present in cases of myopia. Its production here, with accommodation relaxed, seems almost anomalous, when we reflect that convergence ought to be relaxed in harmony with it. But experience teaches us that dissociation often takes place between convergence and accommodation, and that in one case accommodation may be active while convergence is in abeyance, and in the other convergence may be active while accommodation is at rest. Now, in rare cases, there is no reason to doubt that, through hyperphoria, astigmatism, too near position of objects looked at, or nervous irritability, there may be transmitted an abnormal impulse to converge, even in the absence of accommodation, and the myope may then, too, acquire a convergent squint.

In divergent strabismus, convergence is also at fault, but here it is diminished, instead of increased. As Donders has also shown, this diminution is especially liable to take place in myopia, where the stimulus to converge that comes from ordinary accommodation is wanting. Then, given a defective eye, in which binocular fixation is again easily released, and the convergence innervation weakens and divergence follows.

In all forms, then, primarily, strabismus is an abnormal condition of the oculo-motor nerve-centers. At its outset, there is no such thing as muscle-shortening or elongation. This is proved by the facts, that a squinting eye is, at the beginning, and by itself, unrestricted in the extent of normal rotation, and that, when the patient is in deep narcosis and innervation is entirely absent, the squint disappears. Secondarily, however, there may be muscular and aponeurotic changes in cases of extreme and long-continued strabismus, shortening taking place on the side of deviation, and elongation on the opposing side. But these are results, and not causes. In the pathogeny of strabismus, then, let us stop talking about it as muscle insufficiency, excess of muscle strength, muscle shortening or muscle elongation. It is primarily an abnormality of innervation, a vice of the controlling nerve-centers. It is by adopting this view, which I believe to be the correct one, that we are to be saved from many errors of treatment—a subject which I must pass by at this time.

APPENDICEAL FISTULA.

BY JOHN B. DEAVER, M.D.,
Philadelphia.

THERE are two reasons why this subject is worthy of our attention; indeed, it is a subject of the utmost importance, for in practically all instances it is a preventable sequel to operations for acute appendicitis, and is only seen in the neglected cases, if procrastination on the part of the physicians or patient can be so called. If all cases of appendicitis were operated in the early hours of the attack, this complication would be practically unknown. Secondly, the difficulties and dangers of the operation for the relief of appendiceal fistula are often greater than was the original operation, and much more dangerous than is the operation for the removal of the appendix in the early hours of an attack.

The mortality of operation for appendiceal fistula is fortunately not high. Although many brilliant results are reported, nevertheless failure to obtain a cure may result. I fear we are all more tempted to report our fortunate results than those which have an unfavorable termination. This fact, although serving the useful object of stimulating us wtih greater courage in facing serious surgical problems, also has the disadvantage of tending to make us less thoughtful of their dangers. The man who is continually calling to our notice the dangers and gloomy side of any operative procedure exposes himself to the stigma of retarding the science of surgery. This, however, does not apply in this instance, because it not only points out the condition, the cause and means of prevention of which are obvious, and after all "Prevention is the best cure." In the early operation for appendicitis we have the almost certain means of avoiding this complication.

Appendiceal fistula occurs as one of two varietes—the external and the internal. In the internal variety the channel of the communication, of the fistula, is in direct communication with some hollow abdominal viscus, or in the case of evacuation of an appendiceal abscess by way of the bronchus with the chest cavity.

In the internal variety any of the hollow abdominal viscera may be involved—any portion of the intestinal tract, the bladder, the dilated portion of the ureter, etc., in fact, any of the viscera in close proximity to the appendix.

These internal fistulæ, although numbers of cases have been reported, are quite rare in comparison to the external variety. Fortunately, too, they rarely need surgical interference. We cannot be sure, however, that these internal bowel communications will remain innocuous. In too many instances not only do they occasion local discomfort and attacks of aggravated intestinal indigestion, but offer a fertile cause for mechanical intestinal obstruction. Further, I believe that these local foci of irritation are in a certain percentage of cases forerunners of subsequent malignant growth.

The least dangerous of these internal fistulæ are those in which an abscess ruptures into the cecum, the colon or the rectum, as in this variety the danger of intestinal obstruction is minimized and the discharge of pus by this route the safest. The internal variety of fistula rarely requires operative interference, and for this reason is considered by some to be a fortunate termination of appendiceal abscess; this, however, is an opinion to which I cannot subscribe, for I have seen too many unfortunate and distressing consequences follow the adoption of this type of procrastination, and a fatal result in more than one instance

compels me to lay stress on these facts. Those cases which terminated fatally resulted from, in one instance, a communication with the bladder; a second, with a communication with the respiratory system; in a third, the communication was with the dilated portion of the ureter. Again, the inflammatory bands around such an internal fistula have caused death by internal obstruction of the bowel from a coil of intestine becoming imprisoned beneath such adhesions.

The external fistulæ are much more common, but occur practically always in cases where abscess has been present, or where a gangrenous appendix has rested upon the bowel, and by contiguity caused a perforative gangrene of the bowel.

Probably the most satisfactory classification of this embarrassing operative sequela is that which depends upon the character of the discharge. The discharge from an appendiceal fistula can be divided into the fecal and non-fecal. The non-fecal discharges are urine, mucus, flatus, pus and bile. Urinary fistulæ are rare, and are practically always due to injuries to the bladder, as the ureters from their anatomical position are rarely involved. Yet the ureter as it crosses the psoas muscle may be injured. I have seen the ureter exposed when it did not look unlike the appendix stripped of its serous coat. The injuries to the bladder consist either in tears made in freeing adhesions at the time of operation, or are due to ulceration into the bladder, either from the pressure of an abscess in the pelvis, or from an appendix adherent to the bladder. Very occasionally an appendiceal abscess works its way upward and ulcerates into the gall bladder, and when this abscess is opened a true biliary fistula is established. This is, for anatomical reasons, extremely unusual. Another way in which I have seen a biliary fistula is from an infection of the gall bladder secondary to a non-suppurating appendicitis or, rather, an appendicitis without periappendicular suppuration. After operation, the gall-bladder has perforated and discharged through the appendiceal wound, the general peritoneal cavity being shut off by adhesions.

The other non-fecal fistulæ are always due to the presence of a foreign body; this foreign body may consist of one of several things.

An appendix left *in situ*. In many cases of appendicitis in which the operator contents himselfs by merely opening and draining the abscess, the appendix itself is left as a foreign body and keeps open a fistula which will not disappear until the appendix has entirely sloughed away, which in my experience, rarely, if ever, occurs, or has been removed, usually the latter. In these cases, the discharge may be almost pure mucus, and in any case in which mucus is discharged from an appendiceal fistula we can be sure that all, or part, of the appendix is in communication with the tract. In operating upon such cases I have never failed to find a portion of the appendix, and indeed, in cases in which an abscess has been drained and the appendix left undisturbed, at a subsequent operation, I have always found the appendix to be present. The disappearance by sloughing of such an appendix would be a fortunate occurrence, and may occur in rare instances, but personally I have never met with it. Again, a mass of lymph, a part of the wall of the appendiceal abscess, may serve as a foreign body. An infected suture or a few threads of gauze torn from the drainage is often at the bottom of one of these cases of fistula, in others the only way in which they can be explained is a microscopic communication with the bowel through which only enough fecal matter or gas can pass to keep the sinus open and not enough to give a decided fecal character to the discharge.

The fecal fistulæ may be divided according to the part of the bowel in which they occur; in the small bowel, high up or low down, or in the large bowel. Another way in which they can be divided depends upon whether all or only part of the feces are discharged through the fistula. When all of the feces escape through the fistulous orifice of communication with the large bowel we have formed, for all practical purposes, an artificial anus. Fecal fistula involving the upper part of the small bowel can be differentiated from those situate low down in the small bowel, by the pronounced biliary character of the discharge and the discharge of liquids from the fistula immediately after their ingestion. In the former the biliary discharge excoriates the skin, and forms one of the most embarassing varieties of fistula with which to deal. This is so pronounced in some cases and the pain is so great as of itself to indicate operation for the repair of the fistula.

More solid feces show that the discharge comes from the large bowel. Fecal fistulæ of the large bowel are more likely to heal spontaneously than those of the small bowel.

The causes of fecal fistulæ may be specifically divided into the following:

First.—Slipping or sloughing of a ligature used to ligate the stump of the appendix. One or the other of these accidents may occur no matter what method is used to close the wound in the cecum caused by the removal of the appendix, for even if the cecum be repaired by several rows of Lembert sutures, infection of these sutures may cause enough sloughing to open a large fistula in the cecum. This variety of fistula may appear immediately after operation or even ten days or two weeks later.

Second.—Sloughing of an appendix left *in situ* may cause an especially bad fistula, as here there is not only the opening into the bowel, but also the appendix remaining as a foreign body.

Third.—Ulceration into the bowel at the point of adhesion of an inflamed appendix: This is an effort of nature to relieve trouble by drainage of the appendix into the bowel. Removal of the appendix leaves the opening into the bowel, which may be overlooked.

Fourth.—Pressure necrosis of the bowel from

an abscess or from the pressure of a drainage tube or gauze left in at the time of operation.

Fifth.—Necrosis of the bowel from interference with its nutritive blood supply either from pressure on the mesentery or from septic emboli in the mesenteric-veins. Fistula due to this cause are most common in the cecum or ascending colon. This accounts also for many deaths from absorption of septic material.

Sixth.—Tearing the softened bowel in freeing adhesions at the time of operation.

Seventh.—Stripping the serous coat from the bowel in freeing adhesions. This is a very common cause of fistula and one which we must always be upon our guard against. Most of the nutrition of the bowel is derived from the serous coat and stripping this off usually causes a necrosis of the underlying bowel.

The symptoms of fecal fistula are from the nature of the trouble perfectly obvious; there is, however, for the first three or four days before and after a fistula appears usually a very high temperature.

The constitutional effects of a fecal fistula are marked by a progressive loss of flesh and strength and impairment of nutrition, owing to the escape of the contents of the bowel containing the elements required for nutrition, in fistula involving the bowel high up in the small intestine, or from absorption of septic material along the tract.

The proper treatment of an appendiceal fistula depends upon whether the fistula is fecal or non-fecal. If it is non-fecal a careful search should be made for the offending foreign body, as its removal will promptly cause the tract to close. Great care should be used in this search not to make a non-fecal fistula a fecal one by traumatism to the bowel.

A great many appendiceal fistulæ heal spontaneously and an opportunity should always be given nature to achieve this result, and operation only undertaken after this has failed. The only exception to this rule is the case in which the fistula is so far up in the small bowel that the nutrition of the patient is seriously interfered with.

As soon as a fecal fistula appears all drainage should be removed, the tract should not be washed out or packed and only the external surface be cleaned, nutrition should be given in concentrated form and every effort made to make the feces as solid as possible, which favors the healing of the fistula. Purgatives should not be given, but bowels opened by enema, which should not be large enough to regurgitate through the wound.

In non-fecal fistula all that is required in the way of operation is a removal of the offending foreign body, which should be done very thoroughly and the tract packed and allowed to heal by granulation from the bottom. When the fistula or sinus communicates with an unhealed abscess cavity, the mouth of the fistula should be enlarged sufficiently to permit of a thorough cleansing and packing. The urinary fistula, of course, must be freely exposed and the wall of the bladder repaired, best perhaps by Lembert sutures.

Operation for fecal fistula is a much more serious matter, as the danger of peritonitis from an infection of the general peritoneal cavity is very great. This is best avoided by cutting wide of the fistula and working toward it, carefully isolating the infected bowel by sterile gauze.

Fistula of the small bowel usually requires resection, as a simple repair, if the wound be extensive, would probably reduce the caliber of the bowel to a dangerous extent and the bowel involved is often in so unhealthy a condition that sloughing would be likely to follow. My preference in this work is for an end-to-end anastomosis without mechanical appliances.

Fistula of the large bowel may either be resected or repaired, according to the judgment of the operator in each particular case. In some instances in which the cecum has been very much injured it may be wise to do a lateral anastomosis between the colon and the ileum. This anastomosis may be done either with the Murphy button or needle and thread alone, according to the fancy of the operator. Should a resection of the bowel be necessary, my preference is for an end-to-end union with needle and thread alone.

If all the feces have been passed by the fistula the terminal portion of the bowel should be carefully examined to see that it is free from obstruction. Another point that we must be particularly on our guard against is the existence of more than one opening into the bowel, for the overlooking of a second fistula has often rendered unavailing an otherwise brilliant operation.

Drainage after these operations is usually required, although sometimes they can be closed without it. The necessity for drainage depends both upon the amount of inflammatory exudate around the fistulous tract and upon the state of the bowel.

In concluding my remarks I should like to again lay special emphasis on one single fact, the importance and necessity for an earlier recognition of acute appendicitis, and its natural corollary, the prompt institution of surgical interference. If the appendix is removed before any periappendiceal involvement or impairment of the structures contiguous to the diseased appendix has occurred, then it is well-nigh impossible for abscess to occur, except as a result of contamination through a defect in the asepsis of the operative technic. If this is true, then we can avoid the formation of the products of the inflammatory process, prevent invasion of the intestinal walls, make it unnecessary to have such extensive manipulation as is required in the advanced cases, lessen the number of adhesions to be broken up and leave the field of operation in practically as good a condition as it was prior to the attack of appendicitis.

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Associated Medical Defense.—The following plan for defense of members of the New York State Medical Association sued for alleged civil malpractice, not being ready for presentation to the Council and Fellows at their last meeting, has just been handed to us for publication in the *Journal,* in order that all the members of the Council, all the Fellows, and all other members of the Association may have the opportunity to examine the plan leisurely, carefully, and critically before final action is taken thereon. They are requested to communicate their opinions of this plan to the Secretary, 64 Madison avenue.

1. The Council shall, upon request and compliance with the conditions hereinafter provided, assume the defense of suits for alleged malpractice brought against members of this Association.

2. The Council shall not undertake the defense of any suit based upon acts prior to the qualification of the accused as a member of the Association.

3. A member desiring to avail himself of the provisions of this Article shall make application to the Council through the Secretary, shall sign a contract renouncing his own and vesting in the Council sole authority to conduct the defense of said suit or to settle by compromise, and shall make such other agreements as the Council may require.

4. The Council shall thereupon contract with said applicant to take full charge of said suit, to furnish all necessary legal services, to pay all necessary expenses and not to compromise said suit without consent of the accused, but the Council shall not obligate the Association to the payment of any damages awarded by decree of court or upon compromise.

* * *

Report of the Annual Meeting.—We present to our readers in this issue a very complete report of the Eighteenth Annual Meeting of the New York State Medical Association, with the various addresses delivered, reports made and business transacted. We commend it to their careful consideration, for in this way only can an adequate idea be gained of the great progress made during the past year, and that to be looked for in the year to come.

* * *

The New York State Journal of Medicine with this number completes its first volume and we think we may safely say passes out of the experimental stage. The difficulties and discouragements connected with the founding of a new journal on as comprehensive a basis as ours are always very great. Such a journal does not spring forth perfect, but reaches maturity through a process of slow and tedious development, and we think the first publication committee which finished its labors with the annual meeting in October is entitled to great praise not only for setting its ideals high, but also for making very material progress toward this attainment. We trust it will not be considered inappropriate to call attention to the steady and rapid growth of the journal under their charge.

* * *

The small number of original articles in the first few numbers as well as the paucity of advertising bears eloquent testimony to the diffidence of both authors and manufacturers in trusting their products to the untried circulation of a new journal. But as the membership of the State Association, and coincidently the circulation of the Journal, increased by leaps and bounds this diffidence gradually vanished, and at present, is sue for issue, the original articles contributed to it are surpassed in amount by only one or two of our American contemporaries and in quality by none. We trust our readers will make these comparisons for themselves.

If the same relative progress was not made in the department of advertising it was largely because volunteer work of a business character,

however enthusiastic, is always desultory and unreliable.

But when the Association realizing this engaged a business manager who acts in the same capacity for the journal, an immediate change was apparent and our advertising columns in this issue will, we think, bear witness to the wisdom of the plan.

* * *

Now that the journal is firmly established, and that we can command more assistance, we shall make more vigorous efforts to develop the other departments and to make them both useful and interesting to our readers. They should bear in mind that this is their journal, and if it is not conducted according to their wish, it is either because our means do not as yet permit or because they do not make their wishes plain. We desire their suggestions and their criticisms and their help.

* * *

In the coming volume the committee intends to lay special stress on one of the unwritten laws which have guided it in admitting advertisers to our columns. The Association desires to introduce to its members only those houses whose reputation for commercial integrity is such as to guarantee that their products will be what they are represented to be. If one of our members, over-persuaded by clever advertising, buys what he does not need, it is his own fault, but if through our columns he buys something which is not what it was represented to be, the blame may in part be imputed to the committee.

We shall admit to our columns no firm which we cannot recommend to the patronage of our members as honest and reliable, and we shall be under obligations for any evidence to the contrary which may be presented.

* * *

In return our members have certain obligations toward the advertisers in their journal. We enter into no contract to guarantee them sales, but we do contract to give them an audience and it is the duty of Association members to personally make good the promise made in their name.

Not only actual purchases, but every letter of inquiry mentioning THE NEW YORK STATE JOURNAL will be accepted as evidence of the value of our advertising space.

* * *

In this connection let us again call attention to our Bureau of Information at 64 Madison avenue. When our members wish to buy anything of moment, whether it be a piano, a typewriter, stationery, to say nothing of a physician's more ordinary needs, let them bear in mind that the Association is conducting a large and many sided business and can secure better quotations than any individual purchaser. Not only will a consultation with this bureau benefit them, but it will make the publications of the Association more valuable as a business medium. An appreciation of this fact by several members has in one short month enriched our treasury by several hundred dollars.

THE INCOME OF PHYSICIANS.—Recently one of the best known physicians in New York died, a man with a reputation on two continents, who reached the acme of his fame early and had far more than the average years of extreme prosperity. Yet when his estate was computed great surprise was expressed on every hand at finding that he had managed to save during a long and busy life only the earnings of two or three years. The same occurrence can be noted every day. A supposedly prosperous physician dies leaving nothing, while his son gives up his college education and his daughters are compelled to eke out an uncongenial existence as teachers or stenographers.

* * *

No doubt the incomes of most physicians are greatly exaggerated. The average income of the well established city physicians is probably nearer twenty-five hundred than five thousand dollars, while the general average is said to be far below one thousand. But physicians apparently leave much less behind than other men with similar incomes.

* * *

THE BUSINESS TRAINING of physicians is to quit an extent responsible for this. Each one does a vast amount of charity work for which he gets little credit, and this is especially true of the men who have an appearance of prosperity from the relative size of the fees they do collect. He is a poor collector, sending out his accounts at infrequent and irregular intervals and creating the not unnatural impression that he does not need the money. Small wonder then that the family medical bill is paid only after all other reasonable family desires have been satisfied.

* * *

We do not suppose it is possible to suggest any satisfactory fee scale but it is self evident that the scale which taxes the clerk a day's wages for consultation while his employer escapes with the income of a minute is, to say the least, not an equitable one. Neither can the system be defended as businesslike by which the physician treats for nothing a multitude of patients who would willingly pay a small fee for the same service, if the fee were in proportion to their means. And if the fees at one end of the scale are too high those at the other end are certainly too low, as compared to other professions. The man who does not begrudge his pastor a handsome fee for a ten minutes' wedding ceremony, very often thinks the same fee too much for as many hours' work in facilitating the advent of his first born. The business man pays his attorney a large fee for drawing his will in an emergency and then disputes the account of the surgeon who obviated the immediate necessity of that will.

* * *

This inferior business instinct also shows itself in a false professional pride. The laity generally rank a physician according to the location and beauty of his office and the size of his consultation fee, and very many members of the pro-

fession are unable to get rid of the same pernicious idea. As a consequence the aspirant invests his income in an expensive office, charges an exclusive fee, and fritters away hours in idleness rather than accept the smaller sums which he might have. Such policy is good business for a few, but there are not rich patients enough for all and if one adopts the plan he should do it with the clear understanding that the chances are distinctly against him. After all, the ones who lead the busiest, happiest professional lives, who do the most good in the world, and who leave the most behind are the ones who have the least of this false professional pride.

* * *

While it may be good business policy to have an office in an exclusive neighborhood, by it insuring larger fees and a more exclusive practice, the same reasoning does not often apply to a residence in the same neighborhood unless it be amply within one's means. Of course the physician likes to have his family live well and enjoy the society of many of the people who are his patients, but when, on an income of five thousand, he tries to live next to and like the banker on a hundred thousand, he pays a ruinous price.

* * *

Certain portions of our large cities are crowded with physicians attempting just this thing. They have the superficial appearance of prosperity; their families are apparently perfectly secured against want and live in style only justified by quadruple the income. After the funeral it transpires that the utmost endeavor has paid the rent or kept up the interest, while the family living has been made from the renting of furnished rooms.

* * *

Tetanus and Antitoxin.—Our readers are also familiar with the occurrence in St. Louis of a considerable number of cases of tetanus following the injection of diphtheritic Antitoxin manufactured by the municipality.

Much has been made of this affair by the press, both lay and medical, the principal stress being unfortunately laid on the danger of serum treatment rather than the need of greater care in serum manufacture. We have read the widely published report of the city bacteriologist and think that at present there is not evidence enough to justify a positive opinion as to his culpability. But it is evident that whoseever the blame, a serum one step in whose preparation is the handling by "our careful janitor" is not entitled to professional favor.

* * *

Tetanus and Vaccination.—Judging from the information at hand the recent outbreak of tetanus following vaccination at Camden. New Jersey, must be classed as an epidemic of secondary wound infection and not primary infection occurring with the vaccination. It is a well-known fact that the severe cases of tetanus have a short incubation period, less than ten days, while the subacute or chronic cases have almost always an incubation of ten to twenty-one days. This is a very striking feature in the cases with known periods of incubation. In the Camden cases, all of which seem to have been rapidly fatal, the time elapsing between the vaccination and the first appearance of tetanus was from nineteen to twenty-three days. These facts alone are sufficient to prove the secondary character of the infection. It is further stated that where tetanus had developed the vaccination sores were found uncovered and exposed to all forms of dirt or were covered with dirty clothing, such as an old stocking, rags, etc. The vaccinations had thus been exposed to any and every chance infection that dirt may carry. Since the occurrence of these cases the various vaccine lymphs used have been subjected to the most rigid bacteriologic and animal experiments and not a single proof of tetanus germs has been found. With the present care and aseptic methods used in preparing vaccine the chances of tetanus spores being contained in the vaccine is infinitesimal and even if this should occur it would contaminate the whole mass of vaccine and a widespread infection would occur traceable to vaccine from a single source. In the Camden cases the tetanus developed in patients vaccinated with lymph from several sources and the small number of cases developed relative to the large number vaccinated rules out infection from the vaccine used. It cannot be too often repeated that a vaccination is a wound which should be respected and treated as such. Vaccination is a necessity which the protection of the community demands and the many millions of times it has been performed without accident shows its inherent harmlessness. Tetanus germs are widespread in certain localities, the disease being endemic there, and where a number of wounds are uncared for in these localities, tetanus is sure to flare up as an epidemic. Any wound irrespective of its size, origin or position on the body may become the source of tetanus infection. Tetanus is a dirt-born disease and cleanliness is its certain preventative. Vaccination we must have and if this is performed and afterward treated with due regard to cleanliness we need never fear tetanus nor any other wound infection.

* * *

The Treatment of Pneumonia.—At the last meeting of the American Medical Association two papers were read which show that the profession is not at all united on this subject. In the first Dr. De Lancey Rochester argues that pneumonia is a general toxemia with a local disturbance in the lungs; that heart failure occurs not from the interposition in the circulation of a solidified lung, but from myocardial degeneration.

He summarizes his treatment as follows:

"1. The sustaining of the metabolic processes of the individual by the administration of easily digested or predigested foods in small quantities at stated intervals, the administration of large amounts of pure water for eliminative purposes and the administration of oxygen gas by inhala-

tion whenever the absorbing surface of the pulmonary mucosa is involved to such extent as to interfere with proper metabolic oxygenation.

"2. Elimination, (*a*) by the liver and bowel through the vigorous use of calomel and salts: (*b*) by the skin through sweats induced by external heat: (*c*) through withdrawal of blood when indicated by right heart distention.

"3. Stimulation of heart by strychnin, alcohol or ammonium carbonate, and in suitable cases by the subcutaneous injection of normal salt solution.

"4. The local treatment of the lung by leeching, wet cupping or dry cupping as indicated."

In the second paper Dr. W. L. Dickerson advocates the so-called abortive treatment, which he admits is worse than useless after hepatization has begun. He gives from two to five minims of the tincture of Veratrum viride every half hour or hour until the physiological effect is noticed and believes that in many cases of threatened pneumonia he has either aborted the attack or lessened the amount of exudation.

Considering the heart as the essential organ, two methods of treatment could hardly differ more widely. It is interesting to note that in the discussion which followed some took one side and others the other. All agreed that pneumonia is a more fatal disease than it used to be. In fact, we doubt if there has been much change in the mortality since Skoda essayed to prove the uselessness of medicine with his hay tea treatment.

* * *

In this connection we are sorry to see so little mention of a treatment first popularized in this country by Andrew H. Smith, and which seems to many to have a very practical value. It consists in the use of large and frequent doses of carbonate of creosote or of salicylate of sodium, given with the idea of making the pulmonary exudate a poor culture medium for the pneumococcus and thus jugulating the disease.

Welch long ago demonstrated that virulence of the pneumococcus is in inverse ratio to its age and that it only grows at all under the most favorable circumstances. If then by its impregnation with some substance like salicylate of sodium the fresh exudate becomes a poor soil for the specific bacillus, the development of fresh colonies ceases, the toxemia rapidly grows less and the disease terminates by an early crisis or more often by lysis.

* * *

Medical statistics are generally to be accepted and valued only in proportion to their authors' reputation for sanity of judgment, not to say veracity, and this is particularly true of the disease in question.

Reports, however, have come from too many sources of fully developed pneumonia in which the crisis was either abolished or very much hastened by the treatment. Liegel reported seventy-two cases in the unfavorable conditions of a mining town, treated with average daily doses of 120 grains of sodium salicylate without a single death.

Results considerable short of this would please most of us. Best of all this method is perfectly compatible with the abortive treatment of threatened pneumonia, or the stimulant treatment of the fully developed type.

* * *

Kings County Medical Association, November Meeting.—The regular monthly meeting was held Tuesday, November 12th, with the President, Dr. Arrowsmith in the chair. Over fifty members were present. The President introduced Dr. Emil Mayer, President of the Fifth District Branch, who read a brief address in regard to the present and future uses of the State Association. He gave a very encouraging report of the new county organizations throughout the State and urged the members of the Kings County Association to interest themselves in the formation of associations in the other counties of Long Island.

The scientific paper of the evening, entitled "Pelvic Suppuration: Its Conservative Treatment by the General Practitioner," was read by Dr. John O. Polak.

The discussion was opened by Dr. Chas. Jewett, who was followed by Drs. Butler, Judd, Byrne, Poole, Gildersleeve and others. The writer's suggestion that Pryor's vaginal operation for pelvic drainage should be undertaken by the general practitioner was opposed by several of the after-speakers.

In executive session the Association listened to the reading of the sections of the revised charter relating to the election of officers; and to the report of the Treasurer. The President called attention to the fact that nominations must be made at the December meeting and that the question of local dues for the ensuing year must be decided. The usual collation followed the adjournment.

* * *

Duties of Treasurers.—It is perhaps unnecessary to remind the treasurers of the various County Associations that under the by-laws the annual dues are payable on the first day of January of each year, and that, consequently, notices to that effect should be sent to every member before that date has passed.

It is the common experience that a member who has paid his dues is generally much better contented, and for that reason, if for no other, the notice should be issued promptly.

When in addition it is borne in mind that the Association is not only a professional organization but a business one, conducting a large and many-sided business, it becomes evident at once that prompt payment of dues not only saves its financial officers much embarrassment but also enables them to transact the business much more promptly and economically.

* * *

Idaho State Medical Society.—This body has just completed its reorganization on the lines first laid down by our State Association.

Dr. Martin Cavana recently has defended successfully a suit for malpractice which was brought against him, the damages being placed at $20,000.

Such reports only come to the notice of the public when the cases are actually brought to trial, and it is probable that a majority are settled out of court as a matter of economy, whether the claim be just or unjust.

At some future day some practical man may devise a plan by which a medical organization can take this burden from a member, if his case is just, and so prevent a majority of these suits. Till that day each individual must be content with the devout wish that such misfortunes may pass him by.

* * *

MEDICAL EXAMINATION AND MARRIAGE.—Every few months we read that some western State has passed, or contemplates the passage of, a law restricting the marriage of the unfit, forbidding marriage without a medical certificate of health, and denying it entirely to the subjects of syphilis, epilepsy, tuberculosis and gonorrhea. The idea seems to find favor with the profession, but we believe is pernicious in the extreme and would not be countenanced by those who have given thought to more than one side of the question. Contrary to a number of recent writers, we believe it is good public policy to make marriage as easy as possible. In countries where marriage has been made difficult, owing to ceremonial expenses, or impossible because of army service, a very large proportion of the unions are merely tentative and temporary, while the women are without any protection, legal or religious, and may be deserted with their children without notice.

The attraction of the sexes is a natural and strong one, and if denied legitimate expression will find illegitimate channels.

While we may admit the right of society to forbid marriage of idiots or the mentally diseased, we contend that the syphilitic and tubercular have a right to marry; they have a right to what happiness they can get out of a diseased life, and to forbid this is none the less tyranny because exercised in the name of society. To be sure they have a responsibility for their offspring, but it is not to man. The theory takes no account of the fact that the sound body does not by any means always mean the sound mind, and that such a law would deprive society of some of its brightest minds. Education is the only right way of limiting the marriages of the unfit. Show every man and woman, if you will, the dangers of disease, but if they persist do not forbid marriage lest a rebellion against the social tyranny drive them to a course which is worse, both for them and theirs and for society.

* * *

THE BUSINESS OUTLOOK IN MEDICAL PRACTICE.—The ratio of physicians to total population in the United States is rather more than 1 in 600. The 120,000 physicians are dying at the rate of about 25 to 1,000. To make good the deficit of physicians by death, about 3,006 should be graduated annually. The population is also increasing at the rate of about 1,300,000 annually, and this increase could accommodate some 2,100 additional graduates in medicine annually. In 1899, according to statistics of the Bureau of Education, all of the medical schools of the country graduated not quite 5,000. Thus, statistically considered, there is a very slight favorable tendency toward the reduction of a tremendously overcrowded profession.

On the other hand, it should be remembered that as a country increases in density of population, it can support fewer physicians. For instance, European countries with a ratio of approximately 1 to 2,000 of physicians to population, support their medical professions even more poorly than does the United States. Moreover, sanitary science and medical and surgical skill, as well as more wholesome modes of living, are markedly reducing the work of the profession. The well known fact that a fifth or sixth of graduates do not practise is little comfort, as this has always been the case, and it simply denotes the unfavorable conditions against which the medical man has to contend. Thus it is the urgent duty of every physician, by fair argument and reasonable means, to create a sentiment against the entrance of young men upon medical studies, unless they are especially fitted for their pursuit.—*Philadelphia Medical Journal.*

* * *

THE MEDICAL PRACTICE ACTS of many of our States are so full of exceptions that any ignoramus may really practise medicine although he has no knowledge whatever of the science or art. Thus, opticians, osteopaths, christian scientists, hydrotherapeutists, etc., are excepted from the clause that makes practice illegal. One State goes so far as to make the giving of drugs the sole test of the physician's calling. Thus even the surgeon is not a practitioner. Thus also one who does not give drugs may legally do everything else in medical malpractice. One would like to ask these Dogberries for a definition of a "drug," and if withholding a "drug" when it would save life is not a criminal malpractice.—*American Medicine.*

* * *

LEGAL RIGHTS OF PHYSICIANS.—However strong the moral law may be in such instances, and however we may be inclined to criticize a physician for declining his services in times of great emergency, the fact remains that he is a free agent, and can no more be compelled to attend a patient than a lawyer can be compelled to take a certain case. Furtherfore, the moment compulsion comes in from without, the whole significance of a physician's work is lost. If his sense of duty is not sufficiently strong to urge him to self-sacrifice, it is perfectly apparent that he can not be forced into paths of virtue by legal enactment. We need more cases to determine the exact relation of the physician to his patient in the eye of the law. In the meantime it is

gratifying to know that in Indiana there need be no further question regarding the legal independence of the physician, however reprehensible he may be morally.—*American Medicine.*

* * *

Roentgen Rays in the Treatment of Diseases of the Skin.—(W. A. Pusey, *J. A. M. A.*, September 28, 1901.)—An analysis of clinical reports and of the reports of microscopical studies of tissues affected by X-rays indicates broadly that this method of treatment may be of use in the following conditions: (1) In conditions where it is desired to produce an atrophy or partial atrophy of some appendages of the skin, as in hypertrichosis. (2) In mycotic diseases, such as tinea tonsurans, favus and sycosis. (3) In chronic inflammatory affections, such as indurated patches of eczema and lupus erythematosus, where the purpose is to stimulate the tissues and cause absorption of inflammatory products. (4) In certain specific affections, such as lupus and epithelioma, where the purpose is to cause the destruction of tissues of low vitality. The author believes that the effects of the X-rays are due to the peculiar stimulation of the tissues which they cause, and not to any strong bactericidal effects in the rays themselves. The essential factor is something in the rays themselves, and not, as has been suggested some incident of their production, like ozone, or brush discharges, or induced electrical currents in the tissues or parts of platinum carried off from the anticathod. Some excellent photographs accompany the article of a case of lupus and one of epithelioma treated by the rays, which show encouraging results.—*Inter-state Medical Journal.*

* * *

Bovine Tuberculosis.—1. The tubercle bacillus from bovine sources has in culture fairly constant and persistent peculiarities of growth and morphology by which it may tentatively be differentiated from that ordinarily found in man.

2. Cultures from the two sources differ markedly in pathogenic power, affording further means of differentiation, the bovine bacillus being very much more active than the human for all species of experimental animals tested, with the possible exception of swine, which are highly susceptible to both.

3. Tuberculous material from cattle and from man corresponds closely in comparative pathogenic power to pure cultures of the tubercle bacillus from the two sources, from all animals tested.

4. It is a fair assumption, from the evidence at hand, and in the absence of evidence to the contrary, that the bovine tubercle bacillus has a high degree of pathogenic power for man also, which is especially manifest in the early years of life.—M. P. Ravenel, in *Lancet.*

* * *

Mercury is an antisyphilitic remedy, not by acting as a direct and chemical antidote to the syphilitic poison, because up to the present time we have no definite knowledge as to the exact character of the syphilitic poison, hence the absurdity of saying that a known quantity antidotes directly an unknown substance. On the other hand, we are justified in the assumption that the mercurials, which are known to augment the general glandular and nutritive activity of the system, raise the physiological tone to such a point that by its own inherent physiological action the system is enabled to rid itself of the syphilitic infection, whatever that may be, in the same manner that all toxic products are expelled from the system.

Following this method of action for the mercurials, ptyalism, and all that class of symptoms produced by mercury and its compounds can be rationally explained. The same reasoning also shows clearly that the size of the single doses has little if anything to do in determining the liability to mercurial salivation. If, from any cause, the hepatic cells are too inactive, and thus fail to take up the mercurial from the blood as it flows past them, and fail to respond to the pressure of the mercurial salt, and to eliminate it through the bile ducts as speedily as it reaches the hepatic gland, then the mercurial will pass over into the general circulation, where finally the salivary glands will attempt to perform the work of eliminating that should have been accomplished by the liver cells. W. H. Porter, in *Post-Graduate.*

* * *

Phimosis.—I would like to say a few words about phimosis in infants and its treatment. I think there is somewhat of a misconception in the minds of many about the significance of phimosis. We have been taught that at birth the male child should be examined by the physician, and if the prepuce is adherent he should circumcise the child. That would mean that all male children would be circumcised for that is the condition of all at birth. After birth it often persists and may remain so for many months. It is really the natural condition. If the adhesions persist and the opening is small you may get some disturbance that requires a physician.

This boy had the "night cries" and was restless at night. This is the pin-head kind. Sometimes we have to take little artery forceps and stretch the prepuce before forcing it back over the glands. That is a very simple operation and is much better, in my opinion, than circumcision. Nature certainly intended that this delicate part should be protected, otherwise there would have been no prepuce at all. This operation allows drainage and cleanliness. There is further retraction after this. If there is redundant prepuce it is better to take some of it off. But the way the average surgeon circumcises is to take it all off, leaving the part exposed to the clothing, etc. I have done this operation many times. I put a probe in under the adhesions and simply break them up. I get under the corona and free it completely. I have freed the adhesions and done everything that circumcision does.

The only time I believe in circumcision is when the prepuce is redundant. A drop of urine will

decompose and irritate the skin, causing eczema. Sometimes smegma collects.

I think the prepuce has been worked for more than it is worth in reflex troubles. Convulsions may sometimes be attributed to hard smegma back of the corona. When the prepuce is stretched, as you have seen me do in this case, the convulsions cease. If you do circumcise, always leave some of the prepuce there; take off too little rather than too much.—H. D. CHAPIN, in *Postgraduate.*

* * *

INSURANCE COMPANIES AND TUBERCULOSIS.—According to the *Post,* a movement to instruct policy-holders in sanitary habits has been started in some of the large insurance companies. Frederick Hoffman, of the Prudential, points out that companies could distribute among policy-holders leaflets containing "plainly-worded advice as to the prevention of consumption, and the cure of the disease in its very early stages." He would not reject absolutely apparently impaired risks, but postpone them until the effect of proper treatment was tried. The insurance companies would not only be benefited by such a course, but the mortality from consumption could be materially lessened.—*American Medicine.*

* * *

LOCOMOTOR ATAXIA.—Dr. S. Leduc, professor of medicine in the School of Medicine, at Nantes (*Gazette Médicale de Nantes*), basing his practice on the theory that the syphilitic origin of locomotor ataxia is scarcely contested to-day, for a past history of syphilis is found in nearly all ataxics, has injected daily into the muscles of the patient's thigh 2 grams—about 30 minims—of the following solution:

℞ Corrosive sublimate
Recrystallized sod. chlor.... aa gr. iii
Aq. dest. ..... ♏ 300

M. It is said that amelioration was at once manifest. Treatment was continued for periods of three weeks, followed by remissions of fifteen days. Six years from the commencement of the treatment the patient has lost the knee-jerk, and, although some lightning pains persist, he walks well, even at night, and leads a very active life.—*N. Y. Med. Jour.*

* * *

THE DOCTOR'S FEE.—What fee a doctor should charge has always been an unsettled question. There is no limit to the amount as to what a physician or surgeon may charge. There must be a minimum fee established and abided by. John B. Roberts, in the *Philadelphia Medical Journal,* says:

There is, it seems to me, one just plan by which fees should be regulated. It is that the doctor should have an estimate of the value of his services, operative or otherwise, fixed in his mind. The amount should be based on his experience and skill. It should not be so low as to coax away unjustly the patients of the younger and less experienced men of the profession. This fee should be lessened when the financial position of the patient would make its payment a serious burden.

ATONIC DYSPEPSIA.

℞ Resorcin 3i
Acid. hydrochlor., dil.....3i
Tinct. nucis vom.....3ij
Elix. lactopept., ad.....3ij

M. Sig. Teaspoonful in wineglass of water before each meal.

* * *

THE "NORMAL SALT SOLUTION."—There is some variation in the formulæ given by the different writers. Dr. Charles A. L. Reed, in his new "Text-Book of Gynecology," remarks that Locke has suggested the following formula and reported favorably upon it:

℞ Calcium chloride ..... 3¾ gr.
Potassium chloride ..... 1½ gr.
Sodium chloride ..... 2½ dr.
Sterilized, distilled, or tap water, enough to make .... 1 qt.

M. The solution may be injected subcutaneously into the intestine, or into a vein.—*N. Y. Med Jour.*

* * *

A SPECIAL MEETING OF FIFTH DISTRICT BRANCH was held at Newburgh on Wednesday, November 20, at the Palatine Hotel. Over one hundred were present at the meeting, and important papers presented and discussed were fully appreciated by all present. This was the first of a proposed series of special meetings to be held throughout the District during the winter season for the purpose of social intercourse as well as the discussion of important technical questions. Twenty-six members of the New York and Kings County Associations went to Newburgh in a special car over the West Shore Railroad, being joined by physicians at West Nyack and at Haverstraw. The party was received by a delegation headed by Dr. Charles E. Townsend of Newburgh and escorted to the hotel, where an enjoyable buffet lunch was served in the dinner room.

Dr. Emil Mayer, President of the Fifth District Branch, called the meeting to order at 2.15 and in a very felicitous address touched upon the rapid growth of the State Association under its present form of government. Not a few of those present were guests of the District Branch, and these gentlemen were urged by Dr. Mayer to acquaint themselves with the plans and purposes of the organization and to join the County Association in their vicinity. Dr. Mayer laid particular emphasis upon the very rapid increase in numbers which came as a result of the change in the administrative functions of the State Association.

Dr. John B. Deaver's paper on Appendicitis was of especial interest. Dr. Deaver laid stress upon the vital necessity of prompt and careful diagnosis, and, if indications warranted, an im-

mediate surgical operation. Several very interesting cases from personal observation were cited by Dr. Deaver. In closing the doctor remarked, "It has been said that a living man with an appendix is better than a dead man without an appendix. It is also true that a living man without an appendix is better than a dead man with an appendix." The discussion which followed was lead by Dr. Parker Syms, who endorsed the views of Dr. Deaver, as did also Dr. L. W. Hotchkiss and Dr. Irving S. Haynes.

Dr. E. D. Ferguson of Troy, while agreeing with Dr. Deaver as to the necessity of prompt and careful diagnosis, did not approve of the removal of the appendix, unless the same was found to be diseased. In reply to Dr. Ferguson, Dr. Deaver insisted that so far as his personal observation was concerned the removal of the appendix seemed advisable and indeed necessary in the great majority of cases.

The paper of Dr. Chas. E. Quimby on the "Etiology and Treatment of Bright's Disease," was listened to with marked interest throughout. The doctor defined various forms of Bright's Disease and made reference to indications. "Chronic Bright's Disease" continued Dr. Quimby, "is a result of perverted functions, and these conditions should be recognized and promptly removed as far as this is possible."

Dr. John Winter Brannan lead in the discussion which followed. Owing to the fact that Dr. W. R. Pryor was compelled to leave the meeting at an early hour his paper on the "Clinical Diagnosis of Cancer of the Uterus at its beginning," was read by title only, and general discussion was again taken up on the subject of Dr. Quimby's paper.

After a short executive session the visiting members of the association were escorted to Washington's Headquarters by Dr. Connor and the gentlemen of the reception committee. After a brief tour of this historic and beautiful spot on the banks of the Hudson the delegates took their special car for New York.

Several applications for membership were received during the session. Every one who attended seemed well satisfied with the results of the meeting and the special opportunities afforded, both from the professional and social standpoint, to come more fully in touch with the important and far-reaching work which has been undertaken by the New York State Medical Ass'n in the interest of public health and for the benefit of the profession at large.

* * *

Home Exercise.—The moderate and regular use of the punching bag as a means of acquiring and maintaining physical strength and suppleness of muscle is now being recommended by many practitioners. While it has long been an important adjunct to the properly equipped gymnasium, it is but recently that the punching bag has come into general popularity. This is due largely to the fact that several popular priced, practical punching bags are now on the market which are especially adapted to home use.

These bags are simple yet durable in construction, far less noisy than the old style with "sounding board" attachments, and can be put up readily on any convenient door jamb or window casing. While there are many helpful and healthful forms of exercisers especially adapted for use in the home, the punching bag seems to be coming more rapidly to the fore in popularity than some of its older and more familiar rivals. Not only do many physicians endorse the use of punching bags among their patients, but they are not infrequently to be found in daily service in the residences of the doctors themselves.

Acne.

℞ Resorcin
Zinc sulph.
Potass. sulphuret., aa.....3i
Aq. rosæ, ad.....℥iv
M. Sig. Apply several times a day.

Cystitis.

℞ Ac. benzoic 3iiss
Sod. biborat 3v
Ol. gaultheriæ .....♏xv
Aq., ad .....℥ij
M. Sig. Teaspoonful well diluted after meals.

Book Reviews.

The Physician's Visiting List for 1902. Fifty-first year of its publication. By P. Blakiston's Son & Co., Philadelphia.

There is nothing new to be said of this convenient little book, but the fact that it has made its appearance regularly during the last fifty years would certainly indicate that it supplies something in a popular form for which there is a steady demand.

The book is arranged for from twenty-five to one hundred patients per week, and contains space for the greater part of the physician's professional bookkeeping, and also many condensed tables which it is often convenient for him to have in his pocket.

The Physician's Pocket Account Book. Arranged by J. J. Taylor, M.D., and published by the Medical Council, Philadelphia, Pa.

We do not suppose physicians who have already been for several years using one of the many professional visiting lists will take much interest in new candidates for their favor. For the recent graduate, however, it is well worth while to make a selection in the beginning which shall be satisfactory in years to come, and so make his system of accounts uniform and continuous.

In selecting such a system it is a decided advantage to choose one which shall be recognized in law as a competent book of original entry, and therefore admissible in court. Among other advantages the publishers of this book claim that it will stand every legal test. It seems to us very conveniently arranged, and we advise our readers in trying to satisfy their individual needs to look it over.

Correspondence.

THE STATE ASSOCIATION MEETING.[1]

My Dear Wife: I want to let you know that I arrived in the big city of New York safe and sound. But, as you know, the express train was very late and I had to take the "long milk" train to get in. As a result it was pretty nearly midnight, but I found my way around easy enough and spent a very pleasant night in a nice little hotel not far away from the meeting-place.

You remember when, last summer, I concluded to go into the New York State Association and was told of all the good things that might come to me if I joined, I felt as if I had been a little hasty in putting up the ten dollars, and that all the promises that were made were just a little bit too good to be true, so I made up my mind that I would just come down here and see for myself, and find out if things were so or if I had been buncoed.

You will be glad to know that the shirts were not crumpled a bit, and that I got the creases out of my swallow-tail without any trouble.

Well, as soon as I got there, there were half a dozen pretty presentable young fellows about, and pretty soon somebody got my name and address and handed me a badge like the rest of them wore, which I have been sporting on the lapel of my coat ever since. I was introduced to a lot of men whom I had read about and who do a powerful lot of writing and lecturing here, and every one of them was glad to see me and made me very welcome. The meeting room was comfortably filled, and not a few of the women doctors were present to listen to the papers.

What surprised me in all this was that men who we know to be very busy men can leave their homes, like Boston, Philadelphia and other places, and give up their business just for the sake of reading a paper before another medical society in a distant city, and it showed to me clearly and conclusively that their hearts were in it and that they did for the love of their fellow-men the best that they could do and did things that they would hesitate about doing for the mere sake of the money in it.

The papers read were all very interesting, the debates close to the point, and promptly at 1 o'clock each day the meeting adjourned, there was a roll of the folding doors and a table all spread was before us with lots of good dishes all about. There was plenty to eat and a barrel of brown stuff which a fellow called "peel" and which was served with plenty of froth in big brown jugs. I didn't know what the young fellow meant when he asked me if I would have a "stein of peel," but I took it just the same and it tasted somewhat different and felt different than our cider at home. Then they had cigars and I met a lot of men that I have not seen for a good many years and we had a chat about old times.

I can say to you that every single thing that we were told was straight goods, and I never saw such interest in anything medical in all my life. Why, when they talked about the American Medical Association if anybody had his hat on he would have taken it off, and when they talked about the growth of their own organization,—how a year ago they only had two counties and now had twenty-two, and then pointed out to us the men who were the chairmen of the District Branches who had done all this work—I could see that their loyalty to the cause was very great indeed.

We followed the programme closely and a very large proportion of the papers was read.

On the evening of the second day we had a banquet, and you just bet my swallow-tail was right in it because they had a lot of ladies there, and the next time I come, and I hope to next year, you must come along. The dinner was awfully good—somebody counted twenty-four different things to eat, and they gave us a kind of wine to drink that tasted like "your foot's asleep." After that the President of the Association made a short address and then called upon the others who were down to respond to toasts to say their say. It was all very interesting and doubly so to me because I found everybody so sincere. It was 12 o'clock before we started for our temporary homes.

This Thursday afternoon we completed our session and the newly elected officers were installed. Those who had worked so hard for the success of this splendidly attended meeting were thanked by a unanimous vote, and that is all the reward they get, except their own conscience, which tells them that they have done their duty to the very best of their ability and to the satisfaction and gratification of their associates.

An announcement was made that they were going to have another meeting at Newburg, of the Fifth District Branch, lasting one afternoon, and with the announcement the statement was made that this is but the beginning of several similar meetings throughout the State. Who knows, they might come very near home some time, and if they do and they bring any of those New York and Brooklyn fellows along we certainly will turn around and show them what country hospitality is.

I would not have to write this all to you, and would prefer to tell it to you, but you know I have to go down Jersey Coast and I wanted to let you hear from me before leaving for there.

I hope that Joe exercises the horses and that Brown keeps a few of the folks alive for me until I get back.

With love to you and the little ones,

Your fond husband,

Jim.

[1] This private letter has accidentally fallen into the hands of the Publication Committee. It is so frank and guileless that it deserves a better fate than the waste basket. With humble apologies to the writer for the liberty we are taking it is presented to our readers.

Deaths.

Dr. John D. Dunning, Buffalo, N. Y., died Oct. 27, 1901.

Dr. Stuart Eldridge, Yokohama, Japan, died Nov. 18, 1901.

Dr. Charles H. Hamilton, Newton, N. J., died Nov. 20, 1901.

Dr. Moritz C. Hermann, 568 Park avenue, New York, died Oct. 24, 1901.

Dr. William M. Hudson, Hartford, Conn., died Oct. 30, 1901.

Dr. Calvin Edward Hull, Brooklyn, N. Y., died Nov. 13, 1901.

Dr. Charles M. Spalter, 57 West 82nd street, New York, died Nov. 6, 1901.

Dr. George F. Swan, 502 West 149th street, New York, died Nov. 5, 1901.

Dr. Harvey P. Tolman, East Onondaga, N. Y., died Nov. 10, 1901.

Dr. Gerrit D. Van Vranken, Hempstead, N. Y., died Nov. 1, 1901.

Dr. Jarvis S. Wight, 30 Schermerhorn street, Brooklyn, N. Y., died Nov. 16, 1901.

Dr. C. Purcell Woodward, New Egypt, N. J., died Nov. 4, 1901.

Asthma.

℞ Ext. grindel. robust.....3ij
Potass. iodid 3i
Spts. ether. co.....3ij
Syr. pruni virg., ad.....℥ij
M. Sig. Teaspoonful in water after meals.

EIGHTEENTH ANNUAL MEETING OF THE NEW YORK STATE MEDICAL ASSOCIATION OCTOBER 21-24, 1901.

First Day.—The Council and Fellows met in Hosack Hall of the New York Academy of Medicine. The meeting was called to order by the president, Dr. John A. Wyeth, of New York, at 2 P. M.

The roll was then called by the Secretary.

Dr. C. A. Wall, Buffalo, moved that that part of the by-laws having reference to the delegates to the American Medical Association be placed in abeyance for this meeting, and that the Committee on Nominations be instructed to bring in the names of five delegates and five alternates to the American Medical Association, which in the order presented shall be the delegates and alternates to said association. Seconded and carried unanimously.

The President ruled that unanimous consent had been given.

Dr. John A. Wyeth then delivered the

PRESIDENT'S ADDRESS.

It is required at this period of our session that the president report on the needs of the association. Our first great need is an increase of membership, and this implies an earnest co-operation of all of the present members in the effort to impress the general profession with the urgent necessity for a thorough organization of the regular practitioners of this State into one large, yet compact, working body, which, in order to reap the fullest advantages of organization must be in close affiliation with the one great national society, the American Medical Association. All other interests should be subordinated to this essential feature.

The physicians of no State in our Union, holding in mind the best interests and the highest and noblest aims of our profession, can afford to disregard the benefits to be derived, not only by the individual practitioners, but by the profession at large, and the greater public as well, by a close co-operation with the American Medical Association, which has justly been called "the only representative and national association of America." To accomplish this there need be but a spread of the contagion of enthusiasm and unselfish devotion which has actuated a small minority of the New York State Association within the last two years. To the men who had the foresight to perceive the great advantages to be derived from a State charter, which would give this Association at once an unassailable legal position, and make it in the State courts a representative of the medical profession in upholding the laws relating to the practice of medicine, and who had the ability and tact to accomplish the scheme of reorganization which was unanimously adopted at our meeting a year ago, we owe a debt of grateful recognition. But carry this enthusiasm to even one-half of the present membership, and between now and the meeting of the American Medical Association at Saratoga in June, 1902, we will have upon the rolls of the State Association, and consequently as members of the national body, a very large majority of the best workers in the profession in the Empire State.

In October, 1901, the New York State Medical Association had affiliated organizations in only three counties of this State. Although it had members in most counties, these were without organization, without fixed purpose, and practically useless. Under the able leadership of our secretary, and the president of the Fifth District Branch, in addition to the New York County Medical Association, of which Dr. Parker Syms is president, and the Kings County Medical Association, over which Dr. Hubert Arrowsmith presides, there have been organized: (1) The Duchess County Medical Association, of which Dr. Irving D. LeRoy of Pleasant Valley is president; (2) the Orange County Medical Association, of which Dr. Milton C. Conner of Middletown is president; (3) the Sullivan County Medical Association, of which Dr. C. S. Payne of Liberty is president; (4) the Ulster County Medical Association, of which Dr. Frederick Kühne of Kingston is president; (5) the Westchester County Medical Association, of which Dr. N. J. Sands of Portchester is president, and (6) the Rockland County Medical Association, with Dr. Garrett F. Blauvelt of Nyack, president.

In the First District Branch, of which Dr. Charles B. Tefft of Utica is president, there have been organized: (7) The Herkimer County Medical Association, of which Dr. C. H. Glidden of Little Falls is president; and (8) the Oneida County Medical Association, of which Dr. W. B. Reid of Rome is president.

In the Second District Branch, under the presidency of Dr. E. D. Ferguson of Troy, there have been organized: (9) The Rensselaer County Medical Association, with Dr. C. S. Allen of Rensselaer, president; (10) the Saratoga County Medical Association, with Dr. F. J. Sherman of Balston Spa, president; (11) the Warren County Medical Association, with Dr. G. R. Martine of Glens Falls, president; and (12) the Columbia County Medical Association, with Dr. Thomas Wilson of Hudson, president.

In the Third District Branch, of which the president is Dr. Elias Lester of Seneca Falls, the following have been organized: (13) The Broome County Medical Association, with Dr. Le Roy D. Farnham of Binghamton, president; (14) the Cortland County Medical Association, with Dr. H. S. Braman of Homer, president; and (15) the Onondaga County Medical Association, with Dr. H. D. Didama of Syracuse, president.

In the Fourth District Branch, under the presidency of Dr. Charles A. Wall of Buffalo, there have been organized: (16) The Chautauqua County Medical Association, with Dr. Thomas D. Strong of Westfield, president; (17)

the Erie County Medical Association, with Dr. DeLancey Rochester of Buffalo, president; (18) the Genesee County Medical Association, with Dr. Morris W. Townsend of Bergen, president; and (19) the Wyoming County Medical Association, with Dr. Carl C. Mann of Warsaw, president.

A most instructive and largely attended meeting of the Fourth District Branch was held at Buffalo in May. The scientific work was of high character, and this, with the enthusiasm of our members in the western portion of the State, has borne rich fruit in attracting new members to the Association. In one county, where two years ago we had only five members, there is now a working association of thirty-four. Results equally encouraging have been attained in the eastern district, and when our members of the First, Second and Third Districts come up to the measure of the Fourth and Fifth, we will quadruple the membership of the State Association, and with this increase our influence in the national body.

A great deal of work and tact and unselfish surrender of time are essential to success, but personal sacrifices must be made in all such movements. One who cannot give something of time and money to the betterment of the general profession is not worthy of belonging to it. It is very essential that every member should live strictly up to the obligations which his membership implies. The prompt payment of the annual tax when due would save very great expense to the Association, and labor and annoyance to the officers, and surely it is just as easy to pay one time as another. Every county in which no association exists at this date should be organized, and the most strenuous efforts should be made to complete this work before the meeting of the National Association at Saratoga on the 10th of June, 1902.

In the county associations already formed, the regular meeting should be made of such scientific and social interest as to compel a full attendance, and while the scientific work should be the chief feature of these meetings, the social functions should not be neglected. The greatest possible good may be expected by bringing together physicians practising in localities more or less separated, and having them become personally well acquainted.

The families of physicians should also not be overlooked in these reunions. This is one of the attractive features of the American Medical Association's meetings, and our State Association has, for the first time, at this session, invited to the annual dinner the wives and daughters and lady friends of our members.

It is a matter of congratulation that at the meeting of the American Medical Association in St. Paul the delegation from the New York State Medical Association were the recipients of marked consideration from the national body. The plan of reorganization adopted by the national association was not fully known to the delegation until it arrived in St. Paul. The Committee on Reorganization asked for a consultation with the New York delegation, which was held on the evening before the presentation of the resolution for adoption. The able chairman of that committee was present to explain in detail the scheme, and with the approbation of his colleagues, accepted and adopted the modification which the delegation from the State of New York suggested. The general plan of reorganization of the National Association was analagous to that already adopted by the New York State Association, and it was left to our delegates to move the adoption of the plan of reorganization, which was unanimously carried. Equal unanimity characterized the acquiescence in the request of our delegation that the next meeting of the national association be held at Saratoga Springs in June, 1902. You will be gratified to learn that from many States and Territories have come requests for copies of our plan of reorganization, and that it is being not only received with favor, but adopted.

The business of the association has grown to such an extent that the officers are no longer able to give the close personal attention to its affairs which its interests demand. Our secretary, who has worked so assiduously for its advancement, has done so at a very great personal loss to himself, since he has felt it his conscientious duty to devote the greater portion of the time which formerly was given to his private practice to the compilation of the Directory; to the work required upon the *Journal* of the association; to the organization of minor associations; to the correspondence and the innumerable minor details of the State Association. For this he receives no compensation whatever, and the Council has found it necessary to employ an agent who will devote his entire time to the business affairs, and to the details of the association under the direction of its officers.

After many years of patient waiting and of earnest labor, at times under conditions of very great discouragement, the New York State Medical Association finds itself on the high road to the success to which its founders aspired. We have but one end in view, the good of the medical profession, which implies the maintenance of the high standard of medical education which already prevails, the protection of the public in all matters relating to the health of the community, and the increase of the influence of the profession by thorough organization of all of the regular practitioners of the State into one body of workers, closely in affiliation with the American Medical Association.

The Secretary, Dr. F. H. Wiggin, presented the

ANNUAL REPORT OF THE COUNCIL.

The year which has elapsed since the last an-

nual meeting of our Association has been a most eventful one, and it may be that the future history of our organization will prove it to have been the most so of any.

The previous year ended, as you know, with the adoption of the charter granted to us by the Legislature on April 14th of the same year and the adoption of new by-laws, which action practically wiped out the old New York State Medical Association and formed the present one, consisting of component county associations.

This action on the part of your predecessors was so favorably received and considered by the members of our profession in this State that it has resulted not only in a very large increase in our membership but also in the formation of a large number of county organizations.

This is readily shown by the fact that when we last met there were only four of these county associations which had fulfilled all the conditions necessary to entitle them to become integral parts of our State Association, although two others had passed resolutions accepting the invitation of the Council to represent us in their counties. Since then these two organizations have fulfilled all the necessary requirements, and in addition there have been formed sixteen other similar organizations. Therefore our State body of to-day is composed of twenty-two organizations, which have the right to send their representatives here for the purpose of electing officers and transacting the business of the New York State Medical Association.

Communications have been received from other counties in the State, which indicate that in the near future many other of these local associations will be formed, and it seems reasonable to predict that at the time of our next annual meeting we will have an organization in nearly every county in the State.

The effect on our membership of this new and popular order of things has been marked, as is shown by the statement that the total number of our members in good standing at the date of our last annual meeting, October 15th, 1900, was six hundred and fifteen, whereas to-day we have on our roll of members over fourteen hundred, an increase amounting to eight hundred, and it is probable that when the reports of all the treasurers of the county and district branch associations have been received the total membership will be considerably increased over the figures here given. It would greatly facilitate the work of the officers of the Association if the treasurers of local associations would remit monies collected by them to the treasurer of the State Association on the first of the month succeeding its receipt.

This increase in membership is a matter of great importance to our organization, as the American Medical Association, whose representative we are, has seen fit to reorganize on similar lines to those adopted by your Association, allowing each State body in affiliation with it to send one delegate for every five hundred or fraction thereof of its membership, which would entitle us on our present membership basis to three representatives in the House of Delegates, which will be the executive body of the National Association, just as you gentlemen are of the State Association.

It may not be without interest to you to know that many of the other State organizations in affiliation with the American Medical Association have already followed or are getting ready to follow our example and reorganize their associations on the same lines as ours, and it is fair to assume that the result of the work of the Association during the last year will eventually result in the adoption of a similar plan of organization by all of the State associations affiliating with the American Medical Association, the result of which will sooner or later be the unification of the medical profession of the United States.

The total amount of money received by the State treasurer during the past year, from all sources, to October 1st was $12,851.56. The total amount of disbursements was $10,015.40, which leaves a balance on hand on October 1st of $2,836.16, and the amount of all invested funds of the Association to date are $3,468.24.

District Branches.—The First, Third and Fifth District Branch Associations held special meetings, in addition to their annual meetings, for the purpose of reorganizing in accordance with the charter and new by-laws of our State Association, the 2nd and 4th Branch Associations taking similar action at their annual meetings.

The reports of the 2nd, 4th and 5th District Branch Associations are appended to this report, these being the only ones which have been received, notwithstanding the fact that the other secretaries have been communicated with and their attention called to their duties as expressed in Article VII., Section 6.

It is well to call attention to the fact that omissions of this character, to comply with the by-laws, entail greatly increased labor on the part of the State officers and also result in the confusion of records and in unnecessary expenditures of money for postage and clerical help as well as a waste of valuable time on the part of the State officers which could be used to better advantage for the Association in other directions.

Meetings of the Council.—The Council held during the year seven meetings. Two others were called for the transaction of important business but failed because a quorum could not be obtained.

The first meeting of the Council was held on October 18th. Thirteen members were present. Dr. Ogden C. Ludlow was appointed assistant secretary. On account of a misunderstanding on the part of Dr. M. J. Wilson, concerning the initiation fee and dues of the Association at the time he joined it, in 1898, the Council moved to remit

his initiation fee. It was decided that Dr. J. E. Weeks be restored to membership in the association. It was decided that the executive committees of district branch associations might vote by polling their membership by mail. It was ordered that the approval of the president and secretary be appended to all bills of $50.00 and over before their transmission to the treasurer for payment, and that a commission of 15 per cent. be paid the attorney on all collections made by him in behalf of the Association. It was ordered that the names of all those in arrears for State Association dues prior to 1900 should be dropped from the roll of membership on January 1, 1901. The members of the Council residing in the 5th District Branch were authorized to act as the Executive Committee of the Council. Julius C. Bierwirth and James Hawley Burtenshaw were appointed a committee to audit the treasurer's report. The chairman of the Standing Committees was empowered to designate the members of their committees. James Taylor Lewis was appointed attorney of the Association and W. A. Purrington counsel. It was decided to publish a monthly journal. The secretary was requested to present a bill of $500 to the Council to partially reimburse him for expenses incurred in behalf of the Association during 1900. One thousand dollars was appropriated for the expenses of the secretary's office during the current year. The secretary was appointed managing editor and James Hawley Burtenshaw literary editor of the NEW YORK STATE JOURNAL OF MEDICINE.

At the meeting of the Council held on November 16th, seven members were present. It was voted that the list of members of the Association should be published in Volume III. of the Medical Directory of New York, New Jersey and Connecticut. The Committee on Legislation was authorized to procure copies of all medical bills which were presented to the Legislature. The chairman of the Committee on Publication was authorized to write to the publishers of the medical journals for the purpose of obtaining their consent to the publication monthly in the Association's journal of such of the papers read before the Association as had appeared in their publications. The editors of the journal were given power to decide on the advertising matter which should appear in it. It was ordered that the charter and by-laws be printed.

At the meeting of the Council held on February 15th, there were seven members present. The by-laws adopted by the Kings and Erie County Associations were approved, after it had been decided that the six months' limit that a member was allowed to pay his dues should be considered by the Council as dating from the first of January of each year. It was decided to issue a yearly certificate of membership on the payment of their dues by the members. It was decided that the members of the Association serving in the army and navy and temporarily absent should be considered as non-resident members during that absence. The by-laws adopted by the New York County Medical Association were approved. The secretary informed the Council that copies of the NEW YORK STATE JOURNAL OF MEDICINE had been sent to the president and secretary of each State Association in affiliation with the American Medical Association, and that a number of congratulatory letters had been received in consequence. A communication was received from the Executive Committee of the New York County Medical Association containing a letter addressed to them by Dr. Thomas H. Manley, concerning his status as a member. The secretary was ordered to reply that Dr. Manley had been dropped from membership in the State Association on January 1st for non-payment of his dues. The final report of the Directory Committee for 1900 was received and accepted. The treasurer was ordered to settle the accounts and the committee was discharged. It was voted to furnish seals and application blanks to the newly formed County and District Branch Associations. It was decided to pay the treasurers of local associations 5 per cent. on all sums collected by them. At the request of the chairman of the Committee on Medical Legislation of the American Medical Association, for the appointment of a delegate from this Association, Dr. C. E. Quimby was appointed to represent the Association. The chairman of the Committee on Legislation was ordered to oppose the Osteopathic Bill which was before the Legislature, and also the Bell Bill. The committee was authorized to use its judgment in supporting or opposing the Midwifery Bill. It was also authorized to send a circular letter to physicians throughout the State, asking support in an effort to defeat the bill to abolish the State Board of Charities. The Committee on Publication was empowered to dispose of the unsold copies of the Directory for 1900, and of the extra copies of the JOURNAL in the manner most advantageous to the Association.

At the meeting of the Council held on March 22nd, there were seven members present. The chairman of the Committee on Legislation presented the Bell Bill as amended for consideration, and he was authorized to oppose it and to substitute for it, if necessary, a bill covering the same points, drawn up by the attorney of the Association, James Taylor Lewis. The Committee on Publication was authorized to publish Mr. Lewis' bill in the JOURNAL. The by-laws of the Fifth District Branch, Sullivan and Orange County Associations, and the amended by-laws of the Cortland County Association were approved. The by-laws of the Rensselaer County Association were returned with the request that Section 2 of Article VII., and Section 3 of Article IX., be amended to make them conform with the requirements of the State Association by-laws. The secretary was ordered to inform the officers of the Hornellsville Medical and Surgical Association, the Ontario County Society and the

Medical Society of Troy and Vicinity, that in accordance with the new charter and by-laws they could no longer be considered as in affiliation with the New York State Medical Association, and also to inform the secretary of the American Medical Association of this fact. The secretary was also directed to inform the secretary of the last named association from time to time of the names of the members of the State Association who had resigned or been dropped from membership in the State Association, who were also members of the American Medical Association. It was decided that members of the State Association residing in districts where the Branch Association had not reorganized and where no effort had been made to collect their dues, should be exempted from the payment of the fine for their involuntary delinquency. The treasurer was authorized to use his judgment in imposing the fine on non-resident members who were in arrears for their dues. The secretary was empowered to use his discretion in furnishing official stationery to the officers of newly organized associations, the same to serve as samples. Ten thousand copies of the May number of the JOURNAL were ordered to be printed, and a copy sent to every regular physician living in the State. The secretary was authorized to purchase a typewriter, card cabinet and the necessary cards, for the purpose of compiling a list of the Association.

At the meeting of the Council held on May 13th, there were eight members present. A communication was received from the Hornellsville Medical and Surgical Association, declining to accept the suggestion of the Council, that they should reorganize their association under the name of the Steuben County Medical Association, notwithstanding the fact that the committee appointed by them to consider the matter had reported favorably upon it. The secretary was requested to enter into correspondence with the members of this committee, with the object of inducing them to form an association in Steuben County. A communication was received from Mr. A. MacDonald of Washington, District of Columbia, relating to the establishment of a psychophysical laboratory in connection with the Department of the Interior, and requesting the endorsement of the Association on the same. It was decided to continue on the list of resident members of county associations the names of those of their members who were temporarily absent. The by-laws adopted by the Saratoga County Association were received and approved. A committee was organized to consider the preliminary report of the Committee on Reorganization of the American Medical Association. The president, secretary and treasurer of the Association were authorized to sign a contract with the Trow Company for the publication of Vol. III. of the Medical Directory of New York, New Jersey and Connecticut. The meeting was adjourned and reconvened on June 3rd, when there were eight members present. It was voted to favor holding of the next annual meeting of the American Medical Association at Saratoga Springs, and to urge the election of Dr. John Allan Wyeth, president of the New York State Medical Association, as president of the American Medical Association. The special committee, appointed to consider the plan of reorganization of the American Medical Association, reported favorably upon it with the exception of a few minor changes.

The Council again met on September 27th, there being eight members present. Mr. William Starr Bullock was appointed business manager of the Association, and the president, secretary and treasurer were authorized to sign the necessary contract with him on behalf of the Association. It was decided to recommend to the various county associations that the candidates for election to membership, applying during October, November, and December, be not elected until after the first of January. The by-laws of the Rockland, Westchester, and Ulster County Associations were approved. The secretary was given permission to establish a Bureau of Information in connection with the business office at 64 Madison avenue.

The final meeting of the Council was held on the morning of October 21st, 13 members being present.

The secretary was given authority to approve the by-laws adopted and submitted by the Second and Fourth District Branch Associations, of Rockland, Ulster, Westchester and Columbia County Associations, and to make any necessary alterations to make them conform with the by-laws of the State Association, should any be needed.

The annual report of the Council to the Council and Fellows was submitted by the secretary and approved.

The time for dropping the names of those members who were delinquent in their dues was extended until November 1st, in order that they might be interviewed by the business manager of the Association, except in those cases where they had positively declined to pay.

Dr. William Gray Schauffler of Lakewood, N. J., was unanimously elected a non-resident member.

Communication was received from a number of physicians in Wayne County announcing the formation of the County Association and giving the names of their delegates. As it is necessary that they should join the Association individually, the Council decided, as the delegates could not be received, that they be invited to attend the meeting of the Council and Fellows and the privilege of the floor be extended to them without the right to vote.

The resignation of William A. Purrington, Esq., counsel of the Association was accepted with the thanks of the Association for the privilege of the use of his name during the past year.

The sub-committee of the Council, appointed to consider the revision of the by-laws, made its report, which was accepted and adopted and ordered to be appended to this report.

It was decided to recommend to the Council and Fellows that Article XII. be abrogated by unanimous consent and that the delegates to the American Medical Association be elected as provided in the new by-laws of that body.

It was also decided that the five per cent. commission heretofore allowed to the treasurer of local associations be abolished.

It was voted that the fines be remitted for the ensuing year.

The following resolution was adopted:

Whereas there exists widespread misunderstanding as to the interpretation of Section 1, Art. IX. of the by-laws of the New York State Medical Association, it is hereby declared that the words "Physicians in good standing" have been, and are held to mean, under the code of ethics of the American Medical Association, legally registered physicians who make no claim to base their practise upon exclusive dogma, and who maintain no professional relation with organizations or institutions representing such dogma.

This report of the Council serves to show that the business of the Association has grown to such importance that regular meetings of the Council should be held at stated intervals and it would seem but right that the necessary expenses of those members living out of town, who come to this city for the purpose of attending these meetings, should be refunded to them out of the treasury of the State Association. The time given by these gentlemen in attending these meetings, involving as it must of necessity a considerable personal sacrifice, would seem to be all that could reasonably be expected of them by our members.

Attention is called to the necessity of the prompt payment of dues on the part of the members, and their collection and transmission by the local treasurer to the treasurer of the State Association as soon after January 1st as possible, in order that the machinery of the State Association may run smoothly and at the least possible expense.

Report of the Special Committee of the Council on Revision of the By-Laws.

The Council of the New York State Medical Association.

Your Committee has the honor to report the following recommendations for revision of the By-Laws.

To amend Article I, by adding to Section 5 the words, "No member shall hold more than one office entitled to representation on the Council."

To amend Article I, Section 6, by striking out the words, "and Medical Charities," and transposing so as to read, "a Committee on Publications and a Committee on Nominations."

To amend Article II, by inserting in Section 1, after the words, "Board of," the words, "The Council and Fellows, with full power and authority to put into effect the purposes of the Association as expressed in its Charter, By-Laws and Resolutions." By striking out the words, "The New York State Medical Association" from this section.

To amend Article II, by inserting after Section 3, the words, "Section 4. The order of business at all meetings of the Council shall be:

1. Roll-call by the Secretary.
2. Reading of minutes.
3. Communications from the Secretary.
4. Communications from the Treasurer.
5. Communications from the Chairmen of Standing Committees.
6. Unfinished business.
7. New business.
8. Adjournment."

To amend Article II, by inserting after the words, "The Council," in Section 4, the words, "shall fill vacancies in elective offices for unexpired terms and,"

To amend Article II, by inserting in Section 5, before the words, "It shall be," the words, "The Council shall have authority to take action in all cases of violation of the laws relating to medical practice or public health, and may prosecute alleged violators of these laws."

To amend Article II, by striking out Section 6, and substituting the words, "Section 6. Whenever they shall deem it expedient for the Association to institute associated defense in suits at law, the Council shall formulate a plan therefor and submit it at an annual meeting of the Council and Fellows. The proposed plan shall be published in the New York State Journal of Medicine not less than four months prior to the meeting at which it is to be considered, and upon the programme of such meeting."

To amend Article II, Section 8, by striking out the words "and Fellows;" By striking out the word "Association," and substituting the words, "Council and Fellows." By transposing Sections 7 and 8.

To amend Article II, by inserting before Section 9, the words, "Section 8. The President shall have power, in the interim of meetings, to order a poll of the Council by letter. Upon such order the Secretary shall transmit to each member of the Council a copy of the question to be decided as formulated by the President, and shall call for a vote before a stated day. Votes received in conformity with this call shall be counted by the Secretary and a member of the Council designated by the President and the result recorded in the minutes of the Council."

To renumber the Sections of Article II, in conformity with the foregoing amendments.

To amend Article II, by striking out in Section 1, the final words "and Fellows."

By striking out in Section 3, the words "Cushing's Manual of Parlimentary Practices," and substituting the word "Roberts' Rules of Order."

To amend Article IV, Section 4, by striking out the words "shall be a stenographer and."

To amend Article V, Section 8, by striking out the words "and Medical Charities:" By striking out the words, "all matters," and substituting the word, "questions:" By striking out the words "and Fellows suggestions," and substituting the word "recommendations;" and by stituting out the words, "by the Council in these matters."

To amend Article V, Section 1, by striking out the words "printed Transactions of the Association," and substituting the words, "New York State Journal of Medicine."

To amend Article V, Section 9, by inserting after the words, "District Branch," the words, "But in case of a vacancy at the time of, or the absence of a representative of any District Branch from, the annual meeting of the Council and Fellows, the Fellows present from that District shall elect a representative in the Nominating Committee."

By striking out all the section after the words, "until such offices shall be filled," and substituting the words, "save that in case two nominees for any one office shall have been rejected by the Council and Fellows, the nomination for that office shall revert to the Committee of the whole."

To amend Article VI, by striking out the words, "and Fellows," in Section 1. By striking out the words, "3. Special reports from the Council and Fellows," in Section 3, and renumbering the order of business.

To amend Article VII, by inserting in Section 4, after the words, "Presidents of the component County Associations," the words, "a Committee on Legislation and a Committee on Public Health, each consisting of five members to be appointed by the President."

By striking out Section 5, and substituting the words. "Section 5. The duties of the President and Vice-President shall be such as commonly pertain to those offices. In addition thereto, the President shall assist in providing scientific material for the meetings of the County Associations in his jurisdiction, shall make stated visitations to such County Associations during the year, shall make himself familiar with the character and quantity of work performed by these County Associations and shall report upon the condition of each Association to the District Branch at its annual meeting. Whenever he deems it necessary, the President may invoke the aid of the Vice-President and Secretary."

By inserting after Section 8, the words, "Section 9. The Committees on Legislation and Public Health shall be associate committees of the corresponding Committees of the State Association and shall present a report at the annual meeting."

To amend Article VIII, by striking out Section 2, and substituting the words, "Section 2. When the members of any District Branch Association, residing in any county, are ten in number, they shall forthwith be organized as the County Association of the New York State Medical Association for that county by the President of the District Branch. But any independent Medical Society in a county having no organized branch of this Association, may, upon formal application after the adoption of the required By-Laws, be accepted by the Council as the branch of this Association for that county upon the payment of the required initiation fees and dues. Upon such acceptance by the Council members of this Association resident in that County shall become members of such County Medical Association."

To amend Article IX, By striking out Section 1, and substituting the words, "Section 1. Physicians in good standing resident in the State of New York, and duly licensed and recorded in the office of the County Clerk of their respective Counties, shall be eligible for active resident membership in the New York State Medical Association. Physicians in good standing, members of other State Associations, shall be eligible for non-resident membership. Physicians of eminence, members of other State Associations, shall be eligible for corresponding membership, and in other countries, for honorary membership."

By striking out the words, "the annual session," in Section 2, and substituting the words, "any regular meeting."

By striking out the words, "after six months' notification," in Section 3.

To amend Article X, By striking out Section 1, and its title and substituting the words,

"Applicant's fees and dues,"

Section 1. Applications for membership shall be accompanied by an initiation fee of five (5) dollars and the annual dues for the current year. Non-resident applicants shall be exempt from the initiation fee."

By striking out the words, "If a member's dues remain unpaid three months he shall be fined one dollar," in Section 3, and substituting the words, "Except dues of non-resident members, which shall be paid to the Treasurer of the State Association."

By striking out Section 4, and substituting the words, "Section 4. If a member's dues be unpaid at the time of the annual election of his County Association or District Branch he shall not be counted as a basis of representation in this Association; shall not be eligible for election as a Fellow, and shall not receive the publications of the Association or be included in its published list of members for that year, nor thereafter until

he shall have discharged his indebtedness in full."

By striking out the figure "2," in Section 5.

By striking out Section 6, and substituting the words, "Section 6. The Treasurer of each County Association and District Branch Association shall pay to the Treasurer of the State Association, without deduction of any kind, the sum of five (5) dollars for each and every member who shall have paid to him his dues, together with the initiation fees of duly elected members. Monies in hand shall be remitted to the State Treasurer on the first day of each month."

To amend Article XII, By striking out Section 1, and substituting the words, "Section 1. Delegates and their Alternates from this Association to the American Medical Association shall be chosen in the same manner as are the elective officers of the Association, and vacancies in their number may be filled by the Council. Credentials shall be furnished by the Secretary to said Delegates and Alternates, signed by the President and Secretary of the Association."

To amend Article XV, By striking out the word "three-fourths," in Section 1, and substituting the word, "nine-tenths." By inserting after the words "regular meeting," in Section 1, the words, "or by a three-fourths affirmative vote."

By striking out Section 2, and substituting the words, "Section 2. Section 4 of Article III, and Section 3 of Article VI, of these by-laws may be suspended by unanimous consent at any meeting of the Council and Fellows during such session only."

Report of the Second District Branch.—The seventeenth annual meeting of the Second District Branch of the New York State Medical Association was held at Saratoga Springs, May 29, 1901.

The meeting was called to order by the President, Dr. John T. Wheeler, of Chatham.

The Secretary, Dr. Joseph Baynes of Troy, being absent, on motion Dr. William L. Hogeboom of Troy was chosen temporary secretary. Twenty-seven members registered.

Upon motion annual dues for this year were made fifty cents.

President Knapp, of the village of Saratoga Springs, in an address of welcome, extended the freedom of the village to the Association.

On motion of Dr. Finder the privilege of the floor was extended to applicants for membership.

In the absence of Dr. Ferguson, Dr. James P. Marsh read the proposed by-laws. The by-laws were first voted upon by section and article and then voted upon and adopted as whole.

The Nominating Committee presented the following names as officers for the ensuing year, who were duly elected: Dr. E. D. Ferguson, for President; Dr. D. J. Fitzgerald, Glens Falls, for Vice-President; Dr. W. L. Hogeboom, Troy, for Secretary and Treasurer; Dr. William J. Hunt, Glens Falls, and Dr. J. M. Humphrey, Saratoga Springs, were subsequently elected as members of the Nominating Committee of the State Association.

The following program was then given:

1. President's Address, "Prevention of Puerperal Eclampsia," Dr. J. T. Wheeler, Chatham.

2. Paper on typhoid fever. (*a*) "Etiology," Dr. Charles S. Allen, Rensselaer. (*b*) "Etiology in a Recent Epidemic in Philmont, N. Y.," Dr. R. A. Woodruff, Philmont. (*c*) "The Diet," Dr. William J. Hunt, Glens Falls. (*d*) "The Use of Water Internally in Treatment," Dr. D. C. Moriarta, Saratoga Springs. (*e*) "Treatment," Dr. G. F. Comstock, Saratoga Springs. (*f*) "Private versus Hospital Treatment," Dr. M. M. Kittell, Kinderhook.

3. "Sewage Disposal," Dr. D. C. Moriarta, Saratoga Springs.

4. (*a*) "A Case of Resection of Superior Maxilla for Osteoma with Specimens." (*b*) Exhibition of recent Radiographs, Dr. J. P. Marsh.

5. "Aneurism of the Thoracic Aorta, with Report of Cases and Autopsies," Dr. H. C. Gordinier, Troy.

6. The report of a case of obliterative pericarditis with hepatic enlargement and ascities, Dr. E. W. Becker, Troy.

7. A family history of hemophilia with autopsy of one of the cases, Dr. R. H. Irish, Troy.

8. The pathogenic bacteria: A lantern slide exhibition, Dr. William Finder, Troy.

The program was most interesting and instructive and a vote of thanks was given to those who took part.

On motion it was voted to hold the eighteenth annual meeting of the Second District Branch of the New York State Medical Association at Troy, N. Y., on the last Thursday of May, 1902.

On motion the meeting adjourned.

(Signed) W. L. Hogeboom,
Secretary Second District Branch.

Report of the Fourth District Branch.—The seventeenth annual meeting of the Fourth District Branch of the New York State Medical Association was held on May 31, 1901, at the Buffalo Club, 388 Delaware avenue, Buffalo, N. Y. Meeting was called to order by the President, Dr. William H. Thornton, at 10:30 A. M. An address of welcome was given by Dr. Conrad Diehl, Mayor of Buffalo. The President introduced Dr. John Allan Wyeth, President of the State Association, who addressed the members relative to the St. Paul meeting of the American Medical Association, and as to the necessity of unattached members forming County Associations in the counties where they reside. A Committee on By-Laws was then appointed to report as soon as possible. Dr. William M. Bemus, Jamestown, Chairman: Dr. A. A. Hubbell, Buffalo; Dr. Zera Lusk, Warsaw.

Dr. Parker Syms, President of the New York

County Medical Association, was then introduced and made a few interesting remarks.

The Committee on By-Laws reported a new set of by-laws which were read. Dr. C. A. Wall moved to amend Section 1, Article VII., to read: "Annual meeting shall be held during May, June or July, at a time and place designated by the Executive Committee." The amendment was carried; upon motion of Dr. Charles A. Wall the by-laws as amended were adopted.

The scientific part of the meeting was opened by Dr. Charles E. Quimby of New Yor.k. "The Relation of Intestinal Intoxication to Cardiac Vascular Diseases." Discussion by Dr. De Lancey, Rochester. Dr. A. A. Hubbell made a few remarks relative to the use of salicylate of soda in certain inflammatory diseases of the eye. Dr. A. P. Jackson, Oakfield, read a paper on "Fractures and Their Outcome." Discussion by Dr. Zera Lusk, Warsaw, N. Y., and Dr. C. S. Parkhill, Hornellsville, N. Y.

An invitation from Chautauqua County, signed by Drs. Stony and Bemus, inviting the Fourth District Branch to meet at Chautauqua the first Tuesday in July, 1902, was read.

The President now adjourned the meeting for lunch, which was tendered by the Buffalo members, at the dining room of the Club.

Meeting again called to order at 2.20 P. M.

Dr. Herman F. Hayd read a paper, "Tubal Abortion: Report of Case, Operation, Recovery."

Dr. Julius Ullman, Buffalo, "The Racial Factor in Hysteria." Dr. Parker Syms, New York, "Radical Cure of Prostatic Hypertrophy." Discussion by Dr. John Allan Wyeth, New York, and Dr. Marcell Hartwig, Buffalo. Dr. E. A. Woehnert, Buffalo, "Value of Blood Examination in Appendicitis."

Dr. Frederick Holme Wiggin of New York, "The Preparation of Patients before and Their Treatment after Laparatomy." Discussion by Drs. Ingraham, Wyeth and Congdon, closed by Dr. Wiggin. Dr. William Irving Thornton, Buffalo, "Report of Two Cases of Spinal Cocainization in Puerperal Eclampsia." Discussion by Dr. A. A. Jones and Dr. F. M. O'Gorman.

Dr. Marcell Hartwig, Buffalo, "Some Surgical Questions."

Nomination Committee presented the names of the following gentlemen for officers for the ensuing year: President, Charles A. Wall, Buffalo; Vice-President, J. W. Morris Jamestown; Secretary, Bernard Cohen, Buffalo; Treasurer, William Irving Thornton, Buffalo. Nominating Committee: Dr. Zera J. Lusk, Warsaw; Dr. Arthur G. Bennett.

Respectfully submitted,

(Signed) BERNARD COHEN,
Charles A. Wall, *Secretary.*
President.

REPORT OF THE FIFTH DISTRICT BRANCH.—The seventeenth annual meeting of the Fifth District Branch was held in New York City on May 17, 1901, at the Mott Memorial Hall.

The morning session was called to order by the Vice-President, Dr. H. Van Hoevenberg, at 11.45 A. M. The Secretary read the minutes of the previous meeting, which were approved as read. The Treasurer read his annual report, which was referred to an Auditing Committee who declared the accounts to be correct, and the report of the Treasurer was approved as read. This report is as follows:

Treasurer's Annual Statement.—May 22, 1900, to May 7, 1901. Fifth District Branch, New York State Medical Association in account with E. H. Squibb, Treasurer.

Debit—

To balance cash as per statement May 22, 1900	$256.80
Assessments collected	10.00
Permanent fund contribution for the year	5.00
Dues and arrears to the State Association	235.20
Interest collected	50.43
Total	$557.43

Credit—

By rent of meeting rooms for sixteenth annual meeting	$10.00
Catering for sixteenth annual meeting	38.00
Postage	32.60
Printing	8.65
Dues and arrears surrendered to State Treasurer	235.20
Balance on hand	227.98
Total	$557.43

Permanent Fund Account.—The total amount of this fund according to the statement made May 22, 1900, was $1,500.00. The contribution to the fund for the past year of $5.00 makes a total of $1,505.00, which is now at interest in the Savings Bank at 3½ per cent. and 4 per cent. interest.

The Executive Committee reported the election to membership in the Branch of Dr. James L. Preston, Kingston, Ulster County.

After recess the Nominating Committee reported the following members for election as officers of the ensuing year, and these were duly elected: President, Emil Mayer, New York; Vice-President, Mary Gage Day, Kingston; Secretary, Edmund L. Cocks, New York; Treasurer, Edward H. Squibb, Brooklyn; and the following Nominating Committee: E. Eliot Harris of New York, W. J. Russell of Brooklyn.

The following papers were read:

"Gynecology and the Country Doctor," by Dr. James Hawley Burtenshaw. Discussion by Dr. F. H. Wiggin.

"The Technic of Abdominal Operations," by Dr. Parker Syms. Discussion by Dr Haynes.

"Eosinophilia in Trichinosis," by Dr. Alexander Lambert.

The minutes of the meeting were then read and approved and the meeting was adjourned.

A special meeting of the Executive Committee was held at the residence of the President, Dr. Emil Mayer, on Wednesday evening, May 22nd. There were present Drs. Syms, Payne, Day, Cocks, Conner and Mayer, and Drs. Wyeth, Wiggin, Gouley and Harris, by invitation.

Attention was called to the fact that an error was made by the Nominating Committee in the election of Dr. Russell of Kings County to the Nominating Committee, as Dr. Russell was not a Fellow at the time, hence the election was contrary to the by-laws, and the committee declared the election void. Dr. Gouley nominated, on behalf of the Nominating Committee, Dr. W .H. Biggam of Kings County as member of the Nominating Committee, and Dr. Biggam was then elected to the vacancy.

The names of Drs. Frank L. Christian and George F. Hunken, both of Ellenville, N. Y., were voted upon and these applicants duly elected to membership.

The meeting was then adjourned.

There have been no other meetings of the Executive Committee and in the interim the following-named gentlemen have been elected to membership in the Fifth District Branch: Alexander A. Stern, Rondout, N. Y.; Francis J. McKown, Carmel, N. Y.; Robert R. Thompson, Kingston, N. Y.; George A. Leitner, Piermont, N. Y.; G. F. Blauvelt, Nyack, N. Y.; Frank E. Pagett, Spring Valley, N. Y.; J. Howard Crosby, Haverstraw, N. Y.; S. S. Carter, Haverstraw, N. Y.; Edward H. Maynard, Nyack, N. Y.; Daniel Burr Van Wagenen, Suffern, N. Y.; Samuel Blume, Riverhead, Long Island; Albert E. Payne, Riverhead, Long Island; Robert R Felter, Pearl River, N. Y.; H. G. Wahlig, Sea Cliff, N. Y.

The proper number of members having been elected to membership in Ulster County and in Rockland, these counties have been organized and placed on the list of counties in the District Branch.

The officers of the Fifth District Branch are making every effort to increase the number of members in each individual county, especially in those counties where no organization yet exists. There are but few of these left and we express the hope that ere long every county will be organized.

Much stress has been laid upon the scientific meetings held in the counties of this Branch; as a result the meetings are much better attended and we are in closer touch than ever with our confrères in the District. In this connection we beg to extend the very sincere thanks of the officers of this Branch to the gentlemen who have so unselfishly devoted their time and energy in attending these meetings for scientific purposes.

The officers of the State Association have rendered valuable assistance to the officers of this Branch whenever new counties were ready to be formed. Altogether, we find a spirit of enthusiasm and loyalty to the Association to which we have reason to be proud.

The condition of the Fifth District Branch is eminently satisfactory, each county in the District having been visited by the presiding officer during the year.

(Signed) EDMUND L. COCKS,
Secretary

On motion of Dr. E. D. Ferguson the report of the Council was accepted.

Dr. Emil Mayer asked unanimous consent of the Council and Fellows for the abrogation of the fines for the ensuing year in accordance with the statement made in the report of the Council.

Dr. E. H. Squibb, Brooklyn, then presented

THE TREASURER'S REPORT.

The undersigned begs leave to submit the following acounting for the year 1900-01:

The gross receipts from all sources to October 1, 1901, amount to $12,851.56, apportioned as follows:		
Arrears and Dues collected.....	$9,130.00	
Initiation Fees and Fines collected		
Interest on Deposits and Bank Collection Charges advanced, etc., credited to the Treasurer's Office..	31.02..	
Balance surrendered by 1900 Directory Publication Committee $107.34		
For Advertisements in Directory of 1901 ..... 1,039.50		
From sale of 1901 Directory 1,030.01		
	2,176.85	
Advertisements in the JOURNAL....	688.45	
Interest on Building Fund Mortgage..	146.24	
		$12,851.56
The gross expenses to October 1, 1901, amount to.....		10,175.02
		2,676.54
Balance brought over on October 1, 1900.....		470.77
Leaving a gross Bank Balance on October 1, 1901, of.....		$3,147.31

EXPENSES OF THE SECRETARY'S OFFICE.

Final expense bill of last year's retiring Secretary	$219.57	
On account of expenses in 1900 in behalf of the Association by the present Secretary	500.00	
Final printing bill of 1900 from George W. Buskirk	3.00	
Making a total of	$722.57	
Expense this year to start newly formed County Organizations....	337.99	
Direct working expenses of the Secretary's Office	1,350.92	
		$2,411.43

EXPENSES OF THE TREASURER'S OFFICE.

Expense this year to start newly formed County Organizations ...	$73.35	
Commission allowed by Council to County and Branch Treasurers..	350.35	
Direct working expenses of the Treasurer's Office	98.92	
		$522.62

LEGAL DEPARTMENT.

Counsel's commission for collections in 1900	$36.75	
For work by the Committee on Reorganization in 1900	54.55	
Direct working expenses of the Legal Department	2.00	
		$93.30

EXPENSES OF COMMITTEE ON ARRANGEMENTS.

Expenses connected with the 1900 Annual Meeting	$433.97	
Expenses connected with the 1901 Annual Meeting	216.56	
		$650.53

EXPENSES OF COMMITTEE ON LEGISLATION.

Expenses connected with the new Charter (1900)	$250.00	
Legislative work at Albany in 1901	61.25	
Legislative work at Washington in 1901	21.00	
Direct working expenses of the Committee on Legislation	57.25	
		$389.50

EXPENSES OF COMMITTEE ON LIBRARY.

Rent of Mott Memorial Library for 1900	$100.00	
Fire Insurance on Books	80.00	
Repairs to Furniture	3.75	
Direct working expenses of the Committee on Library	4.25	
		$188.00

EXPENSES OF COMMITTEE ON PUBLIC HEALTH AND MEDICAL CHARITIES.

No bills submitted when asked for.

EXPENSES OF COMMITTEE ON PUBLICATION.

Directory Account:

Balance due Publishers for printing the 1900 Directory	$500.00	
Balance due Editor of 1900 Directory	333.36	
	$833.36	
Delivery expenses on 1900 Directories	136.27	
	$969.63	
Delivery expenses on 1901 Directories	255.49	
Direct Office expenses on Directory account	2,254.94	
		$3,480.06
Total expense	$3,480.06	
Total receipts	2,176.85	
Cost to date	$1,303.21	

Publishers' bill for 1901 not yet submitted.

JOURNAL *Account:*

Balance due on printing bill of G. W. Buskirk for 1900	$12.25	
Storage on back Transactions to September 30, 1900 (four months)	22.00	
Storage on back Transactions to October 1, 1901 (twelve months)	60.00	
Delivery expenses on back Transactions	54.07	
For publishing and delivering the JOURNAL to October 1, 1901	1,705.87	
Commission allowed to Editor for securing JOURNAL Advertisements	136.35	
Direct Office expenses connected with the JOURNAL	303.99	
		$2,294.53
Total expense	$2,294.53	
Total receipts	688.45	
Cost to date	$1,606.08	

Expenses of Secretary's Office	$2,411.48	
Expenses of Treasurer's Office	522.62	
Expenses of Legal Department	93.30	
Expenses of Committee of Arrangements	650.53	
Expenses of Committee on Legislation	389.50	
Expenses of Committee on Library	188.00	
Expenses of Committee on Publication: Directory account	3,480.06	
Expenses of Committee on Publication: JOURNAL account	2,294.53	
Withdrawn from general income on May 28, 1901, to deposit in Savings Bank for the Building Fund account	145.00	
		$10,175.02

BUILDING FUND.

Building Fund account, October 1, 1900	$3,322.00	
Interest received on Mortgage	146.24	
		$3,468.24
Distributed as follows:		
Investment in Real Estate Mortgage on improved property in Brooklyn	$3,250.00	
In Savings Bank	145.00	
In Long Island Loan and Trust Company	73.24	
	$3,468.24	

The Treasurer has to report that there are still 4,365 old Transactions on hand, representing all the sixteen volumes issued. Vol. I. only has been lately withheld from distribution on account of the number on hand being so small. It is now urged that these old volumes be transferred to our Business Office and thus save future storage. They have all been packed in convenient boxes and properly marked for identification. The Committee on Publication has been urged to apportion space for their accommodation as early as possible.

E. H. SQUIBB,
Treasurer.

On motion of Dr. Ferguson, the report was received, and a committee of three was appointed by the Chair from the Council to examine the Treasurer's accounts and report back to the Council. The committee consisted of Dr. E. D. Ferguson, Chairman, Dr. E. Eliot Harris and Dr. A. G. Bennett.

Dr. E. Eliot Harris, New York, presented the

REPORT OF THE COMMITTEE ON LEGISLATION.

The Committee on Legislation respectfully submits the following report: Of the two hundred medical bills that were introduced in the Legislature at Albany, all those that have been opposed by your committee have been defeated. The three bills that gave your committee the most work were, the bill to abolish the present

State Board of Charities, etc., the Osteopathic bill and the Bell bill, No. 167, generally known as the Christian Science bill.

The committee desires to express its appreciation of the hearty way in which the members of the N. Y. S. M. A. came to its aid whenever called upon.

Your committee continued to work against the bill to abolish the present State Board of Charities until the Legislature adjourned, which assured its positive defeat. We may now hope for the enforcement of the dispensary law by the present State Board of Charities.

The osteopathic bill demanded a visit to Albany to secure its defeat, by the Committee on Public Health of the Assembly.

We will now consider the action of your committee in regard to the original Bell Bill No. 167, otherwise known as the Christian Science Bill.

After a careful reading of the bill, the chairman of the Committee on Public Health of the Assembly was informed that the bill was crude, very much involved, and sure to cause endless opposition.

Soon after the filing of these objections to the original Bell Bill, the chairman of the Committee on Legislation of the New York State Medical Association, in response to an invitation, had several conferences with the chairman of the Committee on Legislation of the Medical Society of the State of New York, with the object of trying to secure amendments to the Bill No. 167 along the lines of the better protection of public health, and to secure the indorsement and support of the Council of the State Association for the Bell Bill.

At the first conference, Mr. Bell being present, all agreed to certain amendments being made to the original bill. A few days later, at the hearing before the Committee on Public Health of the Assembly, the framers of the bill were obliged to accept the amendments proposed by the opposition. This opposition was aroused by the drastic character of the original Bell Bill. It was thoroughly organized for the purpose of defeating the bill.

The amendments that the framers of the bill were compelled to accept seemed to the chairman of the State Association Committee to give higher moral and legal standing to those affected by them, and to increase the difficulty of securing the conviction of those who were illegally practising medicine.

At the next hearing on the Bill No. 167, before the Committee on Public Health, the substitute bill, prepared by the counsel of the State Association, was submitted to the committee as a concise and direct amendment to Section 153 of the Laws of 1895, under which we now prosecute and convict those who illegally practise medicine.

When the committee finally reported to the Assembly the bill known as the Amended Bell Bill, it was placed on the Assembly calendar and rapidly advanced from second to third reading, at which time the amendments offered from the floor were to be considered.

As soon as the Amended Bill No. 1799 was received by me from Albany it was considered at a special meeting of the Council of the State Association. After general discussion it was unanimously voted to instruct the Committee on Legislation to oppose the Amended Bell Bill No. 1799 and favor the substitute bill, amending Section 153.

At the last conference held prior to the time when the amended Bell Bill was to be considered in the Assembly as a special order of third reading, the chairman of the Committee on Legislation stated that he was acting under the direction of the Council of the State Association, and that he would be glad to receive any communications which would unify the forces in favor of a bill having for its object the better protection of the public health against those who practise medicine illegally. The next day a communication was received from the chairman of the Committee on Legislation of the State Society, asking that, if the Association could not help them to pass the Amended Bill No. 1799, would the Association keep quiet and not oppose it? The communication was submitted to the members of the Council, and they acted on the ground that, as they could not remain indifferent to the advancement of a bad bill, they voted to sustain their original resolution. The chairman of the Committee on Legislation, acting under the resolution passed by the Council, sent to each member of the Assembly a letter, which was delivered on the morning of the day set for the consideration of the Amended Bell Bill No. 1799, as follows:

NEW YORK, April 2nd, 1901.

DEAR SIR: The Council of the New York State Medical Association, the Executive Board of the largest medical organization in the State of New York, which is the representative in this State of the American Medical Association, after carefully considering the amended Bell bill, has unanimously voted to direct its Committee on Legislation to oppose the Amended Bell Bill No. 1799, and to favor the Substitute Bill now on file with the Chairman of the Committee on Public Health of the Assembly.

Your opposition to the Amended Bell Bill No. 1799, and your consideration of the Substitute Bill will oblige,

Yours very sincerely,

Signed by the

Chairman of the Committee on Legislation.

When the bill was reached on the calendar it was sent back to the Committee on Public Health by an overwhelming voice vote, which made it a dead bill.

NEW YORK, April 4, 1901.

TO THE HON. HAL BELL,
Assembly Chamber,
Albany, N. Y.

DEAR SIR: Will you be kind enough to favor me with the facts relating to the defeat of the so-called Bell Bill No. 167 and its amendments.

Yours very truly,

E. ELIOT HARRIS, Chairman.

ASSEMBLY CHAMBER,
CAPITOL, ALBANY, NEW YORK.

DR. E. ELIOT HARRIS,
Chairman Committee on Legislation
of the New York State Medical Association.

DEAR SIR: In answer to your request for an expression of my views on the original "Medical Practice Bill," sometimes called "The Bell Bill" and sometimes the "Anti-Christian Science Bill," and for the reasons for its recent defeat in the Legislature, permit me to say briefly without trying to exhaust the subject that that bill in its original form was worse than an absurdity and fell into the category of monstrosities.

The more I examined the more I was astounded. The bill said: "Any person shall be regarded as practicing medicine within the meaning of this act who shall prescribe, direct, recommend or advise for the use of any other person any remedy or agent whatsoever, whether with or without the use of any medicine, drug, instrument, or other appliance for the treatment, relief or cure of any wound, fracture or bodily injury, infirmity, physical or mental, or other defect or disease."

It was permitted by the bill that persons might be useful in any emergency, and that in families domestic administration of medicines would be allowed.

The gymnasiums would have had to close or to be run by doctors. So with the baths, Turkish and others, where massage is given. The chiropodists, manicurists, masseurs and all the others would have to leave the State. The shops that sell cosmetics and medicated soaps and the thousand and one things that fall under the ban of its sweeping provisions would have had to stop at once the sale of such articles. It would have still been possible to buy cockroach powder or a liniment for a lame horse, but nothing for man, woman or child in the medical line, of any nature or description whatsoever, except on the doctor's prescription.

The doctors who supported it and sent postal cards asking the assemblymen to vote for it, did not appreciate or understand its enormously wrongful and terrible effects nor how their support of such a bill weakened the influence of the medical profession in the Assembly. They took it, as I had done, on faith, and even those who read it before endorsing it did not understand it. They regarded it as something asked at the hands of the Legislature by a Medical Committee and supported the bill as a matter of course, and not as a matter of judgment.

This must have been the case, as there is no grander set of men on the face of the earth than the physicians of this State, none more self-sacrificing, none more devoted to the public weal or helpful and devoted in the midst of any public woe. It was morally impossible that they as a class could have supported such a bill if they had understood it.

At the first conference with those who drew this bill and some other physicians, which took place at the Hotel Ten Eyck, at Albany, on the evening before the first public hearing on the bill, its terrors were shown by the opposition which had been aroused, and after two or three hours of argument it was agreed, finally, that amendments would have to be made in order to exclude certain business interests from its provisions. At the first public hearing the next day before the Committee on Public Health in the Assembly Chamber, I then publicly stated that, although it had been affirmed that I was the author of the bill, as a matter of fact I had not been consulted or even spoken to concerning it or its provisions and knew nothing whatever about it until I received it by mail at the Assembly Chamber and placed it in the bill box. I stated further on that occasion that if the bill should prove to be a good bill, it ought to be passed, if not, then it should be suppressed in the Committee. My relation to this bill from the start has been that of a legislator and not that of a partisan. From this position I have not receded at any time.

The bill in its original form contained such drastic provisions as to create a strong opposition to it from the very start. It was regarded and spoken of as creating a Medical Trust and Class Legislation, and such it plainly was in its original form.

On the Sunday preceding the Wednesday of the second hearing before the Public Health Committee at Albany, I met you, Dr. Harris, and the Chairman of the Committee on Legislation of the State Medical Socity, in the City of New York, at which time you agreed to support the bill as Chairman of the Committee on Legislation of the State Medical Association, provided that there should be no positive exceptions in favor of any interests to examine and treat the sick or injured, and that the proprietary medicine people and opticians, druggists, etc., should enjoy the same privileges that they now negatively did, under the law, but *not* in positive language to be relieved from provisions of the bill. In Albany it was discovered that the organized opposition demanded positive recognition of their several business interests in the amendments to the proposed bill.

Hence, later, when you became aware that this was the state of affairs, you entered your protest, and at the last public hearing on the bill at Albany you appeared and filed a substitute bill to take the place of the original bill.

You also came to Albany to oppose the Osteopathic Bill, on which occasion I took advantage of your presence there in Albany to find out your position on the original Medical Practice Bill as amended. You stoutly maintained your opposition, and I said then it would be useless to ask the Assembly to pass the measure.

I was not informed until after the Legislature adjourned that the Medical Society of the State of New York in convention at Albany had taken any action in reference to this bill. The chairman of their committee on Legislation reported this bill for adoption and endorsements, but the convention refused to adopt and endorse the bill. The State Medical Society took a recess at the very hour when the hearing was to be held before the Public Health Committee of the Assembly in the Assembly chamber—of the two hundred doctors in attendance at the medical convention not over twelve appeared in the Assembly chamber or took any interest in the proceedings—of the twelve only four or five spoke in favor of the bill. You will observe from these facts that the Medical Society of the State of New York placed itself in opposition to the bill by refusing to support and endorse it.

The original bill passed through many states of amendments, and, as I have said, it was doomed to defeat from the start. It ought never to have been presented in its original form. It required too much patchwork in the nature of vital amendments and put the Medical Profession in the position of favoring a Medical Trust. When it was finally reported by the Committee on Public Health, I canvassed the Assembly to discover what support it would receive, and found there were only 50 votes for it out of 150 Assemblymen. It required 76 votes to pass the bill. Its passage was a hopeless proposition. Then it was that I proposed amendments limiting the bill as follows:

1st. That only licensed physicians should use or prescribe medicines or drugs in giving treatment to other persons.

2nd. That they, only, should be permitted to treat infectious or contagious diseases or perform surgical operations.

3rd. Arranging for the examinations of osteopaths, who, after passing such required examination before a Board to be appointed by the Regents, could on proof that the candidates were more than twenty-one years of age and of good moral character, and after having received a license from the Board of Regents could practise osteopathy, but could not use medicine or drugs in such treatment or treat infectious or contagious diseases or perform operative surgery.

I then recanvassed the Assembly and found that the bill amended as I proposed would pass the Assembly,

as on all sides those who opposed the reported bill and had told me at the time of the former canvass that they would not vote for it as reported from the Committee, now said they would vote for my amendments and for the bill as it would thus be amended. I believe these proposed amendments of mine were founded on reason and conscience, and they contained all the protection to the public that was demanded, and I still believe that any measure that is passed in this State hereafter will be upon these simple and straightforward lines, and that the Legislature will not go beyond them.

I feel confident that my amendments would have been adopted by the Assembly on April 3d, on the occasion of the third reading of the bill, if your letter had not been delivered by mail that morning to every member of the Assembly.

This sealed the fate of the bill, for it was seen that the physicians of the State were not a unit in their support of the bill, and like a bolt out of a supposed clear sky (for your former opposition had been in large measure forgotten, as you had not actively appeared in hostility for several weeks) your letter in opposition came upon us and crushed the bill beyond all hope of resurrection.

The practising physician must realize that Medical Legislative enactments should have for their object and be limited to the protection of the public health, and at the same time must zealously guard the personal liberty of the individual. The object is not to protect the physician in his practice, but the public in its health.

Yours very truly,

HAL BELL,

Member of Assembly from the 29th District.

Dated New York, April 19, 1901.

THE BELL BILL.

(Amendments to the present law are printed in *italics.*)

An Act to amend section one hundred and fifty-two of chapter six hundred and sixty-one of the laws of eighteen hundred and ninety-three, entitled "An Act in relation to the public health, constituting chapter twenty-five of the general laws," is hereby amended to read as follows:

Section 152. Construction of this article.—*Any person shall be regarded as practising medicine within the meaning of this act who shall, for remuneration, charge, fee, gift, bonus or reward, directly or indirectly, profess to heal or who shall give treatment to any other person, by the use of any means or method whatsoever, whether with or without the use of any medicine, drug, instrument or other appliance, for the relief or cure of any wound, fracture or bodily injury, infirmity, physical or mental or other defects or disease.* This article shall not be construed as *prohibiting any person in giving treatment to another under the direction or upon the prescription of a physician duly licensed by the laws of this State, or as prohibiting the manufacture, sale or use of any proprietary or patent medicine where no diagnosis is made by the maker or seller thereof; or the giving of temporary relief in an emergency by a registered pharmacist or any person, or the domestic administration of family remedies; or any person in charge of or employed in any gymnasium from giving suggestions or advice as to form or methods of exercise; nor shall it be construed* to affect commissioned officers serving in the United States army, navy or marine hospital service, while so commissioned; or any one while actually serving on the resident medical staff of any legally incorporated hospital; or any legally registered dentist exclusively engaged in practising dentistry; *or any optician engaged in adapting glasses to the sight, or any rights of chiropodists under existing laws;* or any manufacturer of artificial eyes, limbs, or optical or orthopedic instruments or trusses, *or manufacturer or constructor of optical instruments,* in fitting such instruments on persons in need thereof; or any lawfully qualified physician in other States or countries meeting legally registered physicians in this State in consultation; or any physician residing on a border of a neighboring State and duly authorized under the laws thereof to practise medicine therein, whose practise extends into this State, and who does not open an office or appoint a place to meet patients or receive calls within this State; or any physician duly registered in one county to atend isolated cases in another county, but not residing or habitually practising therein. This article shall be construed to repeal all acts or parts of acts authorizing conferment of any degree in medicine causa honoris or ad eundum or otherwise than on students duly graduated after satisfactory completion of a preliminary and medical course of not less than that required by this article, as a condition of license.

Sec. 2. This act shall take effect immediately.

SUBSTITUTE BILL.

AN ACT to amend Chapter Six Hundred and Sixty-one of the Laws of Eighteen hundred and Ninety-three, entitled "An Act in relation to the public health, constituting Chapter Twenty-five of the general laws." (Amendments to the present law are in *italics.*)

THE PEOPLE OF THE STATE OF NEW YORK, REPRESENTED IN SENATE AND ASSEMBLY, DO ENACT AS FOLLOWS:

Section 1. Section One Hundred and Fifty-three of Chapter Three Hundred and Ninety-eight of the Laws of Eighteen Hundred and Ninety-five, entitled "An Act to amend Chapter Six Hundred and Sixty-one of the Laws of Eighteen Hundred and Ninety-three, entitled 'An Act in relation to the public health, constituting Chapter Twenty-five of the General Laws,'" is amended so as to read as follows:

Section 153. PENALTIES AND THEIR COLLECTION. Any person who, not being then lawfully authorized to practice medicine within this State and so registered according to law, shall practice medicine within this State without lawful registration or in violation of any provision of this article; and any person who shall buy, sell, or fraudulently obtain any medical diploma, license, record or registration, or who shall aid or abet such buying, selling or fraudulently obtaining, or who shall practice medicine under cover of any medical diploma, license, record or registration illegally obtained, or signed, or issued unlawfully or under fraudulent representations or mistake of fact in a material regard, or who, after conviction of a felony, shall attempt to practice medicine, or shall so practice, and any person who shall append the letters M.D. to his or her name, or shall assume or advertise the title of doctor (or any title which shall show or tend to show that the person assuming or advertising the same is a practitioner of any of the branches of medicine) in such a manner as to convey the impression that he or she is a legal practitioner of medicine, or of any of its branches, without having legally received the medical degree, or without having received a license which constituted at the time an authority to practice medicine under the laws of this State then in force, *and any person not then being lawfully authorized to practice medicine within this State and so registered according to law, who shall advertise or in any manner hold himself or herself out to the public as a healer of disease or able to abolish disease or symptoms of disease, or as competent to do surgery, or who shall in any manner examine and treat the sick or injured,* shall be guilty of a misdemeanor, and on conviction thereof shall be punished by a fine of not more than two hundred and fifty dollars, or imprisonment for six months for the first offense, and on conviction of any subsequent offense, by a fine of not more than five hundred dollars or imprisonment for not less than one year, or by both fine and imprisonment. Any person who shall practice medicine under a false or assumed name, or who shall falsely personate another practitioner of a like or different name, shall be guilty of a felony. When any prosecution under this article is made on the complaint of any incorporated medical

society of the State, or any county medical society of such county entitled to representation in a State society, the fines when collected shall be paid to the society making the complaint, and any excess of the amount of fines so paid over the expense incurred by the said society in enforcing the medical laws of this State, shall be paid at the end of the year to the county treasurer.

Sec. 2. This act shall take effect immediately.

Respectfully submitted,

E. ELIOT HARRIS, M.D.,
Chairman.

On motion of Dr. Messenger, seconded by Dr. W. H. Thornton, the report was received.

On motion of Dr. De Lancey Rochester, Buffalo, seconded by Dr. A. A. Hubbell, Buffalo, the thanks of the Association were tendered to this committee for its excellent work during the past year.

Dr. J. W. S. Gouley presented the

REPORT OF THE COMMITTEE ON LIBRARY.

The Committee on the Library of the New York State Medical Association held its annual meeting on the 10th of October and has the honor to report that, with the exception of exchanges for the Journal of the Association, there has been, in the current year, no increase in the number of volumes over the preceding year, and that the present number is nine thousand eight hundred and sixty-four (9864) bound volumes, besides the catalogued and uncatalogued pamphlets.

One hundred and twelve visitations to the Library were made between October 3, 1900, and September 30, 1901, but many visitors neglect to register their names.

The shelves are all full, and over twelve hundred volumes are packed away for want of space.

J. W. S. GOULEY,
Chairman.

On motion of Dr. J. Riddle Goffe, the report was accepted.

Dr. James Hawley Burtenshaw presented the

REPORT OF THE COMMITTEE ON PUBLICATION

At the seventeenth annual meeting of the Association, held at New York, October 15-18, 1900, your Committee on Publication was authorized to compile and publish a Medical Directory of New York, New Jersey and Connecticut, it being the third volume of the series, and to publish a monthly journal in place of the annual volume of *Transactions*. The delivery of the directory was begun September 16th last.

A detailed report of the cost of the 1901 directory, as well as of the Journal during the past nine months, will be found in the annual report of the treasurer of the Association. In round numbers, the gross cost of the Directory has been $5,600 for 3,000 copies. This is offset by receipts from advertisements and the sale of books amounting to $2,340.50, leaving the net cost of the Directory $3,259.50.

In connection with the publication of the Directory, the Committee wishes particularly to emphasize the necessity of each and every member of the Association at once sending notice of removal, change of office hours, etc., to the office of the Association, 64 Madison avenue, New York, in order that the lists may be kept up-to-date and correct at all times. It will be well, also, if secretaries of county associations will promptly notify the office of deaths of medical men occurring in their vicinity. Observance of these points will greatly facilitate the preparations of future directories, as well as greatly lessen the expense.

The publication of the Association's journal—the NEW YORK STATE JOURNAL OF MEDICINE—was begun in January of the present year. A copy has been mailed each month to every member of the Association. Including the October number, 31,800 copies have been distributed. In addition, a supplement was issued with the May number. Forty-six original papers were presented at the last annual meeting of the Association. The Mss. of 44 of these were delivered to the Committee, and have been published. The Committee has also published 7 original papers read before county and district branch associations, besides complete reports of county and district branch association meetings, association notes, letters of correspondence, and book reviews. The legal department, devoted especially to medical legislation at Albany, through the efficient co-operation of the Association's Committee on Legislation, has been a valuable feature.

The expense connected with the monthly publication of the Journal, naturally, is of considerable interest. The estimated cost for twelve issues, ending with the December number, is $1,956. From this is to be deducted the net receipts from advertising contracts, amounting to $888, which reduces the total to $1,068. The average net cost of each issue of the Journal, therefore, will be $89. These figures compare very favorably with those connected with the publication of Volume XVI. of the Association's *Transactions*, issued one year ago. The cost of 1,000 copies was $1,633.99, which included printing, binding and delivery, or, approximately, $1.64 per volume. On account of the increase in membership, to supply each member of the Association with a bound volume of the transactions of the past year on this basis would have cost, approximately, $2,952. The amount saved to the Association by the monthly publication of a journal, therefore, approximates $1,884.

It is proper to state in this report that the object for which the Journal was established has apparently been fully achieved. It has served to bring the members of the State Association in closer touch with each other, and has greatly enlarged the scope of the Association's work. It has served, too, as a model for monthly publications of medical organizations of at least two other States, and has had much to do in making

known the reorganization-plan of the Association.

Respectfully submitted,
JAMES HAWLEY BURTENSHAW, M.D.,
Chairman.

On motion of Dr. F. P. Hammond, New York, seconded by Dr. Squibb, the report was received and the thanks of the Association were extended to the committee for its work.

Dr. J. Riddle Goffe, New York, moved a special vote of thanks to Dr. Frederick Holme Wiggin, for his very valuable services to the Association during the past year.

Dr. E. D. Ferguson, Troy, said that as a former secretary he could, most heartily and appreciatively second the motion. It was carried unanimously.

Dr. E. D. Ferguson, Troy, moved that all further consideration of the amendments to the by-laws be deferred to the next annual meeting, to be taken up then. Seconded by Dr. Hubbell, Buffalo, and carried unanimously.

Dr. E. Eliot Harris moved that the Presidents of the District Branch Associations be requested to appoint committees on public health and on legislation, each committee to consist of five members.

Dr. E. Mayer amended this by adding, and that the names of the members on all those committees be announced whenever there is occasion to refer to these committees. Seconded and carried.

REPORT OF THE COMMITTEE ON PUBLIC HEALTH

It appears from the records of the State Department of Health that the mortality rate was about the average of other years except as modified by the prevalence of two epidemics, viz., la grippe and smallpox.

In the January number of the Bulletin of the Department is an interesting account of the several outbreaks in this State with its influence upon the death rate. It appears that the last epidemic of this pestilence was the twelfth which has visited this State since the year 1889, when it was distinctly recognized for the first time. The epidemic of 1900, or the eleventh, was the most fatal, causing 11,500 deaths during the six months of its prevalence. The mortality from this epidemic during this year is not yet rated, but it is noted that it caused 3,000 deaths in the month of January.

Smallpox, it is stated, was brought into the State, after a period of practical freedom from it, last November, by a traveling troupe, and left at Albany, where but one case occurred; at Schenectady and Gloversville, both of which had extensive epidemics. From these centers the disease spread to other villages until it became a serious epidemic in many parts of the State. In April it is noted that smallpox had appeared in sixteen new localities. The practical fact which every outbreak and spread of smallpox demonstrates is that health authorities become very lax in their efforts to secure thorough vaccination of children during the interval of the epidemic prevalence of this pestilence.

From the April Bulletin we learn that the State Department has undertaken to secure a census of pulmonary tuberculosis for the purpose of obtaining with as much accuracy as possible a record of the number of persons in each municipality who are subjects of this disease, thus establishing the locality of this disease and its distribution. It is stated that this accumulation of data will be fundamental to more exact plans of its control, and will aid in discussing the question of State care of consumption. This effort of the State Department to obtain more exact information in regard to the prevalence of tuberculosis is commendable and should receive the cordial coöperation of this Association.

The most important event in regard to the Medical Charities of the State is the effort of the State Board of Charities to enforce the law relating to the dispensaries. During the year the Board has maintained a constant inspection of all the dispensaries of the State. The result of these inspections shows that with few exceptions these institutions are in part but not wholly complying with the rules of the Board. The Board has been very lenient in its efforts to enforce its rules, believing that all of the dispensary officials would endeavor in good faith to comply, but that it would require a considerable time to enable the officers of the dispensaries to become familiar with their duties. The present inspection is chiefly educational as there is much misunderstanding of the details of the rules by those in charge. In but very few instances has there been a manifest disposition to ignore the rules altogether. The Board has not thought it wise to attempt to enforce the rules by prosecution until every reasonable effort has been made to secure compliance by persuasion and constant inspection. The latest annual reports of the dispensaries show that by the enforcement of the rules the number applying for treatment has considerably diminished.

In conclusion your committee would express the opinion that the members of the Association should endeavor to awaken a greater interest in local sanitation of villages by effecting the organization of citizens into Village Improvement Societies. Wherever these Societies have been organized in England and in this country they have created a public opinion which has been quickly responsive to efforts to improve the water supply, the conditions of the streets and roadways, to cultivate trees, to secure proper sewerage and similar important local improvements. We believe, also, that much might be done to create an active professional sentiment favorable to sanitation in all our communities if the members of the Association would communicate brief

articles on the condition of the villages in which they live to the pages of the journal. Such papers would greatly aid the Committee on Public Health in their efforts advance the interests of health reform throughout the State.

STEPHEN SMITH,
Chairman.

THE REPORT OF THE NOMINATING COMMITTEE.

was then presented through its Chairman, Dr. C. A. Wall, Buffalo:

President, Dr. Alvin A. Hubbell, Buffalo, Vice-President, Dr. W. H. Biggam, Brooklyn; Secretary, Dr. Guy D. Lombard, New York; Treasurer, Dr. E. H. Squibb, Brooklyn; Chairman Committee on Arrangements, Dr. I. S. Haynes, New York; Chairman Committee on Legislation, Dr. E. Eliot Harris, New York; Chairman Committee on Library, Dr. J. W. S. Gouley, New York; Chairman Committee Public Health and Charities, Dr. Alexander Lambert, New York; Chairman of Committee on Publication, Dr. J. Riddle Goffe, New York; Chairman of Committee on Nominations, Dr. W. H. Thornton, Buffalo.

Dr. W. H. Thornton having withdrawn from the Chairmanship of the Committee on Nominations, Dr. Charles E. Quimby, New York, was elected to that office by a ballot cast by the Secretary.

On motion of Dr. C. B. Tefft, Utica, the Secretary was instructed to cast the ballot of the Association for the officers whose names had been presented in the report of the Committee on Nominations. The ballot was cast, and they were declared elected.

On motion of Dr. Ferguson the reading of the minutes of this meeting was dispensed with, and the meeting adjourned at 4 P. M.

SECOND DAY.—The meeting was called to order by the President at 10.40 P. M.

Dr. Irving S. Haynes, New York, Chairman of the Committee on Arrangements, delivered the address of welcome.

"MR. PRESIDENT, LADIES AND GENTLEMEN—According to the By-Laws of this Association an address of welcome is assigned to the Chairman of the Committee on Arrangements. In carrying out the spirit of this by-law, it gives me great pleasure on behalf of the New York State Medical Association to bid you welcome to this, the eighteenth annual meeting.

"We meet here for several purposes, not the least of which is to get acquainted with each other. Mutual acquaintance begets friendliness, sympathy and trust. It paves the way for a stronger bond of union between members of the profession which is most desirable, and for which we are all striving. Therefore, let me urge you all to remember we are here for this distinct purpose. Then do not hesitate to speak with a man merely because he is a stranger to you. You will find many things, many interests in common, and you will also find that the more you become acquainted the better pleased you will be with this meeting.

"Again, we are here to learn from the experience of others new methods in the diagnosis and treatment of disease, and ways of ameliorating the condition of sickness. In regard to the literary program we will have to let it speak for itself. Your Committee have tried to do their best. In its preparation, certain principles have guided us in the selection of writers which I believe are just. The first was to secure as far as possible a representative delegation from the entire State of New York. To do this we have been in correspondence with the Presidents, Vice-Presidents and Secretaries of the various district and county Associations. Many of you will remember having received such letters of inquiry asking you to suggest the names of men whom you thought willing, and capable of furnishing interesting papers. I am very glad to say that many names were sent to us and we have obtained the cooperation of these men in the preparation of our program.

"Another principle that to the Committee seemed a good one to follow, was that in the majority of instances men who had contributed for the last two or three meetings of this Association were not asked to participate in the program this year, in order that we might secure as many new writers as possible.

The Committee, following the custom of previous years, engaged the services of a caterer to furnish you with noon and evening luncheons, and you are not only invited, but urged, to remain to these, as it offers you a pleasant social feature and enables you to become acquainted with each other.

"Our annual dinner will be held at the Murray Hill Hotel, and bids fair to be largely attended. We have made a new departure this year in inviting the members to bring the ladies of their households to the dinner. We believe that such a step, while an experiment, will be successful, and we have done it not only to give the ladies a pleasant evening, but also to add to the enjoyment of the occasion by their presence. I am glad to say that of all the letters that I have received throughout the State, there have been only two who strongly objected to this innovation. I would urge those of you who intend to attend the dinner and have not yet secured your tickets, to do so at your earliest opportunity.

"Another point to which I wish to call your attention is that of registration. Please register at once if you have not already done so.

"Those of you who have brought railroad certificates will please turn them in to the Secretary of the Committee in order that they may be properly endorsed and viséd. I will state in explanation that unless one hundred certificates or their equivalents in the shape of return-fare tickets are presented to the Committee, we cannot secure the reduction offered by the railroad

companies. In case the minimum number is obtained, the certificates will be endorsed and ready for distribution on Wednesday afternoon or Thursday morning. Please attend to this as soon as you can, in order to avoid a rush at the last moment.

"Again, in behalf of the Committee, I thank you for your attention, and trust that this occasion will be very pleasant and profitable to you."

Dr. Wisner R. Townsend, New York, read a paper entitled "The Correction of Deformities following Osteitis of the Knee."

Dr. John B. Deaver, Philadelphia, Pa., read a paper on "Appendiceal Fistula," which was discussed by Drs. De Lancey Rochester, Buffalo; F. H. Wiggin, New York; E. D. Ferguson, Troy; Dr. Gibbon, Scranton, Pa.; S. Busby Allen, New York; Parker Syms, New York; J. R. Sturtevant, Theresa; Allen A. Jones, Buffalo; John Edwards, Gloversville; C. B. Tefft, Utica; Wall, Syracuse, and Alfred T. Livingston, Jamestown. Dr. Deaver closed the discussion.

Dr. Samuel G. Tracy, New York, demonstrated an Electrophone for use as an Aid to Deafness.

Adjournment at 12.40 P. M.

The meeting reconvened at 2 P. M. at the call of the Chair.

The following papers were read in connection with a Symposium on Malignant Growths:

"The Clinical Course of Cancers with Reference to Their Resemblance to Inflammatory and Infectious Processes."—By Dr. Albert E. Woehnert, Buffalo.

"The Present Status of the Infectious Theory of Malignant Neoplasms."—By Dr. George Blumer, Albany.

"Intrathoracic Growths."—By Dr. Alexander Lambert, New York.

"The Estimation of the Malignancy of Tumors with Reference to the Reported Cures of the Disease."—Dr. James Ewing, New York.

"The Treatment of Carcinomatous Growths by Caustics.—By Dr. Andrew R. Robinson, New York.

"Malignant Disease of the Nose and Accessory Cavities."—By Dr. Joseph S. Gibb, Philadelphia, Pa.

A vote of thanks was given to Drs. Blumer and Gibb.

"Cancer of the Large Intestine."—By Dr. James P. Tuttle, New York.

"Malignant Disease of the Penis."—By Dr. Henry H. Morton, Brooklyn.

The general discussion was participated in by Dr. S. Sherwell, Brooklyn; Dr. Allen A. Jones, Buffalo; Dr. Stephen Smith, New York, and Dr. John A. Bodine, New York, and the discussion was closed by Dr. Robinson.

The Association adjourned at 5 P. M.

The evening session was opened at 8.15 P. M., with a paper by Dr. Frederic W. Loughran, New York, on "The Daily Medical Inspection of Schools."

It was discussed by Dr. James Lee, New York.

Dr. S. Ormond Goldan, New York, read a paper entitled, "The Ethyl Bromide and Chloride Respectively as Surgical Anæsthetics. Description and Exhibition of Apparatus for Their Scientific Administration." The paper was discussed by Dr. James P. Tuttle.

Dr. Lucius W. Hotchkiss, New York, read a paper entitled, "Perforation of Gastric Ulcer with Report of a Case Successfully Operated upon Sixtv Hours after Perforation."

Dr. Frank Wellington Dennis, Unionville, presented a paper on "The Therapeutic Value of Alcohol as Understood at the Beginning of the Twentieth Century."

Dr. Abram Brothers, New York, read a paper on "Pelvic Inflammation in the Female; Its Diagnosis and Management by the General Practitioner."

Adjournment at 10.30 P. M.

Third Day.—Wednesday, October 23d.

The meeting was called to order by the President at 10 A. M.

The following papers were presented as a Symposium on Arteriosclerosis:

"Arteriosclerosis; Importance, Definition, Etiology and Symptomatology."—By Dr. Charles E. Nammack, New York.

"Cardiac Manifestations of Arteriosclerosis."—By Dr. De Lancey Rochester, Buffalo.

"Management and Therapeutics of Arteriosclerosis."—By Dr. Egbert Le Fevre, New York.

The general discussion was participated in by Dr. Charles E. Quimby, New York; Dr. Sturtevant, Theresa; Dr. James J. Walsh, New York; Dr. Charles G. Stockton, Buffalo; Dr. Frank W. Higgins, Cortland, and Dr. Allen A. Jones, Buffalo. Closing remarks were made by Drs. Nammack, Rochester and Le Fevre.

Dr. Frank W. Higgins, Cortland, read a paper on "Blood Examination from the Standpoint of the General Practitioner."

The paper was discussed by Dr. Richard C. Cabot, Boston, Mass.

Dr. Parker Syms, New York, read a paper on "Conservative Surgery for Tuberculosis of the Lymphatic Glands of the Neck."

The proceedings were here interrupted to give a vote of hearty welcome to the delegates and visitors.

Dr. John Allan Wyeth, New York, then delivered the President's address, taking for his theme "Comments on Some New Surgical Methods."

Adjournment at 12.30 P. M.

The afternoon session was opened at 2 P. M. The special subject for discussion at this time was "The Value of Bacteriological and Pathological Research in Diagnosis, Prognosis and Treatment in Practical Surgery."

Dr. Richard C. Cabot, Boston, Mass., contributed the first paper, which was on "Iodophilia."

Dr. Simon Flexner, Philadelphia, Pa., "Laboratory Differential Diagnosis in Surgery and Dr. Joseph D. Bryant, New York, "Modifications in the Methods of Operative Surgery resulting from Laboratory Research."

On motion, the thanks of the Association were tendered to Drs. Cabot and Flexner.

Dr. Charles E. Quimby, New York, then read a paper on "The Use of the Pneumatic Cabinet in the Treatment of Diseases of the Heart."

It was discussed by Dr. Henry F. Risch, Brooklyn, and Dr. S. A. Knopf, New York.

Major Louis A. La Garde, Washington, D. C., presented a contribution on "Gunshot Wounds of the Hip-joint by Reduced Calibre Projectiles." The paper was discussed by Dr. L. A. Alleman, Brooklyn, and some closing remarks were made by Major La Garde.

On motion of Dr. Van Hoevenberg, the thanks of the Association were tendered to Major La Garde.

Dr. G. N. Jack, Depew, read a paper entitled "Asthma of Blood Origin, and not Nerve or Reflex." The paper was discussed by Dr. George F. Cott, Buffalo.

Dr. Edmund L. Cocks, New York, read a paper on "Acne." It was discussed by Dr. Frank D. Reese, Cortland.

Dr. G. Lenox Curtis, New York, gave a "Demonstration of a New High Tension Electrical Machine and Ozone Generator."

Adjournment at 5.30 P. M.

Fourth Day.—The meeting was called to order by the President at 10 A. M.

Dr. E. D. Ferguson, Troy, read a paper on "Surgical Malposition of the Gall Bladder."

Dr. Pearce, a delegate from the Medical Society of Pennsylvania, was then introduced, and said:

Mr. President and Members of the New York State Medical Association: I come as a delegate from the Keystone State to the Empire State, from the Quaker City to the Greater City. It is with special honor and pleasure that the Medical Society of the State of Pennsylvania has sent its delegates at this time to the New York State Medical Association. That your rapid growth may grow from strength to strength, and that the common bond of fellowship may continue and lead to the placing of the American Medical Association on the pinnacle of success is our wish.

Dr. William G. Le Boutillier, New York, then read a paper on "Differential Leucocyte Count in Fractures."

Dr. J. W. S. Gouley, New York, read a paper entitled "Prostatic Obstruction to Urination; its Remedy by Enucleation of the Diseased Parts." It was discussed by Drs. Parker Syms, New York; E. D. Ferguson, Troy; Eugene Fuller, New York, and Edward Wallace Lee, New York, and the discussion was closed by Dr. Gouley.

Dr. Eugene Fuller, New York, read a paper entitled, "Vesical Emergencies; Their Surgical Management."

Dr. Frederick Holme Wiggin, New York, read a paper on "Uterine Prolapse."

Dr. Charles G. Stockton, Buffalo, in conjunction with Dr. Albert T. Lytle, of the same city, presented a paper on "Typhoid Cholecystitis, with Report of Cases." The paper was discussed by Dr. Rochester, Buffalo; Dr. Allen E. Jones, Buffalo, and Dr. Ferguson, Troy, and the discussion was closed by Dr. Stockton.

Dr. Thomas F. Reilly, New York, presented a paper, entitled "What Percentage of Gouty and Rheumatic Patients develops Fatal Pulmonary Phthisis?"

At the close of this morning session, Dr. Wyeth announced that he must leave in order to join others in the consideration of certain matters in connection with the next meeting of the American Medical Association. Before resigning the Chair to his successor, Dr. Hubbell, he said: "I wish to thank you sincerely for the great honor I have enjoyed as President of this Association, and for your generous support given to my efforts to fulfil the obligation thus imposed upon me."

The Association reconvened at 2 P. M., Dr. Hubbell, presiding.

Dr. E. D. Ferguson, Troy, presented a report of "A Durham Tube in the Right Bronchus."

Dr. Wilbur B. Marple, New York, read a paper, entitled "Resection of the Cervical Sympathetic in the Treatment of Glaucoma; its Present Status." The paper was discussed by Dr. J. J. Walsh, New York, and Dr. Hubbell, Buffalo, and the discussion was closed by Dr. Marple.

Dr. H. Van Hoevenberg, Kingston, read the "Report of a Case of Gunshot Wounds of the Intestines." It was discussed by Dr. R. H. M. Dawbarn, New York.

Dr. Augustin H. Goelet, New York, presented a paper on the "Technique and Method of Inserting the Fixation Sutures for Prolapsed Kidney." It was discussed by Dr. George M. Edebohls, New York; Dr. Howard Lilienthal, New York; Dr. Willy Meyer, New York, and Dr. R. H. M. Dawbarn, New York, and the discussion was closed by Dr. Goelet.

Dr. J. R. Sturtevant, Theresa, presented the report of "A Case Simulating Glanders."

Dr. John Edwards, Gloversville, moved that the warmest thanks of the Association be extended to Dr. Frederick Holme Wiggin, the retiring Secretary, for his great labors for the benefit of the profession. Seconded and carried unanimously.

Dr. C. A. Wall then formally introduced the newly elected President, Dr. Alvin A. Hubbell, Buffalo. Dr. Hubbell said:

"Mr. President, Ladies and Gentlemen—Your franchises have bestowed upon me a great honor. You have elevated me to a lofty position in the affairs of the profession of our State. I am deeply mindful of these, and I should accept them with disheartening misgivings, did I not know that I should have, to support me, the strong arms of those who have brought the Association to its present high degree of success. Your action in placing me here is not, I take it, so much in recognition of any services that I may have rendered the Association (for these have been very meagre and very humble), as in the hope, that by so doing, the special interests of the profession of the western part of the State may be fostered and enlivened. It seems to me that you hereby commission me to this particular task, and with the preservation of my health and with the assistance of the loyal confrères at home, I pledge myself to its execution. In doing this, however, I shall not forget to apply myself, so far as is within my power, to the interests of the Association at large.

"The year before us is one of great importance to this Association. The American Medical Association is to meet at Saratoga next June under its auspices. The physicians of this State should register there as members almost in a body. Save one or two, the American Medical Association is the largest National medical organization in the world. Its sections constitute the largest and most helpful special organizations in the United States. No progressive physician can afford not to become an active member. This cannot be done, however, according to the best interpretation of the new Constitution of the American Medical Association, except through accredited certification of affiliated State societies; and the only Society in this State that is now or will be in the future affiliated with it, is the New York State Medical Association. Then let us, one and all, seek to impress this fact upon our neighbors, and without hostility or controversy, endeavor to enlist them with us and by a process of absorption wipe out the lamentable division of the profession of our State, and thus bring it once more into unity.

"With due regard to the best interests of our profession, and with kindly, persuasive, and persistent efforts on the part of all we ought to carry to the American Medical Association next June a State membership of at least three thousand.

Members, I beg your coöperation with the officers of this Association, to the end of enlarging our membership as rapidly as possible; and in the performance of my duties I crave your indulgences for any short-comings I may commit—they will be of the head and not of the heart.

"I again thank you for the confidence you have reposed in me."

Dr. Wall then introduced the newly elected Secretary, Dr. Guy D. Lombard, of New York. Dr. Lombard said:

"It is my desire to express my sincere appreciation of the honor done me in electing me as Secretary of this organization, and it only remains for me to tell you that it will not be, at least, an intentional fault if I do not carry out the duties of the office thoroughly and conscientiously, nor will it be for lack of a brilliant example of what a Secretary should be in the person of my predecessor."

On motion of Dr. Van Hoevenberg a vote of thanks was given to the retiring President, Dr. Wyeth, for the efficient manner in which he had attended to the affairs of the Association during the past year.

On motion of Dr. E. Mayer a vote of thanks was given to the Chairman of the Committee on Arrangements, Dr. Irving S. Haynes, for the very thorough and capable manner in which he had conducted the business of this meeting.

Dr. C. A. Wall, Buffalo, said that, as a member of the New York State Medical Association living outside of New York City, he desired to rise and voice the feelings of those living up the State, and to express to the members resident in the City of New York the pleasure that they had felt at the cordial hospitality extended to them by the Committee of Arrangements and resident members. He wished to personally thank the latter. He then moved a vote of thanks to the members residing in New York City, which was carried unanimously.

Dr. J. R. Sturtevant, Theresa, said that as another member from away up the State he would most heartily second what had been said by the last speaker. He thought if he had been offered the choice of Heaven or New York he might, perhaps, have taken an option on New York.

Dr. C. B. Tefft, Utica, said that as a member living between the two extremes just represented, he would add his thanks and expressions of appreciation to those already presented. The members in Oneida County would keep a warm place in their hearts for the members living in New York City.

On motion of Dr. Mary Gage-Day, Kingston, a vote of thanks was extended to the retiring Standing Committees not included in previous motions.

Dr. J. H. Burtenshaw, New York, spoke a few words about the Association Journal. He thought that while the interest in this journal was unquestionably growing, many did not understand some of the difficulties under which the Publication Committee had labored. All the work so far accomplished had been done very willingly and cheerfully. What was especially wanted now was the coöperation of every individual member of the Association. The committee wants expressions of local opinions, also local news, and if such items were supplied the Journal would be made still more interesting.

The Association was declared adjourned at 4.20 P. M.

Original Articles.

THE ESTIMATION OF THE MALIGNANCY OF TUMORS WITH REFERENCE TO THE REPORTED CURES OF THE DISEASE.*

BY JAMES EWING, A.M., M.D.,
of New York.
Professor of Pathology Cornell University Medical College.

BARRING the great topic of etiology, there is perhaps no question relating to carcinoma in which greater diversity of opinion exists to-day than in regard to the ultimate results of the surgical treatment of malignant tumors. Not long ago we were informed that a well-known operator was securing 40 to 50 per cent. of permanent cures in carcinoma of the breast, while inside information regarding the statistics of a large hospital in New York indicates that hardly 5 per cent. of permanent cures can be traced for three to five years in the service of one of the most experienced and technically skilful operators in America.

Somewhere between these extremes all the majority of reported series of cases in this particular field, the natural and undoubted tendency being to record a series if the results are favorable and to say nothing if they are unfavorable. It can hardly be denied that if one wishes to convince himself of a favorable outlook for the operative treatment of cancer he should read what surgeons write, and that one who takes a gloomy view of the subject will usually find ample grounds for pessimism if he will talk to very experienced surgeons in private. I was astonished recently to hear a surgeon of national reputation say that he didn't feel sure that he had ever cured a case of cancer of the uterus. A laryngologist of this city is reported to have seen operations upon eighty cases of epithelioma of the larynx, with recurrences in all but one instance. A patient referred to him was told that he had one chance in eighty, while the surgeon who was to perform the operation said that he had one chance in ten.

In what way are these widely different opinions, views, statements, and actual results to be explained? How many cancers are curable and how many are not? Are the wide excision of skin, the removal of a pound of flesh, the violent search in every direction for involved lymph nodes sufficient to fully eradicate all traces of the neoplasm and to permanently arrest the process in the hands of one operator in any considerable proportion of cases in which a slightly less radical procedure by another operator would have been followed by recurrence? Can the difference between 5 and 25 per cent. of cures in a large series of cases of cancer be referred to variations in surgical treatment, as now practised by competent surgeons?

From an experience of about ten years in the gross and microscopical study of malignant tumors as received from the surgeon and found in the cadaver, I believe there is very little difference in the results obtained in this field by competent operators, and it is the object of this paper to consider from the pathologist's standpoint some of the factors responsible for the diversity of opinion regarding the curability of cancer.

On the present occasion it will be necessary to limit these considerations to a single group of tumors, and cancer of the breast will best serve the purpose.

Of this group of tumors, as of most others, it may be said that their malignancy, and therefore to a great extent the results of operations, depend first and chiefly upon their histological structure.

It is an unfortunate result of the relations existing between surgeon and pathologist that neither of the two is able to associate to a sufficient extent the histological structure of a tumor with the final results of operation upon it. The former sees the patient and the tumor in the gross, and has the opportunity of following the fate of the case. The latter receives the more or less misused specimen or scrap of the same, with a meager epitome of the clinical history, and, contenting himself with a microscopical study of the new growth, brief or extended, according as the histology strikes him as interesting or ordinary, hurriedly reports to the surgeon, "carcinoma." As a rule the surgeon does not insist upon learning any more, unless it be concerning the condition of the lymph nodes. Occasionally the pathologist adds the vague description adeno-carcinoma, large alveolar or small alveolar, or encephaloid, or scirrhus. Further than this I do not know that any descriptive classification of cancer of the breast exists.

Nevertheless, carcinoma of the breast arises from the glandular epithelium, from the epithelium lining ducts, and from the cutaneous structures. It develops in early adult life, during or shortly after lactation, at the menopause and in the atrophic breast. Some malignant epithelial tumors pass through a more or less definite and prolonged stage of adenomatous type, others exhibit distinct malignant anaplasia in their earliest minute foci. Some follow chronic productive mastitis, others are first noted after acute exudative inflammations of the gland, or after traumatism. Now, there is good *a priori* ground for supposing, and numerous observations to prove, that all of the above factors have more or less determining influence on the rate of growth and general malignancy of cancer of the breast. Yet in few of the reported series of operations on this group of tumors do we find any systematic attempt to classify the growths according to their exact structure and cell of origin, or to consider the possible influence of other of the above important conditions. It is possible, in the time allotted to me, to consider only some of the points in the histological structure and origin of these

*Third paper read in the Symposium on Malignant Growths at the Eighteenth Annual Meeting of the New York State Medical Association.

tumors which seem to influence their general malignancy.

(1) Tumors of the skin of the breast have sometimes been classed with glandular carcinoma in reports of the operative treatment of cancer. Of this group it may be said that all are distinctly less malignant than is the true carcinoma.

Simple epithelioma is the most common representative of the class. It may show moderate anaplasia, producing pearls with large flat epithelial prickle cells and hornified centers. The malignancy of such a tumor is not to be compared with that of carcinoma. Thorough excision in any but the very advanced stages can confidently be expected to effect a permanent cure, as the lymph nodes are usually not involved until ulceration has occurred and the case has reached the surgeon. Or the epithelioma may assume the plexiform type, with marked anaplasia, exhibiting smaller cells without spines, with little or no tendency to hornify and with greater tendency to infiltrate deeper tissues, and extend to lymph nodes. This type, while more malignant than the former, is far less serious in prognosis than is true carcinoma, and ought to be separated from the latter in estimating the results of operation.

Paget's disease is a condition usually associated with a type of epithelioma of the skin of the breast of somewhat variable structure. Its cells are rather small and they do not possess spines or tend to hornify, but grow in narrow cords in the lymph spaces of the cutaneous and subcutaneous connective tissue and progressively involve the discharging ducts. In its early stages it ought not to recur after complete excision, but in some cases the lateral infiltration of the skin is very wide before any considerable tumor has attracted attention, and very extensive excision of skin is then required. I have recently seen two cases of Paget's disease or of carcinoma of the skin, in which there was a small globular tumor about the nipple, while the infiltration of the skin extended over an area five inches in diameter. In both cases the line of incision passed through infected skin, and recurrence in the line of incision was of course immediate. Nevertheless Paget's disease and its sequalæ are relatively benign as compared with true carcinoma, and cannot be classed with carcinoma in estimating the results of operation.

There remains in this group the less common forms of reticular epithelioma and adenoid cystic epithelioma, which are comparatively benign.

(2) *Endothelioma of the Breast.*—I have never seen in the breast an undoubted example of this common variety of tumor. If it exists it probably conforms to its characters in other situations, and may be expected to show a tendency to become encapsulated, to grow to considerable size without causing cachexia or ulceration, to long spare the lymph nodes, and not to recur after operation. Several rather large epithelioid celled tumors of long standing, showing the above characters, have from time to time come under observation, but their exact nature was uncertain and it seems best to regard them at present as exceptional forms of glandular carcinoma.

(3) *True Carcinoma.*—It is everywhere recognized that the grade of malignancy in this most important and frequent form of tumor of the breast varies within wide limits. In my own experience this variation extends from the malignancy exhibited by one case in which a recurrent globular tumor, 6 cm. in diameter with wide metastases, developed and caused death within four months after the detection of the original growth, to the comparatively harmless course of another large partly encapsulated growth, showing considerable mucoid change, which was removed after ten years, and before it had involved a single axillary node.

Unfortunately for the value of the microscopical test the general structure of these two neoplasms was very similar—that of large alveolar carcinoma, although the slowly growing tumor showed slight anaplasia and a marked grade of mucoid degeneration, while in the other the rapidly growing cells were well nourished and their malignant tendencies were not dissipated by mucoid degeneration.

Of the factors determining the result of operation on true carcinoma of the breast, probably none is more generally important than the duration of the disease before it reaches a surgeon. The importance of this fact is recognized in the almost universal rule to extirpate without delay every suspicious nodule that is detected in the breast. Yet, for the purpose of comparing the results of operation, it is very difficult to form an estimate of the age of a carcinoma. Often the deep axillary nodes are extensively involved when palpation of the breast leaves the very existence of carcinoma doubtful.

A rapidly growing carcinoma, developing before the menopause, may in a few days develop as large a tumor as a scirrhus may show in as many years. Obviously no proper estimate of the results of operative procedure can be reached by associating these two distinct groups of carcinoma. The age of a carcinoma can therefore figure in the prognosis only in connection with histological structure and rapidity of growth. Given two carcinomata of identical structure, the relative prognosis will vary almost exactly with the duration or size of the growths.

Another less generally recognized factor connected with the age of a carcinoma and disturbing the uniformity of results of operation has become clear in my experience. I have several times examined benign processes in the breast—fibroadenoma, cystic adenoma and chronic mastitis—in which one of several sections exhibited a small carcinomatous focus. These breasts were removed on account of benign processes, very early carcinoma being accidentally discovered, but the cases are now figuring as cures in a series of operations upon carcinoma.

In general, considering the wide variations in

the rapidity of growth of carcinomata, it seems hardly possible to give any accurate estimate of the duration of these tumors. Certainly the histological signs of rapid or slow growth furnish the most reliable indications, and if we are to determine more precisely the prognosis of different carcinomata, the surgeon must secure full data of the clinical features of the case, while the pathologist must report minutely the grade of anaplasia of the cells, the probable point of origin and the particular structure of the tumor.

These considerations lead directly to a brief discussion of the structure and origin of the true carcinomata of the breast, especially as these features bear on prognosis.

First may be mentioned a group of tumors which retain more or less of the adenomatous type. These new growths, which are properly called adeno-carcinomata (not alveolar carcinomata), are comparatively rare and are encountered under at least three distinct conditions.

First Type: There is a carcinomatous multiplication of cells in the epithelial tufts projecting into large cystic adenomata of the breast. Usually these tumors are removed at an early stage of the malignant process, and the operation ought in most cases to be followed by permanent cure.

Second Type: Adeno-carcinoma arises in a tumor composed of many dilated spaces which are probably intra-lobular ducts in which the excessively multiplying cells are confined within the original alveolus. The alveoli are commonly distended by colostrum coming down from the secreting alveoli, which aids in the distention of the acini and rapidly produces a large tumor. Such tumors seldom involve lymph nodes until their prominent size has brought them under the knife and their prognosis is good, while other carcinomata developing at this age and increasing as rapidly are very malignant.

Third Type: Adeno-carcinoma arises apparently in the long quiescent gland by the increase in number and tortuosity of the secreting alveoli. Such a process yields large lobules containing an excessive number of alveoli in section, while the multiplication of cells often bursts the basement membrane, throwing the tumor into the class of adeno-carcinoma. I have no knowledge of the fate of such tumors, but the histological structure indicates a moderate grade of malignancy.

For the entire group of adeno-carcinoma of the breast, of which the above types are probably not a complete synopsis, it must be strenuously urged that they be separated from pure carcinoma in prognosis and in estimating the results of operation.

There remains the group of pure carcinomata of the breast commonly described as small or large alveolar, or encephaloid or tubular carcinoma, and the distinct sub-group of scirrhus.

These tumors arise either from the secreting cells or from the lining cells of ducts. Usually it is possible to trace the origin from one or the other of these two sources. Carcinoma of the ducts is apt to be tubular, the cells often exhibiting a low cuboidal form, a relatively acidophile staining tendency, and are arranged in uniform rows as though still retaining their proper office of lining cells. Yet the great majority of diffuse carcinomata of the breast arise from the epithelium of the ducts. Evidences of lacteal secretion are wanting, although simple fatty degeneration of the cells is common, and the spaces are often distended by colostrum from above. I have encountered some early stages of this type of carcinoma in which considerable lengths of the affected ducts could be followed in the section, showing throughout a carcinomatous multiplication of the lining cells. In other more numerous cases an origin from duct-epithelium was probable, but could not be positively demonstrated. There is a very proper tendency to limit the term tubular carcinoma to growths developing from the lining cells of ducts.

Carcinomata arising from the alveolar or secreting epithelium (alveolar or gland-cell carcinoma), on the other hand, generally exhibit some prominent characteristics. First of these is the tendency of the cells to maintain an arrangement in large or small alveoli with more or less pervious lumina. A basement membrane is of course wanting. Second tumor cells derived from secreting epithelium usually retain a trace of their secreting function, especially when the tumor develops before the menopause. Small plugs of tumor-colostrum may then be demonstrated lying in the cell masses, and their presence is a fairly reliable indication that the tumor has developed from the secreting epithelium. Now, while the separation of the duct-cell and gland-cell carcinomata is an interesting histological pursuit which pathologists do not systematically pursue, it is not probable that its results can establish any great differences in prognosis between these types of carcinoma. Both types are extremely malignant. Nevertheless, it is just in these common forms of very malignant tumors that the recognition of slight variations in structure determining equal variations in malignancy may often serve to foreshadow and explain the varying results of operation upon the breast. If there is any difference in their dangerous qualities it is usually against the tumor developing from duct-epithelium.

I have seen several of these duct carcinomata removed very early, but have seldom learned of a permanent cure by operation. The axillary lymph nodes are very early involved, and a history of recurrence has nearly always been obtained when I have been able to follow the case. It is in this type of carcinoma that an extension through the lymphatics measured by inches may very likely occur in a period measured by months or even weeks, although the original tumor may not appear to be growing rapidly. Not infre-

quently the primary focus in the breast is so small as to be difficult of palpation, while the lymphatics leading to the nearest nodes are tightly distended by a dense growth of diffuse carcinoma. Nor does there appear to be any capacity of the tissues of the breast to limit the growth by encapsulation.

Alveolar carcinoma, on the other hand, exhibits somewhat greater variety of structure and greater differences in prognosis. A lesser grade of malignancy may be expected to mark tumors in which the alveolar tendency is prominent, where the cells divide these energies between multiplication and secretion, and especially where mucoid degeneration destroys many cells which would otherwise continue to multiply. This last factor has been known even to bring to a standstill the growth of a glandular carcinoma, and if we could artificially induce mucoid degeneration of epithelial tumor cells their malignancy might be enormously diminished. Many such tumors are partly restrained by the development of a capsule which saves the skin above and the muscle beneath, although of little avail against lymphatic extension. Extreme malignancy must be ascribed, on the other hand, to the glandular carcinomata in which the cells show little tendency to maintain a distinct alveolar arrangement, or even grow diffusely, where the secretory function is entirely lost, and where multiplication of cells is not interrupted by degenerative changes, and where the inflammatory process about the periphery is exudative rather than productive.

With both tubular and alveolar carcinomata the age of the patient and the relation of the growth to pregnancy, lactation and the menopause are of prime importance in determining prognosis. The most malignant cancers of the breast are alveolar carcinomata, first noted during or after lactation, while there is an increasing tendency toward the scirrhus type as the subjects pass the menopause.

With scirrhus carcinoma the grade of malignancy is always less than with the tubular variety and less than most of the alveolar types. Yet the frequent failure of the fibro-carcinoma to develop a prominent localized tumor secures for many of them immunity from operation until there is extensive involvement of the lymph nodes. Hence the duration of a fibro-carcinoma is the chief factor determining the result of operation.

In all this field the coöperation of surgeons and pathologists is urgently called for at the present day, in order to determine more accurately the relation of prognosis to histological structure in these two main classes of carcinoma of the breast. If a conscientious effort is to be made to establish an accurate prognosis for epithelial tumors of the breast, now frequently passing under the general term of "cancer," it is obvious that rigid histological distinctions must be recognized, as separating these tumors into various classes. All tumors of the skin and its appendages must be kept apart and their malignancy estimated according to the rules known to govern their behavior in other situations. The possible existence of endothelioma of the breast with its rather low grade of malignancy must be considered. The various forms of adeno-carcinoma must be distinguished and given full credit for their tendency to long spare the lymph nodes. For the alveolar carcinomata the varying grades of anaplasia must be carefully noted and held as unerring indications of the inherent malignancy of the tumor process. Especially should the uniformity of the alveolar structure, the patency of lumina, the persistence of secretory powers, the development of a capsule and the character and extent of degenerative processes in the tumor cells, be regarded as features affecting malignancy and prognosis. If carcinoma of the ducts shows especially high degree of malignancy this origin should be determined wherever possible. The extent to which a fibrous hyperplasia succeeds in converting the growth into scirrhus carcinoma should also secure consideration. Finally, the general circumstances surrounding the case, the age of the patient, the relation to pregnancy, lactation, and the menopause, and the more distant influence of origin after traumatism and mastitis should always figure in due proportion in the estimate. If some one will report a series of one hundred operations for cancer of the breast with full attention to these details, his readers will be able to construct for him a very accurate table of the permanent cures and the slow or rapid recurrences.

A VERY interesting case of tuberculosis has just come to the attention of medical experts in Chicago. A large snake has died of tuberculosis, a disease so rare among cold-blooded animals. For several months a large African boa-constrictor in the Academy of Science has refused food. Its suffering was so great the authorities decided to chloroform the reptile in order to end its misery. To the great astonishment of the operating scientists at the autopsy the bronchial tubes, lungs and liver were entirely filled with the true germs of tuberculosis.—*Yale Med. Jour.*

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ONONDAGA COUNTY MEDICAL ASSOCIATION.—The October meeting of the Onondaga County Association was held at the residence of Dr. J. S. Kaufman, at Syracuse. In the absence of Dr. H. D. Didama, the meeting was presided over by the vice-president, Dr. Adelbert Head. Dr. Didama sent a letter to the members, resigning the office of president, owing to ill health. The resignation was accepted with regret, and Dr. Head was elected to the vacant office. Dr. J. S. Kaufman was then elected vice-president. A committee of three, composed of Drs. Kaufman, Campbell and Moore, was appointed to draw up a notice explaining the objects and needs of the county association. Dr. Kaufman then gave an entertaining talk on the subject of syphilis, and the meeting adjourned.

ARTERIO-SCLEROSIS; IMPORTANCE, DEFINITION ETIOLOGY AND SYMPTOMATOLOGY.*

BY CHARLES E. NAMMACK, M.D.,
New York;
Professor of Clinical Medicine, Cornell University Medical College; Visiting Physician to Bellevue Hospital, New York; Attending Physician for Out Patients, New York Hospital.

IMPORTANCE.—To appreciate properly the importance of arterio-sclerosis, we must begin by divesting ourselves of the idea that the blood vessels are mere tubes for the conduction of the blood. They are not mere appendages of the heart, but the heart is rather an appendix to the blood vessels, for low in the scale of life the circulation is carried on without a heart. The study of the blood vessels is the study of the ultimate processes of life, for not only have they the mechanical functions of contraction and dilatation, but they have also the living functions of oxygenation, nutrition and all of that wonderful and little understood group of changes which are classified as metabolism. Nature, as yet, works here in her secret laboratory and we must perforce be content with the study of changes visible to the eye.

The time when pathological changes begin in the vascular walls of an individual, marks for him the beginning of his decline and decay, irrespective of his length of years. One man may be old at thirty, another young at fifty, and the time of one's death may be precipitated by causes which accelerate or intensify these pathological changes. So many of these causes enter into the lives of working physicians, that the importance of a careful study of this subject is manifest, that our own days may be long in the land.

It will be recalled that the walls of the vessels are three in number. The outer wall, chiefly fibrous, carries the nutrient vessels and gives strength to the structure. The middle wall is muscular and elastic; it receives the nerve supply, and is the essential factor in the regulation of the circulation and the distribution of the blood. The inner wall is a layer of apposed flat cells, endowed with a peculiar kind of osmotic function which ministers to metabolism and forms part of the phenomena of life, in the capillary vessels.

The influence of the nervous system is shown in its driving power, not only on the heart, but also on the vessels themselves in whose muscular walls there are "local hearts," and these local hearts regulate local pressure and have, moreover, immediate connection with the central heart. External influences, such as cold, heat, abdominal massage and hydriatic methods, also influence very markedly the smallest vessels. The vaso-motor centre has been located in the medulla, but the influence of the cerebrum itself is shown in the phenomena of blushing, pallor and the anomalous circulatory changes of hysteria. Pathological conditions influencing the vessels are many and varied. Bright's disease causes hypertrophy of the heart by irritation of the vaso-constrictors by the excrementitious substances accumulating in the blood in consequence of defective renal excretion. Hysteria causes marked and sudden changes by an abnormal mechanical irritability of the cutaneous vessels, as seen in dermographism, blue œdema, subcutaneous hemorrhages, and the free hemorrhages corresponding to the wounds of Christ.

All this change does not depend upon muscular contraction and dilatation. Much of it is caused by the action of the cells which compose the walls of the capillaries; this shows that the blood vessels are not inert tubes, but highly differentiated organs doing part of the work of life. With this preliminary understanding, we may consider that pathological state known as arterio-sclerosis, or more correctly, as arterio-capillary fibrosis, the name originally given it by Gull and Sutton in 1872.

Definition.—Arterio-sclerosis is a hyaline degeneration of the structural elements of the arterial wall, with connective tissue substitution, hyperplasia, and subsequent contraction with induration, whereby the characteristic functions of the vessel wall, retention, absorption, metabolism, with the power of expansion and contraction, are weakened and lost. The hyaline process is usually associated with atheromatous and often with chalky and fatty changes. Atheroma may be regarded as the physiological form of thickening of the arterial wall, and arterio-sclerosis the pathological, but arterio-sclerosis may exist without atheroma and atheroma without arterio-sclerosis, though frequently both are manifested in the same subject. Whether the first change begins in the blood, or in the blood vessel wall, or in the nervous system, cannot be determined as yet, but the tendency of modern opinion is to locate the origin of arterio-sclerosis in the blood.

The effect of arterio-sclerosis shows itself first in the impairment of contractility; later, in weakening of elasticity and osmosis and consequent interference with metabolism. Next in the escape of fluid, constituting the various dropsies, and the exudation of albumin from the walls of the vessels of the Malpighian bodies. Finally, in the failing nutrition, emaciation and marasmus which mark the terminal stage. The increased resistance in the vessels throws extra work upon the heart, which first hypertrophies and then dilates. But if the heart continues strong and the vessel grows weak, we may have distention of the vessel wall (giving aneurysm) or rupture, causing apoplexy. Thus the arterial system, which leads the van in the development of the body, is also that upon which the finger of decay is earliest laid. The assault of death begins at the circumference and ends at the cen-

*First paper read in the Symposium on Arterio-Sclerosis at the Eighteenth Annual Meeting of the New York State Medical Association.

ter, and though we cannot prevent the sapping of the outworks, we can reinforce the citadel, and thus we are often able to postpone the ultimate surrender. But it is sometimes impossible to foretell whether the enemy will first storm the heart, the kidneys, or the brain.

Etiology.—The causes of this condition may be considered under the headings of heredity, age, sex, alcohol, syphilis, gout, rheumatism, certain acute infections, high living, and hard work. In Osler's terse English, the onset may be said to depend, in the first place, upon the quality of arterial tissue (vital rubber) which the individual has inherited, and secondly, upon the wear and tear to which he has subjected it.

Age is a very indefinite expression. That a man is as old as his arteries may be a trite saying, but it is true. It is failing arterial nutrition that produces advancing age, and cuts off most men's chances of reaching a century of existence. The habits largely influence the production of arterio-sclerosis, however, and give to lives of self-denial or of self-indulgence their corresponding reward of longevity or punishment of short life. Of course the gross alteration of atheroma is undoubtedly a disease chiefly of middle and advanced life, but the finer changes of arterio-sclerosis may be determined much sooner, even in childhood and early youth. In fact, there is no doubt that individuals are born differing in the thickness and strength of arterial walls, as much as in structure of other organs. Since men are more frequently affected with alcoholism, syphilis, gout, etc., and are subject to more mental and physical strain than women, it follows that the preponderance of cases occurs in the male sex.

Alcohol acts in many ways to bring about arterial degeneration. First, it over excites the heart, so that the vessels are subjected to greater strain; second, it disturbs digestion, causes liver cirrhosis and kidney insufficiency which load the blood with poisons; third, alcohol is itself a poison to the blood.

Syphilis causes so much thickening of the inner wall of the vessels, as to lead to great diminution, or final obliteration, of their calibre. It may also deposit gummatous nodules in the outer wall. Syphilitic changes seem to show a predilection for the brain arteries, especially for the brain that has been weakened by other injurious influences. Syphilis sometimes produces, besides the endarteritis obliterans, a circumscribed granulation tumor (syphiloma) in the walls of arteries and veins. Syphilis attacks the brain vessels by preference because syphilitic arteritis is localized in arteries supplied with lymphatic sheaths.

Certain acute infectious diseases, especially typhoid fever, malaria, influenza, scarlet fever and diphtheria, may lead to arterio-sclerosis, either by injuring the vaso-motor nerves and thus leading to changes in the vessel walls, or by directly affecting the endothelium by their specific micro-organisms or toxins.

Chronic diseases, like gout, rheumatism, saturnism, and diabetes, are frequently attended by arterio-sclerosis or atheromatous changes in the vessels. Toxins, like ergot and lead, produce protracted spasmodic contraction of the smallest vessels, whereby the blood pressure is increased and extra work thrown upon the heart and large vessels.

Overfeeding and drinking induce a simple plethora of the vessels but, in addition, load the blood with toxins in the case of high livers with sedentary habits. Yet, as an initiative, there must be peripheral obstruction to produce hypertrophy of the heart, because Strassburg geese may be stuffed to repletion to supply the market with foie gras, or young porkers fattened for the butcher, without producing cardiac enlargement. Hard work acts by raising the blood pressure and subjecting the heart to hypertrophy and the vessels to strain. This is especially true if the work be accompanied by depressing psychical emotions, or accomplished under circumstances of prolonged mental and physical strain. The labor we delight in physics pain, yet which of us has not felt the increase of his arterial tension and the booming of his heart, when, after a long night's vigil by the bedside of a parturient primipara, the time had arrived to assist Nature's failing efforts. It is not work, but worry, which leads to premature senescence. Yet how little the public credits us with worry about our work. How many believe that men become but specimens in our eyes, and that there is no room left in us for ministry to the agony of hearts whose only disease is grief. Yet which of us has not seen some great leader of our profession, whom forty years of hard practice has not yet hardened, with moistened eye and blanched cheek, forcing himself to say that for some beloved relative science had no remedy. Sleepless nights and anxious days, hours of tense apprehension, the exertion of almost superhuman ingenuity to relieve pain, are alike the portion of our rural William MacLures and of our city brethren. Few indeed have the opportunities, few also have the cares and strain of a good physician who is also a good man. And arterio-sclerosis, the cause, not the effect, of advancing age, finds its root in these. The death rate of medical men, in New York and Brooklyn, from 1884 to 1892, was exceeded only by that of saloon keepers, who are intemperate; by that of butchers, who are gluttonous; by that of quarrymen, who are exposed to the dangers of explosives, and by that of the most underpaid of factory operatives. And of those who died, thirty-five per cent., or more than one-third, died from the threefold sequela of arterio-sclerosis; that is, from Bright's disease, apoplexy, and heart disease. As against this showing, the death-rate from these causes was only *twenty-five per cent.* among all the male adults in New York City, including all

the tramps, vagabonds and drunkards who drift into the city to die. Arterio-sclerosis, then, is *pre-eminently* the doctors' disease.

Symptomatology.—The clinical history of arterio-sclerosis is not the mere story of the past few weeks, but comprises the life history of the patient from his cradle, and often includes that of his forefathers also. The symptomatology sometimes makes its diagnosis easy and certain; sometimes only presumptive; sometimes impossible. The disease may be extensive and show no external signs whatever. Or it may be distinctly indicated by the hardness and serpentine course of a radial, temporal or other accessible artery. Latent arterio-sclerosis may require for its detection an increase in the blood-pressure discernible only by instruments of precision, like the sphygmometer, arteriometer, or the sphygmograph. The disease may be *latent* for a long time, and the symptoms which eventually appear will depend upon the organ which is most affected. Thus, when the *aorta* suffers, we may have aneurysm with its accompanying train of symptoms. When the *coronary arteries* are implicated, we have heart failure, arrhythmia, and stenocardia. Affection of the bronchial and intercostal arteries may give weak respiratory efforts, defective expansion of the chest, emphysema of the lungs. When the process is general, arterio-capillary fibrosis of Gull and Sutton, or when it involves large organs and, by increasing blood pressure, throws extra work upon the heart, we have hypertrophy of that organ, giving place later to dilatation, each condition giving its characteristic symptomatology.

Sclerosis of the coronary artery announces itself by palpitation after meals, dyspnœa after slight effort, oppression over the upper part of the sternum or a sharp pain the left arm, which is at first relieved by cessation of muscular effort. Later on, attacks of true angina pectoris may set in. Arterio-sclerosis produces nowhere more serious change than in the kidney, leading to cirrhosis with its classical signs, to-wit: abundant urine of low specific gravity, little albumin, hypertrophied heart. Brain symptoms at first require keen observation, or rather keen perception on the part of the patient himself. Earlier fatigue, disinclination to effort, especially to the physical effort which has perhaps made the man successful in life, irritability, alteration of disposition, headaches in crowded assemblies or in the study, headache after the very moderate use of alcohol, tobacco or coffee, all indicate the point where the habits of life must be revised and corrected, where the individual must take in sail. The city doctor of forty years of age must consider selling his horse, abandoning his dinner glass of wine, cigar, or coffee, and spending more time in the open air. His summer vacation must be longer and must be spent in some place where he will firmly decline to infringe upon the practice of the local practitioner. The pursuit of the elusive golf ball may be taken up in lieu of the still more elusive pursuit of fame and wealth. Open air opens arteries better than iodides do. Night work, if possible, must be handed over to some younger man with more elastic arteries. It is by securing these advantages, and turning them to the good, that vital decline is arrested, and chronic ailments remedied when that is possible, rather than by the unguents, the hot baths, and the elixir vitæ, by which our forefathers sought to emolliate the rigidity of age, and to add a fresh stock of vital force to that which was fast wearing away.

Herbert Spencer's definition of life, to-wit, that it is "the continuous adjustment of internal relations to external relations," while not answering all the problems of our inquiring reason, is yet practically sufficient for the physician, who deals only with the physics involved in life.

By adopting these measures, one affected may hope to escape the advanced brain symptoms of the process. These are, weakening of the mental faculties, vertigo, insomnia, transitory speech disturbances, mental disturbances, melancholy, irascibility of temper, or perhaps an abrupt closure of the scene with apoplexy.

In the vessels of the extremities, coldness of the surface, rheumatoid pains on walking a short distance; later, changes in the color of the skin and perhaps gangrene may be observed. Raynaud's disease is sometimes referred to this cause.

I have endeavored to present here, concisely, what is given in the writings of the authors, references to which are hereto attached, but I am indebted chiefly, almost wholly, to the comprehensive article by James T. Whittaker.

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THE CLINICAL COURSE OF CANCERS IN RELATION TO THEIR RESEMBLANCE TO INFLAMMATORY AND INFECTIOUS PROCESSES.*

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CANCER is being considered in all its phases to-day, and it has fallen to my share to say a few words on the clinical side of the subject. The amount of cancer literature is appalling and shows with what earnestness the profession has thrown down the gauntlet to give battle to this unconquered dragon.

This ubiquitous disease, which is no respecter of age, sex, or person, is at present of doubtful cause. Is cancer an infection, or not? is the burning question. If an infection, is it animal or vegetable in nature? Cohnheim's inclusion theory, which has stood for years, is now being assailed. When one thinks of the strides that have been made in the past twenty years, especially in laboratory methods, he is encouraged to hope that perhaps we are on the brink of as great a revolution as that brought about by the germ theory.

The anamnesis shows that environment plays some part. The disease is more common in the temperate zone. It may occur oftener in certain localities; thus Lyon has shown that in Buffalo it is 4.59 times more frequent in wards populated by foreigners. Alfred Haviland finds it more common in regions liable to floods and underlaid with clayey soil, and less common where there is limestone foundation. Darcey Powers writes on the occurrence of cancer in certain regions and houses, so-called cancer houses.

The importance of heredity is rather difficult to estimate. Senn in his article, read before the American Medical Association, thinks that more emphasis should be placed upon it. Other authors value it not more than as a predisposing factor. H. Smith of Washington reports a cancer family in which the mother died of cancer of the breast, one daughter of cancer of the stomach, one daughter of cancer of the breast, and another daughter, alive, having been operated upon for cancer of the breast. The number of cases in this family might be ascribed to hereditary influences or to direct infection. With our modern and better diagnostic methods, cancer is found to occur with some degree of frequency at all ages.

Like tuberculosis, cancer has apparently no stage of incubation, and as far as is known is purely local in its attack. The further progress of the disease differs widely in different cases, possibly depending upon individual peculiarities, or perhaps, as Park has suggested, a polymorphous organism like malaria differing in virulence.

The cases may be divided clinically somewhat like those of tuberculosis:

First Group: Metastasis may occur early and be widely distributed. I had under my care in the Erie County Hospital a patient who developed, six weeks after a primary growth in the gallbladder, many secondary growths in the omentum. The abdomen gave one the impression of being filled with large-sized shot. These cases pursue a rapid course, reminding one of miliary tuberculosis. The cachexia and toxemia are extreme.

Second Group: Cases that pursue a more chronic course in which often secondary infection and ulceration occur. These cases resemble the ulcerative form of phthisis.

Third Group: Cases which are so chronic in nature and in which the progress is deliberate, and only a mild toxemia. In these cases the growth acts more mechanically than otherwise, and a pathological examination is necessary to clear up its exact nature.

Pyrexia.—The occurrence of pyrexia is common. This is especially so in cancer of internal organs. The disease may apparently start in with a chill, as in the case reported by Hawthorn.[2] The patient had cancer of the liver—was seized with chill, followed by intermittent temperature. He also reports three other cases of cancer of the liver with temperature. Freudweiler observed fever in 117 out of 475 cases. The temperature was seldom continuous—mostly remittent or intermittent. In 25 per cent. of autopsies no ulceration was found, so that the author concluded that tubercle like carcinoma may have a direct pyretogenic effect. Osler,[3] in his reports of cancer of the stomach in Johns Hopkins Hospital, finds temperature 50 per cent. of cases, ranging from a few tenths above normal to 103°. In searching for causes of pyrexia, Osler concludes that ulceration and metastasis do not have constant influence on temperature. In six of my own cases of cancer—two of the liver and four of the stomach—under observation this year, there was temperature in four ranging from 99° to 103°. Although more than one-half of the cases of malignant disease do not have any rise of temperature, this fact can hardly be used as an argument against its infectious nature, as syphilis is not characterized by any pyrexia, and tuberculosis, when local, may show no elevation of temperature. Amebic dysentery, a parasitic disease, may have subnormal temperature throughout its entire course.

The blood in cancer has certain resemblances to that of infectious diseases. Early, and when the disease is purely local, we have a mild secondary anemia, that is, a slight reduction in the number of erythrocytes with some irregularity in size and shape. The hemoglobin is reduced somewhat more in proportion than the cells. The white cells or leucocytes may show no increase, and occasionally may be reduced in number. This is about what we find in early tuber-

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culosis, syphilis, or malaria. Later, when the disease is more advanced, the blood changes are more severe. They may show themselves in two ways: First, a moderate reduction of the erythrocytes, hemoglobin is greatly reduced, white cells increased ten or twenty thousand. This form of anemia, a secondary chlorosis, is commonly found in chronic infections. Second, a great reduction in the number of erythrocytes, the individual cells showing marked variation in size and shape, the hemoglobin greatly reduced, and the polymorphous leucocytes increased. This form simulates a pernicious anemia, and must be differentiated from it. It is generally agreed that pernicious anemia itself is probably the result of infection. We know that many cases have been caused by intestinal parasites. This secondary form of pernicious anemia is occasionally seen in syphilis. May we not argue by analogy that the blood changes in cancer are also due to infectious agents and their toxines?

The fact that these blood changes depend considerably upon the character of the growth is rather significant and seems to point to this. All things being equal, the more rapid the growth the greater the degree of leucocytosis. Like the leucocytosis of inflammation the increase is mainly in the polymorphous or adult variety.

In many infectious and contagious diseases, the kidneys suffer more or less in the process of eliminating toxic products from the body. The degree of injury differs widely, depending upon the nature and the virulence of the toxin eliminated; thus in scarlet fever, nephritis is common, in tuberculosis, fairly infrequent. In many cases of cancer, the kidneys show involvement ranging anywhere from a cloudy swelling to a marked nephritis. Osler, in his reports of the urine in cancer of the stomach, finds albumin without casts in 25 per cent. of cases, albumin and casts in 25 per cent. of cases, and no albumin in 50 per cent. of the cases. F. Müller[4] found chlorides diminished, Dujardin and Beaumetz[5] report urea low. Häberdin,[6] indican increased in 60 per cent., greatly in 20 per cent.

That cancer has its own particular toxemia seems evident. Experiments upon animals by injections of cancer juice giving rise to temperature, salivation, etc., seem to point to this. This toxemia may bring about a fatal termination without any regard to local process, sometimes producing coma similar to that observed in diabetes. The action of this substance seems to depend upon the virulence of the process at work, and varies in about the same degree as toxemia varies in any ordinary infection. Take syphilis, for instance: it is a well known fact that many cases produce so little local or general reaction that the individual is not aware of having contracted the disease, while in others the disease may pursue a violent and rapidly fatal course. In a general way, the more rapid the growth and metastasis, the more marked the toxemia which shows itself by bringing about changes in blood and urine. Its continuous action being responsible in part for emaciation and loss of tone in heart and muscular systems, the appetite is disturbed, the breath is foul, the tongue coated, and vomiting and diarrhœa may be distressing symptoms.

As in tuberculosis, the dyscrasia and cachexia, brought about by toxemia, may appear an appreciable time before any local symptoms or signs are manifest, and apparently long before the growth could bring about these changes either mechanically or by nutrition perverted, unless accounted for on the theory of infectious origin. The more elaborate clinical study of cancer will undoubtedly prove of value. Better histories as to injury, etc., and closer study of the individual and his surroundings may prove an invaluable aid to the pathologist in pointing out the probable nature of infection.

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VESICAL EMERGENCIES—THEIR SURGICAL MANAGEMENT.

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THE great majority of vesical emergencies requiring immediate surgical attention depend entirely or at least primarily on retention of urine and it is a consideration of these conditions which is the object of this paper. Consequently nothing will here be said concerning vesical rupture from indirect violence, vesical perforation from direct violence or concerning other conditions which may arise chiefly as complications of various pathological states of the bladder and which may occasion a surgical emergency.

When one is called in a case of retention of urine the service demanded—the necessity of emptying the bladder—is usually so clearly defined as to be self-evident to the surgeon. Still I have on more than one occasion known of instances where physicians of considerable general experience have failed in that particular and made a wrong diagnosis. The cases where such failures have been made, and in some of them the advent of the retention has been so insidious as to in a measure palliate the surgical mistake, are those where the vesical function has failed as the result of great bodily prostration conse-

quent on general disease or injury, where it has failed owing to injury to the nerve centre or supply or where the failure, owing to the very gradual development of an obstruction to the outflow of urine, has been so slowly progressive that a condition of what is termed chronic retention has developed.

In that class of cases the patient himself does not make evident to the surgeon just what the trouble is by frantic and ineffectual attempts at urination or as a rule by any personal complaint directed toward the bladder. Where a person's vitality is greatly lowered, especially if he be past middle life, as may occur in the course of typhoid, pneumonia or other severe febrile disturbance, the occurrence of the gradual development of retention should always have the attending physician's attention. Such retention is not infrequently an outcome of severe surgical shock, especially in those addicted to the free use of stimulants. Chronic retention is not infrequently seen in the case of elderly individuals suffering from prostatic or urethral obstruction. In these cases the passive dribbling away of urine from the méatus, which constantly wets the clothing or bedding, and the discovery by abdominal palpation of the hypogastric tumor resulting from the full bladder are in themselves sufficient to lead a surgeon to a correct conclusion. The mistakes in diagnosis are not made by those who look for this complication and fail to find it, but only by those who, forgetful of the possibility of its existence, fail to look for it.

Cases of vesical retention can be surgically subdivided into two general classes, those amenable to catheterization and those that are not. Under the first heading can be grouped instances of spasmodic retention and those dependent on paralysis or on causes which have occasioned a marked lowering of vitality; all instances dependent on so-called passable stricture of the urethra, uncomplicated by urinary extravasation and its sequellæ, gangrene, abscess and septic absorption; retentions uncomplicated by urethral laceration, free hemorrhage or sepsis; and some of the rare forms of retention due to neoplasms, calculi, etc. Although catheterization may be easily effected in some of the lighter grades of deep urethral traumatism causing retention, the urethral lesion being a severe contusion or a minor degree of laceration, still such cases cannot be grouped among those suitable for treatment by means of the catheter, owing to the disastrous consequences which generally follow dependence on a catheter and the avoidance of perineal incision and drainage.

It is hardly necessary to enumerate the instances of retention which are grouped under the second heading since they include all cases excluded from the first list.

When one encounters a case of retention where traumatism the result of external perineal violence is not the evident cause, the first, and one might almost say the natural surgical indication is to pass a catheter and draw off the accumulation. In this connection it is needless to state that careful antiseptic precautions should be observed. No effort will, however, here be made to detail the nature of these precautions since the aim of this paper is the discussion of instrumental manipulation and operative procedure. One extremely important point to be especially emphasized before attempting relief by catheterization is gentleness in instrumental manipulation in order to avoid all needless urethral traumatism. One should always remember in cases of great vesical over-distention that much resistance will be encountered when the attempt is made to pass any instrument along the membranous and prostatic urethra even in cases wholly free from organized obstruction in that portion of the canal. This resistance, which is caused by tenesmus and spasm, immediately disappears with the relief of the retention. If one forces a sharp-pointed or rigid instrument against such an obstruction it is a very easy matter to cause a false passage, an accident which is likely to remove the case immediately from the group of retentions which can be treated by simple catheterization to the group demanding a serious operative procedure undertaken in an emergency. Harmful traumatism can never be done by a soft rubber catheter. Such an instrument is, however, rarely of use in this connection since its softness is so marked that its shaft doubles up or kinks, owing to the deep urethral resistance, an accident which checks its further progress. Gum elastic silk-woven catheters are often of great value. If a retention is spasmodic in character, the urethra being free from stricture or other complicating conditions, a blunt ended instrument of this description, of good calibre, will generally pass without difficulty; or if not a blunt-pointed, an olivary-pointed one is apt to answer equally well. Less resistance will be met in passing the olivary-pointed instrument. In fact if marked resistance is met, that form of instrument should be abandoned since if its point is arrested and firm pressure continued there will occur a sharp bend at its neck so that its point will face backward rather than forward. If retention be caused by urethral stricture, chief dependence must be had on gum elastic olivary-pointed catheters. In such an instance if the olivary point be fine enough to pass the stricture, then it may be that the wedge-shaped neck may so dilate the narrow area as to allow the passage of the shaft. In using such an instrument if the point cannot be made to pass the stricture by gentle manipulation, force will not avail. In fact it is only after the point has passed the stricture and the neck is engaged that any force should be used to push the instrument along. Where olivary-pointed catheters fail recourse should be had to whalebone filiform bougies. As the openings of many

strictures are eccentric as regards the natural calibre of the urethra it is well to bend the necks of these instruments at various angles with their shafts in order to facilitate their engagement in the orifice of the stricture. If the point of one of these fine instruments once becomes engaged in the orifice of the stricture the subsequent passage of its shaft is usually an easy matter. When a filiform bougie cannot be made to pass, the fact is usually accounted for by the existence of some complication such as false passage or secondary traumatic or inflammatory changes which have caused a disorganization of the part. If a filiform has been passed much has been accomplished. Many a time urine will flow freely along the shaft of such an instrument. If the surgeon has no other means of relief at hand the filiform should be tied in and the patient put to bed, the great chance being that there will be gradual relief at least from the state of overdistention. In the Gouley tunneled catheter, which slips over the whalebone filiform as a guide, one has then the means by which the retention can be immediately relieved. In an obstinate case, especially where there is marked tenesmus and where the preliminary attempts with catheters have failed, conditions can be made more favorable for their passage by eliminating the element of spasm. This can be accomplished by cocainizing the deep urethra or by the administration of general anesthesia. If failure still attends the surgeon and for some reason or another a radical operation cannot well be performed, the bladder can be emptied by suprapubic aspiration. The bladder being so relieved it is not improbable an instrument which had previously failed will then pass readily. If retention be due to prostatic obstruction the problem of relief by catheterization is different from that presented in the previous class of cases. In the latter cases there is no narrowing of the urethral calibre from a stenosis of its walls, the obstruction being due to a localized extra urethral tumefaction which by direct pressure collapses the lumen of the canal. Consequently it is obvious that a catheter of good calibre can be made to pass provided its point is progressively maintained in a line with the direction of the canal and prevented from becoming arrested by impingement against irregularly projecting masses of prostatic hypertrophy. In many prostatic cases where there are no such projecting masses the relief of retention is as easy a matter as in simple spasmodic cases, while in the other class it may be most difficult. When the retention is not accompanied by much tenesmus and the volume of the fluid is moderate, it may be possible to pass a soft rubber catheter. Such an instrument, owing to its elasticity and flexibility, is very apt to avoid impingement against jutting hypertrophies. These same qualities also make it fail where spasm or pressure offer much general resistance to its passage. Among the silk-woven instruments those straight and blunt or olivary-pointed may pass. They will not, however, if the floor of the prostatic urethra, as is frequently the case, presents irregularities due to the impingement of hypertrophies. Such instruments can be tried, but if at the first attempt the point of the one employed becomes arrested it should be withdrawn and no other instruments of such pattern tried. In order to avoid the irregularities along the floor of the prostatic urethra the silk-woven catheter with the single or double Mercier bend is most useful. Next in order, if these do not pass, the English gum instrument, bent so as to conform with the prostatic curve and kept in shape by its stylet, can be employed. Last of all comes the time-honored silver catheter with its prostatic curve. Although the silver instrument when properly used can be made to pass in almost all instances of prostatic retention unattended by complications, it is dangerous unless very carefully employed, owing to the great leverage which its rigid curve represents. It can nowadays be almost said to represent an emergency instrument since no progressive surgeon now advocates it for constant use in a given case. Where prostatic obstruction is so grave as to require this instrument a prompt resort to radical surgery should be insisted upon. Anæsthesia, local and general, and suprapubic aspiration play about the same role in this form of retention as in the form previously considered.

In the second group of cases, those not amenable to catheterization, the surgeon has to meet the emergency by liberating the retained fluid through the medium of an incision. There are two practical routes for such incisions, the perineal and the suprapubic. In the great majority of instances the perineal is the one chosen. The few instances in which to my mind it is not advisable will be noticed in the following discussion of the subject. Perineal operations of this character are usually subdivided into two classes, those with and those without a guide. The mere entering of the bladder by perineal incision in cases where the point of the knife is guided by the groove of a staff, which instrument has been passed along the urethra and into the bladder, is not a difficult operation, although one that is very frequently faultily performed. In most instances of retention caused by stricture and which are not amenable to catheterization no staff can be so passed. In some of these instances the difficulty lies in the fact that as a result of previous unskillful instrumental attempts one or more urethral lacerations or false passages have been made in front of the anterior face of the stricture, in others a filiform instrument becomes arrested after its point has apparently become engaged in the anterior orifice of the stricture. In such cases and in those of very recent rupture of the urethra, in the absence of perineal gangrene or marked diffuse inflammation of the part, the surgeon should pass first of all a tunneled groove sound

along a filiform if it has been found possible to engage the tip of that instrument in the anterior orifice of a stricture and if not, a simple staff down until its end is arrested by the obstruction. When so passed the instrument should be steadily there maintained by an assistant while the patient is placed in the lithotomy position. A free median perineal incision should then be made laying open the urethra from ½ to ¾ of an inch above the end of the steel instrument down to its end and continuing in the median line down to the rectal sphincter. A short incision is always a mistake. The first thing to do after so laying open the part is to see if the upper portion of the canal exposed represents the interior of the urethra and not a false passage into which the instrument has been deflected. The terminus of the urethra anterior to the stricture having been definitely determined and exposed by lateral traction on its cut edges the next step is with a filiform or fine probe under the guidance of the eye to try to pass the stricture. By gently probing in likely places aided by careful dissections in the median line through the cicatrix this can generally be after a short time accomplished, after which it is an easy matter to enlarge the narrow path and complete the operation. The accomplishment of perineal section without a guide is classed as a difficult operation. A skilled operator ought, however, to be equal to any difficulty it may present provided the perineum is not in a state of thorough disorganization from extravasation accompanied by gangrene and suppuration or from traumatism. Where any of these contra-indicating factors exist certainly to a marked degree, their presence can be recognized by the surgeon before attempting the operation just described. When a surgeon encounters a patient suffering from retention complicated by perineal gangrene and suppuration the indication is to drain the bladder and the perineum as quickly and as thoroughly as possible. In such an emergency first put the patient in the lithotomy position and make a median perineal incision deep enough to freely expose the pathological focus. If there has been burrowing of the extravasation make from the central cut lateral ones freeing from all pent up secretions the ischiorectal, the scrotal, and whatever other regions the process may have invaded. Pay no attention to the deep urethra. This being accomplished the next step is, placing the patient flat on the back, to open the bladder suprapubically and arrange suprapubic vesical drainage. Then at the end of two weeks' time, after all perineal gangrene and slough have become detached leaving a healthy granulating surface, a secondary perineal operation for the repair of the urethral disorganization should be undertaken. The posterior end of the urethra can then be definitely indicated by retrograde catheterization, an aid which obviates the necessity of the operation without a guide. In some of these cases, where a portion of the urethra has become invaded by the gangrene and has disappeared, the location of the posterior end of the canal in this manner is most essential.

In case of complete rupture of the urethra, where operation is undertaken early, before gangrene has commenced, retrograde catheterization to locate the posterior urethral segment, and repair of the urethra should be undertaken immediately after the bladder has been drained suprapubically.

The method here detailed of managing cases of retention due to stricture complicated by extravasation and perineal gangrene I first published in 1896 ("Good Results Following Urethral Resection," *Medical News*, July 25, 1896) and in my book of last year (Diseases of the Genito-Urinary System, The Macmillan Co., 1900). I have practised it since 1895 and my impression is that it is original with me. By this I do not mean that there is anything original in the operative technique, but in the manner of timing the different steps in the general operative procedure and in the rule laid down not to attempt direct draining of the bladder by way of the perineum at the time of the first operation. Surgical emergencies of this description, especially where extravasation and gangrene is extensive and the accompanying evidences of general septic absorption marked, are usually and justly considered desperate surgical risks; yet in my experience, which has been considerable with the method here advocated, recovery is the rule and death the great exception. The reasons for the great lessening of mortality from the method here advocated are several. In the first place the patient when first seen in a low septic condition is in no state to withstand a long surgical ordeal such as is likely if the surgeon attempts to find the deep urethral opening without a guide in the midst of gangrene and inflammatory disorganization. By such surgical disturbance of these gangrenous tissues a great amount of septic material is suddenly introduced into the lymphatic and circulatory system, a fact in itself which generally turns the scales against the patient. In severe instances the suprapubic incision in itself serves to liberate deep extravasations, the presence of which would not otherwise have been suspected. The suprapubic vent entirely diverts the urine from the extravasated area, thus effecting a quicker resolution than could be attained had the perineal route been chosen. The aid served by the suprapubic incision in enabling the operator to make use of retrograde catheterization in connection with the secondary operation is oftentimes marked.

Where prostatic retention occurs in cases not amenable to catheterization the rule should be to immediately perform prostatectomy, thus effectively and radically removing all future obstruction to urination. If such a patient is seized by retention in some place where a little delay before operation cannot be avoided, then the aspirator can be employed to tide over the interval.

In cases such as this never be content with establishing urinary drainage either suprapubically or perineally and with leaving the prostatic obstruction undisturbed. It may be that some will take exception to the rule I have laid down and argue that the surgeon in these cases should content himself with the establishment of suprapubic drainage. If a surgeon is not equal to the skillful performance of prostatectomy I admit that the exception to my rule is well taken. I, however, feel that I can perform prostatectomy in these cases in conjunction with effecting a relief of their retention without adding materially to their immediate hazard; while on the other hand if vesical drainage only is established the lives of these patients still remain in jeopardy from the many ills attendant on their prostatic malady. It may also be asked why I do not in these cases, as in those previously considered, advocate a division as regards time between the establishment of vesical drainage and the removal of the obstruction. In answer I would state that there is no suppurative or gangrenous tissue in the second class of cases, the disturbance of which is especially dangerous. To be sure the vesical contents of many of the prostatic cases are purulent, but with thorough irrigation at the time of operation, and with the surgical establishment of perfect vesical drainage little general absorption from that source is to be expected. One of the chief reasons, however, against making two surgical operations in the case of prostatics lies in the age of the individuals. Old people cannot endure a series of surgical ordeals or continuous confinement to bed. Do whatever surgery their cases may require quickly and completely. Arrange their prostatic operations so that the vesical drainage will be free, the after discomfort slight and the pain associated with surgical dressings nil. Let the time during which they must lie still in bed be very brief, making them sit up and move about as soon as the condition of the wound will possibly warrant. Confinement in bed for a considerable interval is of itself sufficient many a time to hasten death in connection with aged individuals.

ACNE VULGARIS.

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ACNE vulgaris is an inflammation of the sebaceous glands and the hair follicles, characterized by the formation of papules or pustules which may suppurate, resulting in complete destruction of the follicle and production of scars.

Although acne forms only 7 per cent. of all varieties of skin diseases it is the most common one of adolescence. The lesions are generally limited to the face, chest and shoulders, never occurring on the soles of the feet or palms of the hands. They are of various sizes, from a pin's head to a split pea. If the papules and pustules coalesce the lesion may be of any size and form, or degree of severity.

Only two cases of acne have been reported occurring in children; these cases will be referred to later if time permits.

Although acne is quite uncommon before 14 to 18, it is quite prevalent at that time. It may remain, if not treated, ten or more years, to disappear entirely before the age of 30.

Acne is more frequently seen in females than in males; this may be due to the fact that the former more often consult the physician.

The lesions of acne are not always uniformly distributed; at times both cheeks may be affected, or one more than the other, and again, one may be entirely free. The primary lesion is probably the comedo, the papules and pustules being secondary. The different degrees of inflammation can in every case be readily recognized and studied. Acne punctata, papulosa, indurata and pustulosa are but different stages of this disease.

Touton, basing his opinion on the fact that the hair follicle with its sebaceous gland and the surrounding vascular tissue, constitute an anatomo-pathological unit, states that the different portions of the unit are often involved in various degrees and that it is frequently difficult, and in fact impossible, to distinguish between folliculitis and perifolliculitis.

Etiology.—Dr. Bulkley claims that acne is always a disease of lowered vitality, associated with disturbances of assimilation as indicated by cold hands and feet, impaired digestion, coated tongue and constipation. He further states that the urinary analyses show abundant and conclusive evidences of these errors. The specific gravity of a series of cases, 93 in all, was found to vary from 1,004 to 1,044, the average being 1,024. The chlorides and phosphates were below normal, the sulphates slightly increased. In several of my own cases in which intestinal fermentation was a prominent symptom, indican was present in large quantities; this is the result and not the cause of the fermentation.

Age is a very important etiological factor in acne, about 75 per cent. of the cases commencing before 18. The greater number of patients are seen between the ages of 15 and 25, at which time the functions of the sebaceous glands increase with the more active development of the hair follicles and of the tissues in general.

Chronic dyspepsia, chlorosis, mal-assimilation, menstrual irregularities and derangement of the alimentary canal, are of great importance in its causation. Very frequently a fresh outbreak of papules will follow closely each attack of dyspepsia or constipation. Acne is generally aggravated by menstruation; in many women a recurrence may be expected just before or during the menstrual period, or an aggravation of the existing condition takes place. We must not fail to give due weight to mental and physical

exhaustion, masturbation, a sedentary life, exposure to inclement atmospheric conditions, irritations due to tar, bromine, eye strain, atrophic rhinitis and uncleanliness. Frequently enough pastry, candies, salted meats and fish, cheese, and highly seasoned foodstuffs are the exciting cause of an acute outbreak.

Unna claims that acne pustulosa is due to the entrance of the staphylococcus aureus and albus into the follicle, that there are several forms of microörganism found in the comedones, of which the microbacillus is the most important etiological factor. He teaches that the disease is a purely local one, disregarding the almost universally accepted opinion that acne is often, if not generally, dependent upon a derangement of one or more organs.

Isaac considers the eruption of acne due to an enlargement of the neck of the follicle and a relaxation of its wall, while Hammer attributes the condition to hypersecretion and relaxation of the follicular walls. Kaposi thinks a lack of tonicity and innervation of the vessels responsible for the lesions. Neisser adheres to intestinal absorption and Behrend to a stoppage or clogging of the hair follicle wtih dead lanugo hairs, as responsible for the lesions. Schütz looks upon nervous hypersecretion as the primary factor, and the secondary changes of papules and abscess as dependent upon organized external agents. He expresses grave doubts as to the possibility of Sabouraud's microbacillus as an etiological factor.

Sabouraud believes that acne varioliformis is a necrotic perifolliculitis due to infection by the microbacillus of seborrhea oleosa and that the exciting cause is a golden staphylococcus indistinguishable from the ordinary one.

In ninety-six acne pustules Gilchrist (American Dermatological Association for 1899, p. 87) found that fifty-five gave sterile cultures, and thirty-four cultures of staphylococcus epidermidis albus. Spreads of the pus invariably showed a small polymorphic bacillus, which he considers the cause of acne, and identical with that of Unna.

J. F. Payne (Allbutt's System, 1900, Vol. VIII., p. 752) says: "I am bound to say I have found black masses deep down in the comedo, remote from the surface, and therefore think some abnormal pigment production may play a part in the blackening of the sebaceous mass, though the influence of dust and dirt cannot be denied."

Behrmann (Dermatological Centralblatt, 1900, No. 9) states that as acne frequently accompanies or follows chlorosis, he believes that at the time of puberty in females toxins develop in the intestines, which are taken up by the blood, injuring the red blood cells, and cause an intoxication of the cardiac muscle. He also believes that the chlorosis and its accompanying acne vulgaris and rosacea, are due to the intestinal toxins. He finds that chlorosis is benefited by sulphur, because the sulphur probably gives oxygen to the red blood cells, at the same time it is eliminated by the skin and thus influences the sebaceous glands. He advises a half to a teaspoonful of sulphur with equal quantity of milk sugar every morning for 3 or 4 weeks and then minute doses 3 or 4 times daily for 2 months; and at the same time sulphur is to be used externally.

The following is Jas. Galloway's classification (Allbutt System, Vol. VIII., pages 903-904) of the bacteriology of acne:

"*Acne Comedo.* Bacilli are found in the deeper part of the comedo, remote from the surface, covered over by the horny layers of the upper part of the comedo; 1¼ to 1½ μ long, ⅓ to ½ μ broad; in threads of 3 or 4 bacilli; occasionally in loosely packed bundles; often an unstained or faintly stained zone may be observed across the bacillus, with the two stained ends embedded in a mucoid mass—'mucus producing' bacillus. In the mouths of the follicles are found the bottle bacillus and the diplococcus of seborrhœic eczema."

Acne Vulgaris.—(1) In the pustules or inflamed comedones. (I) A micrococcus arranged in the form of staphylococci (*S. Pyogenes albus*) in great numbers; gives a white culture; at first non-pathogenetic to rabbits, but, by passing through animals, rapidly increased in toxic power till it becomes virulent. The more virulent the more rapidly it liquefies gelatine; it also becomes pigmented of a yellow color, characteristic of staphylococcus aureus. Lomry is inclined to classify it as a form of staphylococcus pyogenes albus. (II) Bacillus subtilis. (III) Torulæ of different species.

2. In the uninflamed comedones. (I) Micrococci arranged as staphylococci, capable of being rendered virulent by cultivation and inoculation in animals, finally developing yellow pigmentation and giving the characters of staphylococcus pyogenes albus and aureus. (II) The microbacillus of Unna which Lomry regards as a variety of the Bacillus coli communis. (III) Cocci large, liquefying gelatine. (IV) Cocci small, which do not liquefy gelatine. (V) Cocci producing rose-red cultures. (VI) Numerous other microörganisms.

Diagnosis.—The diagnosis of a typical case of acne presents no difficulty. It is readily recognized by the presence of the comedo, the formation of papules and pustules around it, the evident involvement of the sebaceous glands, the age of the patient, its chronicity, the absence of pruritus, and the seat of the lesions.

Tar acne may be recognized by the presence of that drug or history, and that due to chrysarobin by the discoloration of the skin. Bromide or iodide acne may be distinguished from acne vulgaris by the larger size of the lesions, the history, and the absence of comedones, the more frequent involvement of the scalp and the hairy portions of the body, and that it may occur at

any age; furthermore, it is an acute affair, coming out simultaneously in considerable numbers.

There are no comedones in eczema papulosum, the lesions are more itchy, not as large, generally grouped and forming patches with more or less exudation. Eczema papulosum is seldom seen on the face alone, the favorite location for acne, while the latter is very seldom, if ever, seen on the buttocks and legs.

Acne rosacea, or more properly rosacea, is very frequently mistaken for acne vulgaris on account of its appearing together. Acne vulgaris is a disease of youth, rarely lasting after 25, while rosacea is a disease of middle life, commencing at the time that acne vulgaris is subsiding; then again, acne vulgaris occurs on the face, neck and shoulders, while rosacea is confined or limited to the nose, chin and cheek; the enlarged blood vessels of rosacea are generally absent in acne vulgaris.

Variola in the papular stage may resemble acne vulgaris. The presence of constitutional symptoms, the acute onset, the high fever and severe lumbago preceding the eruption, and the greater induration of the papules, are sufficient to distinguish it from the latter disease.

In syphilis the eruption is generalized and other evidences of the specific character, such as adenopathy, mucous patches, or the remains of the initial lesion, will aid in the differential diagnosis. If pustules are present they are generally superficial and when lanced only a drop of pus is evacuated, whereas in acne, which is a folliculitis of the sebaceous glands, the papules and pustules are the prominent lesions, and when these are incised a plug of sebaceous matter or thick pus escapes. The papular or papulo-pustular eruption is more uniformly distributed in syphilis than in acne, the inflammation is less, the copper or ham color of the areola is typical, and the tendency to grouping in the form of crescents or circles is more or less characteristic. The scars of syphilis may disappear in a few months, while those of acne are generally depressed and rough, lasting a lifetime.

Between an acne indurata and a tubercular syphilide, the differential diagnostic point is one of degree. In a doubtful case the entire body should be examined for syphilitic lesions, especially those parts that are not usually the site of acne.

Prognosis.—The prognosis of acne vulgaris is generally, if not always, good, providing the patient will follow instructions minutely and conscientiously.

If, as some writers claim, acne may undergo a spontaneous cure before the age of twenty-five, are we warranted in allowing the sebaceous glands to be destroyed, and unsightly scars to mar the skin of a great number of those affected with this disease, because a few recover without assistance? I have seen a large number of cases past twenty-five, whose disfigured faces caused me to blush for the believers in spontaneous cures.

Just to the degree that we are able to remove the cause of the acne will our patient's physical, mental and cutaneous condition improve. The prognosis also depends on the faithfulness with which the patient avoids the predisposing causes, which in the case under consideration have been found to favor the development of the disease.

Treatment.—The treatment of acne is not only a difficult but a serious problem. An eminent dermatologist said to me: "I wish that my friends would send cases of acne, especially girls between sixteen and twenty, to my enemies."

I am very sure that these cases can all be relieved and the majority cured, if you will give to them your best thoughts and a determination to conquer. Do not quiet your conscience by the shopworn assertion: "Oh! it will disappear when menstruation commences," or, if present at eighteen, "when she marries." The same case may come to you after one or more pregnancies with a face so horribly disfigured from neglected treatment, that you will feel, to put it mildly, greatly chagrined.

In my history book, under the heading of "present condition," a record of the pulse is kept, the function of digestion is studied and noted very carefully, and all possible information as to the frequency and consistency of the stools, with special inquiries as to the quantity, is ascertained. The result of the chemical and microscopical examination of the urine is recorded under that head. The appetite is next in importance. The patient is not only asked when she eats, but what she eats and how she eats. Her hours of sleep are considered as to the length, the kind, and result. The blood is examined as carefully as the urine, and a note is made of any deviation from the normal in the genito-urinary tract.

With the history of the case before us we are now ready to give proper weight to the cutaneous manifestations. By this system of examination the condition of *all* the organs has been ascertained and recorded; a balance is struck and the excesses or deficiencies in pulse, digestion, bowels, urine, sleep, the appetite and the genito-urinary organs are now before us for correction. The case from a complex one of unknown quantity becomes a simple one as far as treatment goes, of cutting down the excesses and making up the deficiencies.

Our success in the treatment of acne depends on the correct interpretation of the objective and subjective symptoms. We must study our patient carefully and systematically, brushing aside for the time being the cutaneous lesion.

The previous history of the case is of great importance. Direct questioning will elicit information regarding errors of diet, drug idiosyncrasies, a better understanding of the patient, and last, but not least, will aid you in avoiding

the pitfalls of the gentlemen through whose professional hands the patient has passed.

Local treatment alone will remove any eruption that may be present, but we must depend on general treatment judiciously planned and perseveringly carried out for a long time, to prevent its return.

Massage, cold sponging of the entire body, gymnastics followed by the cold plunge, out-door exercise of all forms, with instructions as to the kind and amount, watching carefully that the patient does not overdo it, protecting the face from cold winds, especially that of automobile riding, which causes a sudden contraction followed by a relaxation of the facial blood vessels, are advised.

It is impossible to prepare a menu that would please the palate in every case or meet the indications; it is preferable to give specific instructions to each patient regarding his diet. Our acne cases are addicted to over-indulgences at the table, partaking of those articles that they should not, and leaving untasted the food that they should have eaten; a surprising improvement is very often the result of their discontinuance. Explicit instructions are given to the patient in the presence of the parent, to avoid pastry, cakes, candies, sweets, hot bread, veal, fried meats and potatoes, salt meats, fish, tea, coffee, and alcoholic drinks. Butter, broiled chicken, steaks and chops, roast beef and lamb, may be used freely. Rice should be eaten as a vegetable in place of potatoes and served at breakfast with milk or bacon gravy. Farina and hominy are also allowed. Oatmeal seems to be the cause of acne in some cases. Milk should be drunk freely, either hot, or if preferred cold, with lime water or Vichy added. Hot water one hour before meals, and a glass or two of cold water, not "iced," two hours after meals, restricting the patient to one glass of fluid at each meal, may be taken.

All defects of vision must be corrected. An otorrhœa or a purulent rhinitis may be the local cause of an acne simplex or pustulosum, the acne persisting until the cause has been removed. If amenorrhœa or dysmenorrhœa are present their removal will be evidenced by the facial improvement. The urine may be scanty, of a high specific gravity and acid. The acetate of potash, Tr. Nux Vomica and Mist. Rhei and Soda, in conjunction with the increased amount of water that the patient has been instructed to drink, generally improves the urinary condition and reduces the folliculitis. Cascara sagrada added to the above will relieve the flatulency and constipation.

Do not use arsenic in the acute stage of *any* skin disease; it is of great benefit in the chronic. Sulphide of calcium I have very little faith in. Ergot alone or with glycerine acts nicely when the circulation is sluggish. Cod liver oil, one hour after meals, is indicated in the majority of cases. I am very partial to wheat phosphates with the addition of strychnine and phosphorus (Thompson solution). The improved Blaud's pill is well borne.

The acetate of potash, tincture nux vomica, fluid extract cascara sagrada, with fluid extract rumex, taken in half a glass of cold water, half an hour before meals, has given me better results than any other prescription.

Local Treatment.—The patient is to be seated in an easy chair, one with a head-rest preferred, and placed in a good light. The parts to be operated upon should be thoroughly disinfected with pure alcohol, peroxide of hydrogen or the white precipitate ointment. All instruments used should be thoroughly cleansed and dipped in alcohol or pure carbolic, especially if a papule or pustule has been lanced. If this precaution is not taken, a new crop of pustules, due to autoinfection, may result.

The comedones and papules are removed by putting the skin on the stretch and curetting with a blunt dermal curette; this treatment removes the tops of the lesions and presses out the contents of the follicles. Warm water may be used to encourage the bleeding; I prefer small pellets of absorbent cotton lightly applied. The engorged vessels can be as freely relieved and the risk of carrying germs to adjacent follicular openings obviated by this means. By commencing at the chin and working upwards, the field is not obscured by the bleeding. Very little, if any, pain is experienced if the curetting is done gently and not too much pressure made where the cellular tissue is thin. The face is again disinfected, and lanolin, a soothing ointment, or lotion applied.

The patient is requested to apply hot water at night and massage according to instructions. A lotion composed of ʒij of pulverized calamine and zinc oxide in four ounces of aqua rosæ is applied and our patient's toilet is completed. In the morning hot water alone, or followed by cold, is applied for five or ten minutes, depending on the patient's circulation and reaction. This is the daily routine until the patient is again seen. The hot water can be applied with a pad of white flannel, or by means of a sponge placed in a glass and the water poured on the sponge; the latter prevents the burning of the hands.

If the patient is timid or objects to this mode of treatment, the same result may be obtained by opening every papule with a spear-shape lance, Allen's preferred; the contents are forced out by the comedone extractor, free bleeding, etc., to be encouraged as in the first case.

In the pustular stage, or in acne indurata, the same rule that applies to pus elsewhere holds good here. The lesions should be opened freely, thoroughly curetted, the wound allowed to bleed and an application of 50 per cent. carbolic made to the base. The result in the majority of cases is healing without scars.

In the papulo-pustular stage an application of pure carbolic will often prevent the formation of

the pustules. If the patient experiences any pain, apply pure alcohol. A needle attached to the negative pole of a galvanic battery and passed through the papule, deep into the follicle, will result in resolution in shorter time and with less pain.

When one or more of the operations have freed the skin of the comedones and pustules, the nightly application of tincture of green soap, resorcin, salicylic acid, sulphur, betanaphtol, or any drug that will cause a slight desquamation, should be made and allowed to remain on the face according to the results desired. The resulting dermatitis opens the mouths of the follicles, the hot water and rubbing aid in expelling the contents. The case is now a simple dermatitis which will respond to a lotion of glycerin, zinc sulphate, and pulverized sulphur, each ʒij in ℥iv of rose water.

In our text-books mercurial and sulphur preparations are indiscriminately advised. They should *never be used together,* as unless all traces of the mercury be removed before applying the sulphur a beautiful crop of blackheads will result.

Massage of the face is the last step and should be done after each sitting. I prefer the massering ball of Dr. Hyde, which has a short handle of hard rubber with a rubber or ivory ball set in a steel socket. The ball is rotated freely over the face and deep pressure is made, emptying the follicles, restoring the circulation and bringing a new supply of blood to the skin.

THE CLINICAL LABORATORY IN SURGICAL DIAGNOSIS.

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IN accepting your flattering invitation to speak on the subject of this paper, I make no pretense of coming before you in the attitude of an advocate. To do this would be to put myself in an embarassing position towards an audience already assured of the importance of the laboratory to the practitioner, and especially to your honorable president who has within a year contributed a valuable paper on the subject of the laboratory in surgical diagnosis. My purpose in this paper will be merely to present to you some of the ways in which the laboratory has assisted the surgeon, and to point out still further possibilities of benefit that shall accrue to him when careful observations shall have multiplied, and accurate and incisive analysis yielded the interpretation, of many, at present, imperfectly understood, pathological phenomena.

No one will, I think, gainsay that the most important of surgical advances with which this generation is identified, if not the product directly of the laboratory is, at least, an outgrowth from it. The debt which medical science owes to Pasteurs researches on microorganisms is in no danger of being forgotten, but the relation between these studies and the art of surgery is not always quite realized. It is difficult to transport one's self in thought to the state of surgical practice about the year 1870, at which time "Listerism," as it was called, had not yet become generalized and accepted; and it sounds sweet in one's ears to read in the memorable letter addressed by Lister to Pasteur in 1874 that he takes the opportunity of sending him his most warm thanks "for having, by your brilliant researches, demonstrated the truth of the theory of putrefactive germs, and having thus given me the only principle which could lead to the success of the system of antiseptics." And a little later, Lister expressed the debt of surgery to this remarkable man in these pregnant words: "Your researches on fermentation have thrown off powerful beams, which have lightened the baleful darkness of surgery, and have transformed the treatment of wounds from a matter of uncertain and too often disastrous empiricism into a scientific art of sure beneficence. Thanks to you, surgery has undergone a complete revolution, which has deprived it of its terrors and has extended almost without limit its efficacious power."

In estimating the value of the laboratory to the surgeon, the part which it plays in the early training of the student should not be overlooked. Its service in the ward, while not to be depreciated, represents only a fraction of its importance; for the practical operations connected with the cultivation of bacteria and the employment of the methods of sterilization in a bacteriological laboratory, if not the only preparation for the understanding of antiseptic surgery, yet provide the basis of greatest security. It is a correct axiom that states that "one who has prepared sterile culture media and preserved cultures from contamination has mastered the principles of surgical antisepsis."

But I have no intention of pursuing this topic further. The laboratory of which I wish especially to speak to-day is not the institution devoted to the teaching of students or to investigations in the region of the unknown, but it is that laboratory which either already is, or cannot too soon become, an adjunct to the hospital ward. Such a laboratory might be called "clinical," as it will deal especially with patients.

The value of such a laboratory will rest in no small part upon its organization. To erect and equip a laboratory and then fail to provide suitable and trained men to conduct it is merely to court dissatisfaction and disrepute. And just here I wish to introduce a word of warning and also of protest. In this country where private inclination must be sought and encouraged to promote useful and beneficent hospital work, the importance of making the laboratory, when once secured, effective, is of the utmost importance. For if its true value is realized its financial support is assured; while, it may through inadequate equipment and indifferent control, become not an aid but a reproach to the hospital and the starting-point of lasting defeat.

The sum of the activities of a well-organized laboratory is considerable. It becomes the recipient of the entire material derived from surgical treatment, upon which it should conscientiously report. Nothing should be considered too inconspicuous or commonplace to be taken into account and, while the surgeon should be regularly and promptly informed by a brief report of the nature of this material, the fuller records should be kept so as to be readily and permanently accessible.

Although pathological anatomy has not yet reached perfection, the high state of its development permits it to be of great assistance to the surgeon. It can inform him of the nature of tissues which at the time of the removal may be doubtful, or even when, as in the case of certain malignant tumors, this is not in question, the extent of the operation may be dictated best as the result of the examination of excised parts. That this value is not entirely theoretical, I am prepared to affirm. I can recall an example of a carcinoma of the thigh which led successfully to the detection of the primary tumor in the prostate; of a cancer of the cervical lymphatic glands that was traced to the mucous membrane of the nose; and in several instances, the prediction could be made—and what is worse, realized—that from the study of the edges of an excised malignant growth its return was certain.

Perhaps, after all, this aspect of the laboratory aid is least questioned. But to what extent may bacteriology be trusted to assist the surgeon? There are, at least, two possibilities. The demonstration of particular kinds of bacteria in surgical diseases may give indications for operation and prognosis, or they may disclose the nature and extent of the pathological condition. A pleural effusion or exudate will vary in significance, depending upon whether bacteria are entirely absent, or whether the bacillus tuberculosis, the micrococcus lanceolatus, or the streptococcus be present in them. We are doubtless still imperfectly informed of the precise meaning of general invasion of bacteria from surgical foci. The use of cultures made from the circulating blood has rendered excellent service, especially in medical cases, in drawing attention to certain hidden or cryptogenetic foci of infection. An obscure endocarditis or serositis has not infrequently been thus revealed. But that such general invasions—bacteremias, septicemias—are necessarily of grave prognostic significance is not established. Indeed, the contrary would seem to be nearer the truth. Not a few streptococci or staphylococci may be cultivated from the circulating blood and recovery yet take place. This result is more probable if the invasion is from a focus of infection that can be reached and evacuated by the surgeon. I recall an instance of general streptococcus infection following a phlegmon of the axilla which was controlled by freely incising the tissues, and from which the patient eventually recovered. A greater number of exact observations are urgently needed upon this condition. From our present vantage-ground we are justified in distinguishing eruptions of pathogenic organisms, perhaps periodically, into the blood, from their rapid growth there. The former condition must at this time be regarded as more favorable.

Within recent times evidence has been brought that the majority of cases of typhoid fever are in one sense septicemias; for the bacillus typhosus can frequently be cultivated from the blood drawn from a vein. These bacilli are probably erupted into the circulation, and, unless in rare and perhaps very grave cases, do not multiply to any great extent. But on this account a group of intercurrent and frequently surgical conditions follows. The peri-chondritis and osteo-myelitis typhosa; the infections and inflammations of the gall-bladder and bile passages, and a host of inflammations in different organs, are thus yielded. Sometimes such an accidental localized inflammation either illuminates an otherwise obscure case of typhoid fever or confirms the diagnosis. A previous pathological state at times comes into play in determining some special localization of the typhoid inflammation. Thus suppurations of thyroid and ovarian cystomata have arisen in the course of typhoid fever from infection with the typhoid organism; an instructive instance of this condition having come to my attention within the past few days. The contents of a suppurating dermoid cyst of the ovary was sent to the Ayer Clinical Laboratory from the wards of the Pennsylvania Hospital and the suppuration shown to be due to the typhoid bacillus, thus confirming the diagnosis of the fever from which the patient was suffering, and at the same time explaining the nature of the local lesion.

The importance of the discriminate as opposed to the indiscriminate examination of surgical material is illustrated by the examination of a small amount of pus having a strong fæcal odor evacuated by the surgeon—Dr. Morton—from the belly-wall of a man. The stained specimens showed an organism behaving much like the tubercle bacillus with the Ziehl-Niehlsen stain, but appearing somewhat more irregular and clubbed in form. The suspicion aroused by the appearance of these bodies led to careful examination of the fresh material and the demonstration of the rosettes of actinomycosis.

In how far the Widal reactions, to speak of them in general, may aid the surgeons is an important question. That they may be of indirect use must be admitted, for it is possible for certain obscure symptoms to be discovered in an agglutination reaction with the typhoid bacillus. Similar positive results with the pyogenic cocci in cases of suspected suppuration due to them have not thus far been obtained. The limits of the agglutination reaction are far from defined; and advances may yet be expected from extension of its use. The last addition to its usefulness has been in the diagnosis of dysentery through the use of the bacillus dysenteriæ of Shiga.

Not a small part of the activity of the clinical laboratory has, within the past few years, centered about the blood. The examination of the blood for parasites, such as malarial organisms and filaria, may be of direct as well as indirect surgical interest. By the latter, I mean the exclusion or detection of a malarial infection in bringing about certain symptoms; while by the former, I mean the discovery of the cause of certain surgical affections due to filaria. Some of you will doubtless recall the case recently published by Opie in which a testicular and femoral filarial varix was operated upon without its nature being suspected. And recently I was able by the examination of sections of an enlarged lymphatic gland excised by the surgeon to determine the filarial origin of a varix, although no parasites could be discovered in the circulating blood.

The blood counter has been elevated and, I think, justly to a commanding position in surgical diagnosis. While it is not an infallible guide it is capable of contributing valuable data for diagnosis. The presence or absence of leucocytosis, the existence of anemic and leukemic states, are readily determined through its use. Along with the estimation of the corpuscles a determination of the hemoglobin index is of value, and the determination of the relative numbers of red and white corpuscles, of the existence of degeneration among the red corpuscles, and the presence of new varieites among the white are important additional facts to elicit.

Undoubtedly, the most important positive information yielded to the surgeon by the blood examination is given by the numerical estimation of the white corpuscles in instances of suspected suppuration. While leucocytosis is not an invariable accompaniment of local inflammation and suppuration, it is a usual attendant upon those conditions and indicative of their existence. The value of the determination of a leucocytosis in deciding upon the presence of foci of inflammation, and of its absence in order to exclude such a pathological condition, is too much a matter of daily experience to be open to discussion. The imperfection and partial unreliability of the sign arises from the failure of the organism to respond to some very severe infections either because of intensity in the infecting germ or inherent incapacity of the tissues to resist invasion. Just as in pneumonia without leucocytosis, so also in such non-leucocytic focal inflammations, experience has shown the prognosis to be grave. If, therefore, the clinical signs point strongly or unmistakably to such local lesion and a leucocytosis fails to appear, the case assumes a special gravity which is revealed first perhaps by the blood counter.

While leucocytosis is a means of positive diagnosis often guiding the surgeon to purulent accumulations, the anæmias may also supply desirable and important information. Whether the anæmia is essential and pernicious or secondary and dependent upon a removable cause may be a matter of great moment. The blood pictures, fortunately, are sufficiently distinct to permit, in the majority of instances, of the making of the differential diagnosis. Moreover, the variety of white cell increased in the blood throws additional light upon obscure conditions. A suppurative leucocytosis is at once distinguishable from the blood changes in leukæmia; and because of the characteristic blood picture in the latter disease unwarranted and dangerous surgical operation has been avoided. An abdominal tumor not suspected to be the leukemic spleen has been removed with fatal results, and Dr. R. N. Wilson, in a recent paper on the value of the blood examination to the medical man and surgeon, relates an instance of so-called sarcoma of the spleen upon which the surgeon was prevented from operating only because the patient left the hospital, and which proved upon blood examination to be due to a leukemia in which 48 per cent. of the white cells were myelocytes. What the myelocyte is to the diagnosis of leukemia the eosinophile may become to trichiniasis. Since the important observations of Brown in Baltimore a very high percentage of eosinophilic leucocytes in the circulating blood has been the means of discovery, in several cases, of trichiniasis in man, a diagnosis abundantly confirmed by the examination of excised bits of the voluntary muscles.

No great use has been made thus far of facts relating to the coagulation-time of the blood. That the coagulation-time is increased in certain pathological states is, of course, well known, and the dangers of operation where such a condition is flagrant are admitted; but we have thus far taken into account only extreme grades of hemophilia, and only with reference to the question of operation. What the state of coagulation is in various other pathological states remains to be determined.

The aid of chemistry, except in so far as the examination of urine goes, has been invoked but little. And yet, chemistry has insensibly affected surgical practice. The fervor with which disturbances of metabolism is being pursued by physiological chemists and the new facts elicited cannot help throwing additional light upon problems in surgery. A beginning has been made in the study of such diseases as diabetes and gout, diseases notable for general deleterious effects upon the organism, exposing it to infection either spontaneously or through surgical procedures.

It would seem as if chemistry might also supply the explanation of the greater vulnerability to micro-organisms of persons the subjects of chronic organic disease. The study of terminal infections has resulted in the enforcement of the lamentable fact that one who carries with him a cirrhotic liver, contracted kidney, or sclerotic heart, is constantly menaced by the pathogenic organisms with which he is surrounded. Long before the ordinary physiological functions of these organs begin to fail because of inadequate

tissue, is the unlucky individual overtaken by bacterial infection. From a study of many hundred autopsies upon those who were the subjects of some chronic malady, the conclusion could be drawn that the tendency to infection either spontaneously or from relatively trifling surgical operation, was so high as to constitute the chief danger to life. Such individuals are notably bad surgical risks.

In the preceding pages I have endeavored in a brief and sketchy manner to indicate the lines along which the laboratory has been able to contribute to more accurate surgical diagnosis and prognosis. The value of the laboratory lies in its ability to supply certain definite facts, about which there can be no doubt or misunderstanding, and to apply the results of its methods to the elucidation or treatment of disease. The method pursued in the laboratory is essentially scientific; the results are not approximations, although in some instances they are not absolutely accurate. The error of observation is, however, even under the worst conditions, small as compared with most clinical methods. Personal equation in the determination of facts plays a part in the laboratory, but the part is less than in other means of diagnosis. The personal equation is reduced to the minimum by training, and the more precise and delicate the method of work, the greater the need for trained hands and heads to carry it on. It is not likely that the surgeon will to any great extent use personally the methods of the laboratory. The question of time would probably make it prohibitive, and even without this he can scarcely bring to the work the concentration and special training demanded. And yet the benefits of the laboratory should not be limited to hospital patients. There will doubtless be found in every large community some one trained to make bacteriological, clinical and pathological examinations, to whom the work should be entrusted.

For the carrying out of laboratory diagnosis a suitable equipment is required. It may be desired to invoke the aid of the freezing microtome during the progress of an operation while the patient is kept under an anesthetic. It may be desirable to examine immediately evacuated exudate for organisms—amebæ, actinomyces, or bacteria—upon which the diagnosis, and perhaps the treatment, will depend.

Our present knowledge does not permit of a conclusion as to the exact significance of different kinds of bacterial infection. A bacteriological assistant, armed with test-tube and slide, at the surgeon's side when operating upon an appendicitis, an empyema, a phlegmon, or when tapping the spinal canal, may, after one or two days, supply valuable information. Whether the infecting organism is the bacillus coli, streptococci, staphylococci, pneumococci, meningococci, the tubercle bacillus, or still other bacteria, may make great difference in individual cases; but what is urgently needed is the correllation of knowledge of the nature of the organism with the clinical symptoms and course of disease, and that only the surgeon with his assistants can provide.

Laboratory diagnosis is most valuable when correlated with clinical diagnosis. The laboratory will endeavor to supply data relating to disease, obtained through observations and experiments, by methods of precision, indicating the existence of pathological states with certainty in many and a high degree of probability in all instances.

The true purpose of laboratory diagnosis is to aid and supplement clinical diagnosis, to correct and improve its methods, to assist in determining the exact limits and significance of symptoms, to connect these with specific causes and efforts of disease, and thus to contribute to a more scientific, rational, and better treatment.

The laboratory in the best sense will endeavor to achieve these ends and will not be easily discouraged. It recognizes that the methods now at its disposal are not uniform, and that not all results are of equal value. Already the amount and nature of the work demanded of the clinical laboratory requires especial fitness and training in those engaged in its pursuit. That a form of laboratory specialism is inevitable, I am assured. That a high degree of ability is also needed, I am equally convinced. That the servant will be worthy of his hire, the beginning already made proves.

Dr. Shattuck writes: "It appears to be almost inevitable that laboratory specialism must be added to clinical specialism, and must enlist a considerable number of men in its ranks. The day is not far distant when every large hospital must have its pathological laboratory as much as its operating room, with a trained and well-paid head, busied as much with the solution of problems arising in the living, as with the determination of the cause of death." In conclusion, I will quote a paragraph from the oration on surgery delivered before the American Medical Association at its last meeting by your president, who said:

"The experienced surgeon soon learns that it requires more than asepsis and the rapid and skilful performance of an operation to achieve the fullest measure of success; that, although a thorough practical knowledge of regional anatomy is essential in the highest degree to the conscientious fulfilment of the professional obligation, it is equally important that there be called into requisition the invaluable aid which laboratory research alone can give in determining an accurate diagnosis, in indicating the most rational measure of treatment, not only in the preparation of a patient for an operation, and in the selection of an anesthetic, but for the post-operative management of the case, and in removing as far as possible all doubts as to the prognosis."

INDEX TO VOLUME I.

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SUPPLEMENT.

BRIEF COMMENTS ON THE MATERIA MEDICA, PHARMACY AND THERAPEUTICS OF THE YEAR ENDING JULY 1, 1900.

(ALPHABETICALLY ARRANGED.)

BY

E. H. SQUIBB, M. D.,

BROOKLYN, N. Y.

Read at the Seventeenth Annual Meeting of the New York State Medical Association, October 17, 1900.

BRIEF COMMENTS ON THE MATERIA MEDICA, PHARMACY AND THERAPEUTICS OF THE YEAR ENDING JULY 1, 1900.

By E. H. Squibb, M.D.

ALPHABETICALLY ARRANGED.

Read by title at the Seventeenth Annual Meeting of The New York State Medical Association on October 18, 1900.

It will be quite unnecessary to take the time to make any explanatory introduction to these Comments, for the title itself covers the ground sufficiently.

Acetanilid (Antifebrin) is still a most important drug. In some of its uses it is hard to realize how the physician could now get along without it. Unfortunately, however, the "headache powder" habit is much on the increase and an alarming number of bad effects, not to say fatal results, are continually reported. These reports now-a-days are not confined to the medical literature but are found frequently in the lay press. The *Philadelphia Medical Journal* (Vol. 4, p. 1145) editorially comments as follows:

"Even the Coroner is compelled to protest at the furious cart-load-dumping of samples of drugs in the halls of private houses

throughout whole cities. The Coroner of Philadelphia issues a warning that these headache-powders, secret drugs to kill pain, pills, and concoctions galore, for all conceivable purposes and to satisfy the mania of the self-druggers, are often poisonous, and that the lives of children into whose hands they fall or are thrust, are endangered. Inquests show that insanities and sudden deaths may be traced to the use of these nostrums. It is a national disgrace, this saturnalia of the quacks and venders of medical humbugs, and the laws should be made effective against the intolerable pest."

Dr. G. W. Gaines of Milliken's Bend, La., has reported a case of rheumatism in an adult negro who was being treated with Acetanilid and who established a habit in that his pains returned if he left off the medicine. The patient is reported as using 57 grammes (two ounces) each week and has been doing this for some months. It is not stated whether the man suffers any ill effects by its continued use (*New Orleans Med. and Surg. Journ.*, Vol. LIII, p. 30).

In connection with the treatment of rheumatism by this agent, Dr. F. A. Long reports in the *Western Medical Review* (December 1899) that nothing has ever given him more satisfactory results in inflammatory rheumatism than Acetanilid put up in a special tablet with sodium salicylate, caffeine citrate and podophyllin (*N. Y. Med. Journ.*, Vol. LXXI, p. 58).

Unfortunate cases are still undoubtedly reported of Acetanilid poisoning and it would be quite out of place to attempt to enumerate them here, but it may be of service to those who desire to keep a record of such cases to know where the account of any peculiar case may be found. A case in point was that of Dr. O. R. Summers of Middletown, Ind., and was published he says not only for the reason that it was his first case but on account of the smallness of the dose, the severity of the symptoms and that he had given much larger doses to that same patient many times before, which proved that there was no idiosyncrasy for the drug (*N. Y. Med. Journ.*, Vol. LXXI, p. 426).

Acid Acetic has been still more extensively used in the exhaustion of crude drugs on a large scale during the past year. The finished products have not only made more of a record for themselves therapeutically in the hands of various medical practitioners but their appearance as finished pharmaceutical products has

been much improved by the closer study of the technique used and the amount of settling which has been permitted to take place, and thus a fairer comparison with the alcoholic preparations can be made at this time. It will therefore probably be of interest to both the physician and the pharmacist to see the following tabular form, showing the condition of the samples of the same list of drugs enumerated here last year which have been standing for the past twelve months.

Drug.	Liquid Portion, Per cent.	Deposit Per cent.	Condition.
Aconite Root	99	1	Clear
Allspice	98	2	"
Arnica Root	99	1	Turbid
Belladonna Leaf	95	5	Clear
" Root	98	2	"
Black Pepper	95	5	"
Buchu	99	1	"
Buckthorn	99	1	"
Burdock	99	1	"
Cannabis Indica	99	1	"
Capsicum	98	2	"
Cascara Sagrada	99	1	"
Cascara " Aromatic	97	3	"
Cassia Saigon	98	2	"
Cardamon	99	1	"
Celery	99	1	"
Cimicifuga	99	1	"
Cinnamon, Ceylon	25	75	Tendency to Gelatinize
Cinchona, Red	98	2	Clear
" Yellow	98	2	"
Cloves	98	2	"
Coca	97	3	"
Colchicum Seed	99	1	"
Coriander	99	1	"
Cypripedium	99	1	"
Dandelion	99	1	"
Digitalis	95	5	"
Ergot	99	1	"
Eucalyptus	98	2	"
Garlic	92	8	"
Gelsemium	99	1	"
Gentian	95	5	"
" Compound	95	5	"

Drug.	Liquid Portion, Per cent.	Deposit, Per cent.	Condition.
Ginger, Jamaica	95	5	Clear
Hydrangea	98	2	"
Hydrastis	98	2	"
Hyoscyamus	95	5	"
Ipecac	92	8	"
Juniper	92	8	"
Larkspur, Delphinium	99	1	"
Leptandra	99	1	"
Lobelia	99	1	"
Mace	98	2	Turbid
Malt	99	1	Clear
Marjoram	99	1	"
Nutmeg	99	1	"
Nux Vomica	99	1	"
Prickly Ash	99	1	"
Rhatany	98	2	"
Rhubarb	98	2	"
Sanguinaria	99	1	"
Sarsaparilla	97	3	"
" Compound	97	3	"
Senega	88	12	Turbid and Gelatinizing
Senna	95	5	Clear
Spigelia	99	1	"
Squill	98	2	"
Thyme	99	1	"
Valerian	98	2	"
Yellow Dock	99	1	"

The space occupied by the liquid portion and the deposit is taken by actual measurement and then reduced to percentage by volume, as found in the above table. The deposits themselves hold from 20 to 80 per cent. of the liquid portion, but the most of the latter can be recovered by either filtration or displacement. It is still to be regretted that in the case of Cannabis Indica that equal parts by weight of 60 per cent. Acetic Acid and officinal alcohol have to be used, as Acetic Acid alone in the various strengths so far tried does not completely exhaust it.

In comparing the odor of the above Acetic Fluid Extracts with the alcoholic preparations of the same drug many of them develop the characteristic odor of the drug far more distinctly in the Acetic Acid preparation, for the slight pungency of the Acid

apparently does not mask the odor as much as the alcohol. In comparing the general appearance of these two classes of fluid extracts, the advantage seems to be in favor of the Acetic Fluid Extracts in the majority of cases. The exceptions to this general rule are found in the table in those marked "turbid." In relation to this particular condition, however, it must be remembered that fluid extracts in general made with any of the various menstrua vary quite considerably at times, depending upon the particular lot of drug used in that portion.

Since giving the above list last year, the following additional drugs have been successfully exhausted with Acetic Acid:

Drug.	Liquid Portion, Per cent.	Deposit, Per cent.	Condition.
Aromatic Powder	95	5	Turbid
Buchu and Potassium Acetate	99	1	Clear
Bittersweet	98	2	"
Cinchona, Red Compound	98	2	"
Calumbo	95	5	Turbid
Convallaria	98	2	Clear
Cotton Root	97	3	"
Pilocarpus	97	3	"
Pleurisy Root	98	2	"
Pareira	97	3	"
Quassia	97	3	"
Scullcap	95	5	"
Spigelia and Senna	98	2	"
Senna Compound	98	2	"
Stillingia	95	5	"
Stramonium Seed	95	5	Turbid
Serpentaria	98	2	Clear
Tarragon	98	2	"
Tobacco	98	2	"
Uva Ursi	97	3	"
Veratrum Viride	95	5	"
Wild Cherry	95	5	Turbid

The mixture of Buchu and Potassium Acetate was tried in order to make a finished product to satisfy a demand coming particularly from the genito-urinary practitioners.

Although stated on many previous occasions in print, it may be worth repeating here the observation of Dr. Samuel Edwards of Baltimore, Md., that in his experience of some years he has

found that Acetic Acid (vinegar) acts as an effective preventive to the nausea and vomiting following the administration of an anæsthetic. It is to be hoped that a more general use will be made of this agent and either the report confirmed or disproved.

Dr. L. Fürst of Berlin, Germany, states that in the case of an emergency he used Acetic Acid to disinfect his hands and the tissues adjacent to the site of operation. His success was very gratifying (*Deut. Aerzte-Zeitung,* Vol. for 1900, p. 275).

Acid Cacodylic (Di-Methyl Arsenine [Cacodyl] Hydrate)—the new organic arsenical compound containing the equivalent of 71.4 per cent. of arsenic oxide (known as arsenous acid)—continues to receive considerable attention since Dr. Armand Gautier's first announcement followed by that of Dr. Dalché.

Drs. Fernand Widal and Prosper Merklen have fully confirmed its value when used subcutaneously. They report in an article entitled "The Action of Cacodylic Medication" (*Bull. et Memoires de la Soc. Méd. des Hôp. de Paris,* Third Series 17th year, p. 232). Their experience shows that its use can be continued for some years without establishing a habit or showing other ill effects. It has been found of value in the treatment of chlorosis, leucocythemia and like symptoms.

Most of the observers who discussed this paper at a meeting of the Paris Society of Hospital Physicians seemed to agree that when given by the stomach or rectum the effects are apt to be dangerous, owing to supposed chemical changes in the Sodium Cacodylate usually given. Dr. Dalché however speaks very emphatically of his favorable results even when given in pill form by the stomach. The only objectionable effects appeared to be the slight garlic odor given to the breath. Of all the cases treated the tuberculous predominated. He reports that three were unquestionably cured, and in four a marked improved condition occurred in that they increased in weight, developed more muscular force and manifested greater renal activity. Two of his cases gave evidence of no beneficial results and two became worse, but these latter were in a very advanced stage of tuberculosis. During the discussion, it developed that as large doses as from 400 to 800 milligrammes (6.2 to 12.4 grains) were given by the stomach or rectum with no ill effects. Drs. Widal and Merklen made use of hypodermic injections of from 50 to 100 milligrammes ($\frac{4}{5}$ to $1\frac{3}{5}$ grains). Hygienic precautions were always adopted in

the treatment of all the cases, and the skeptical attribute much of the good results to following out such a plan.

Dr. Maurice Letulle of Paris, France, although still experimenting with this agent is also one of those who has noticed that when the rational routine practice of his hospital is suspended the good effects of this agent are no longer noticed and relapses occur. He however has made a report on "Injections of Cacodylate of Soda" (*La Presse Médicale*, Vol. 8, first half, page 209) in which he relates good results in the treatment of pulmonary tuberculosis. He injects for six days in succession and then suspends for a week, making use of Dr. Gautier's original formula which may be repeated here:

Sodium Cacodylate.. 6.40 grammes (100 grains)
Distilled Water.....100 Cc. (about 3¼ fluid ozs.)
Sol. Carb. Acid (1 to 10) 6 drops

The localities for the injection which he preferred were in the side, hypogastric region and buttocks. He admits that he did not always obtain favorable results, due largely to the cases being much advanced, with considerable fever and cachexia. On the other hand however there were cases of a very severe nature which were markedly benefited.

Dr. J. Grasset of Montpellier, France, has reported on the treatment of thirteen cases in which he administered this agent by the mouth and found it well borne. He advocates first administering by the mouth and then changing to either hypodermic injections or rectum administration if intolerance occurs (*La Sémaine Médicale*, Vol. 20, p. 90).

Dr. R. Belbèze of Paris, France, reports on its use in three cases of simple chorea in children ranging from the ages of 8 to 14. He injected by the rectum daily for the first 5 days, then twice daily for 5 days and three times daily for the following 5 days. He then interrupts for 5 days, after which he continues for 15 days. The cases were all of some severity (*La Sémaine Médicale*, Vol. 20, p. 110).

Dr. Bormans of Turin, Italy, read a memoir before the Royal Medical Academy of Turin on the use of Sodium Cacodylate in cases of chlorosis. He is a believer in much larger doses than those usually given, and finds that it is quite readily tolerated and of much service in all those cases in which large doses of arsenic are indicated. He finds it of much service in those cases of anemia

and chlorosis in which there is an intolerance of iron. Dr. Battistini in discussing the paper reported that he noticed such unfortunate results as pyrexia and restlessness due to the disturbance of the nervous system after its use. He would agree to the general usefulness of the agent but would advise a certain amount of caution (London *Lancet,* Vol. I for 1900, p. 1037).

Dr. Alfred Frassi of Pisa, Italy, has also made a study of this agent in chlorosis and tubercular affections, confirming the good reports from others (*Gaz. degli Osped. e delle Cliniche,* Vol. XXI, p. 346).

Dr. J. Renaut of Lyons, France, reports favorable results in the use of Sodium Cacodylate in the treatment of mucous epithelioma. He records one case of the growth being in the tongue and most marked improvement followed after eighteen months' treatment. He administered the agent by the mouth in pill form made up of:

Sodium Cacodylate...50 milligrammes ($\frac{4}{5}$ of a grain)
Extr. of Gentian.....50 " (" " " ")

in each pill, and five of these were given daily (*Rév. de Thérap.,* Vol. 67, p. 238).

As is usually the case with these newer agents, attempts are soon made to form new combinations by which increased effects are aimed at. In this line there is now offered a Guaiacol Cacodylate, recommended as of special value in the treatment of tuberculosis. It has been given the name of "Cacodyliacol." It appears in the form of fine, colorless crystals with a garlic odor and slightly caustic taste, soluble in water, alcohol and glycerin. Very meagre accounts of its action are yet given, but it is reported that subcutaneous injection of 30 to 50 milligrammes ($\frac{1}{2}$ to $\frac{4}{5}$ of a grain) surpass the Sodium Salt. The injections are apparently given every second day, and after ten doses have been given there is an intermission of eight days before renewing the injections.

Acid Carbolic (Phenol) as an agent used in criminal cases of poisoning, is largely on the increase. The unfortunate cases were becoming so numerous in England that their consideration in the House of Commons was found necessary, whereby Carbolic Acid was scheduled among the poisons. The officials have already recognized that this has had the effect of greatly diminishing the number of fatalities, for it is more difficult for the purchaser to obtain. Even with this limitation, however, it appears that the

fatalities from Carbolic Acid alone were nearly as many as from the whole of the English scheduled poison list. Their record is of interest:

"Carbolic Acid first appeared as a 'cause of death' in the Registrar-General's report for the year 1866. It began with a record of three accidental deaths in that year. Two others followed in 1867, and in 1868 seven accidental deaths and one suicide were debited to the coming poison. As the substance came into general use, and the facility of getting it became known, accidents from its use grew more numerous, and suicides by it increased alarmingly. In the five years 1868-72 the accidental deaths from carbolic acid numbered 53 and the suicides 22. In the next five years (1873-77) the figures were respectively 92 and 53. In the quinquennium 1878-82 there were 90 accidental deaths and 108 suicides due to carbolic acid, and from this time the substance became the popular poison. In the five years 1893-97 the accidental deaths due to carbolic acid numbered 176, and the suicides 847. In the last reported year, 1898, there were 37 accidental deaths and 169 suicides attributed to carbolic acid. Truly it was time something was done to check this continuous massacre." (*Chem. and Drug.,* Vol. LVII, p. 55).

A similar report for this country is not now at hand but would have been of interest if it could have been given here for comparison.

Dr. R. Abrahams of New York City reports an unexpected fatal case of Carbolic Acid poisoning in an infant, due to astonishingly rapid absorption by the skin. After giving a detail of the delivery of the child and the poison symptoms, he relates the history of the poisoning (*Pediatrics,* Vol. IX, p. 241).

Quite considerable prominence has recently been given to the subject of Carbolic gangrene introduced most prominently by a paper read at the annual meeting of the Massachusetts Medical Society last June on "Gangrene Produced by the Application of Dilute Solutions of Carbolic Acid" by Dr. Francis B. Harrington of Boston (*Amer. Jour. Med. Sciences,* Vol. CXX, p. 1). Although such unfortunate results from the external application of Carbolic Acid have been known for many years past, it needed just some such awakening as this paper furnished to call attention to the results of too recklessly using this valuable agent. It is well known, however, that gangrene does not invariably follow

from such applications but this fact should not deter those who have occasion to recommend or actually make use of such solutions, to advise caution and especially to keep it out of the reach of children. The general consideration which has been given to this subject since has developed the fact that many surgeons can not quite agree to Dr. Harrington's general advice to use other substitutes for wet dressings, for the beneficial results have been so marked in too many cases with Carbolic Acid Solution. They would rather call for more care in its use.

Dr. Wendell C. Phillips of New York City, who made "A Preliminary Report upon the use of Pure Carbolic Acid in the Treatment of Mastoid Wounds and Chronic Suppuration of the Middle Ear" and which was alluded to here last year, now makes "A Further Report....." He states that "during the past year I have continued the use of carbolic acid both in private and hospital practice, and am able to give a fuller report as to its benefits. My cases have been about the same as those reported before, excepting that I have used it upon the denuded surfaces after ossiculectomies and also in burrowing pus sacs accompanying mastoid suppurations." (N. Y. *Med. Record,* Vol. 58, p. 296).

Dr. R. Minervini of Genoa, Italy, has carried on quite an extended series of experiments on "The Bactericidal Action of Carbolic Acid and Its Value in the Practice of Surgery" (*Archiv. für klinische Chirurgie,* Vol. 60, p. 687). His claim is that its bactericidal influence is very limited and the surgeon should not rely on its effectiveness. He argues that Lister's results were rather due to a checking of the development of the bacteria than to their destruction.

As opposed to the above investigation and opinion, Dr. Frederic J. Adams of Bridgeport, Conn., makes "A Plea for the Further Use of Carbolic Acid." He introduces the subject as follows: "One of the best of our bactericides is carbolic acid, which has probably been used as extensively as any of our antiseptics." He claims that by the judicious use of alcohol as its antidote, unfortunate results may be minimized. He makes use of the liquefied crystals by applying them with a camel's hair brush, and just as soon as the surface appears white he applies a chemically pure alcohol in copious quantities, and "the work is over." He gives a partial list of five cases taken at random treated at the Bridgeport Emergency Hospital Dispensary. He closes by relating the history

of an attempt at suicide with Carbolic Acid which was counteracted by the use of alcohol, and remarks that he makes "no claim of being the first to discover the effect of alcohol as an antidote to carbolic acid, but merely urge the fraternity to a further use of the pure acid, and can assure them of splendid results with cases that have formerly been tedious and trying, and only recovered to bear great scars where the patient had been lanced" (*N. Y. Med. Journ.*, Vol. LXX, p. 780).

In a general summing up of the testimony for the recognized antidotes for Carbolic Acid, the Editor of *Merck's Archives* (Vol. I, p. 498) states that alcohol ranks the highest. He firmly believes that if either whisky or alcohol is promptly used and then immediately followed by washing out the stomach and administering sodium sulphate, almost uniformly favorable results will follow. He repeats the well recognized fact that at times it is almost impossible to make emetics work, and he strongly recommends the use of the rubber tube in repeatedly washing out the stomach. He directs that sodium sulphate be added to the water thus used so that any acid in the stomach and intestines may be counteracted.

Dr. E. T. Nealey of Bangor, Maine, reports an interesting fact in his observations that when Carbolic Acid and alcohol are mixed no escharotic poisonous effects follow. A further consideration of the recognized antidotal effect of alcohol over Carbolic Acid may lead up eventually to some satisfactory explanation of his observations, in that alcohol may correct or modify some of the well-known effects of Carbolic Acid without entirely counteracting all of its beneficial effects, but his surmise that some chemical change takes place in the mixture is not borne out by any evidence that there has been any such change.

Dr. Livio Amadori of Italy reports on the treatment of a case of malignant edema by injections of 32 milligrammes (½ grain) of Carbolic Acid. Seven injections were made into the swelling of the left upper eyelid which later spread over the head and finally closed the right eye. A rapid fall of the pulse and temperature with a relief of pain and swelling followed, and was complete in five days. Discoloration of the urine naturally followed but did not last longer than 36 hours after the last injection (*Gaz. degli Osped. e delle Cliniche,* first half of Vol. XX, p. 714).

Dr. N. A. Nemtchikoff of Russia reports his success in the radical cure of abscesses, erysipelas, lupus and other local inflammations

by the injection of a 5 per cent. solution of Carbolic Acid. He states that he has observed no ill effects, and that it appears to offer an efficient bactericide. It apparently renders the pus already present thin and easily absorbable. Complete local anæsthesia is produced and the pain does not return for three or four days (*N. Y. Med. Jour.,* Vol. LXXII, p. 123).

Dr. D. S. Hanson reported to the Cuyahoga Co. (Ohio) Med. Society "A Case of Tetanus treated by the Baccelli Method of Hypodermatic Injections of Carbolic Acid in two per cent. solution." The case was that of a 14 year old boy who had accidentally shot himself through the foot. Tetanus followed. Three injections of a syringeful each were made three times a day for nine days. The urine became smoky and the injections were reduced to two a day and were continued for two weeks longer. Small doses of eserin were given with the injections. A good recovery followed (*Cleveland Med. Gaz.,* Vol. XIV, p. 642).

Drs. H. L. Nietert and R. F. Amyx of St. Louis, Mo., reported "Four cases of Tetanus treated by Carbolic Acid Injections at the St. Louis City Hospital." A two per cent. solution was used. Three of the cases died, but the fourth in which a larger quantity was used, recovered (*Med. Rev.* of St. Louis, Vol. XL, p. 507).

Dr. J. Mitford Atkinson reports from the Government Civil Hospital at Hong Kong, China, a case of bubonic plague treated with large doses of Carbolic Acid and followed by recovery. He remarks:

"I was led to try this drug by reading an article in *The Lancet* of April 8, 1899, p. 958, by Mr. A. Wiglesworth on the Treatment of Influenza by Large Doses of Carbolic Acid, and certainly in this case it appears to have been efficacious. During the three days June 10th to 12th over 200 grains of carbolic acid were given internally with the result of lowering the temperature, allaying the vomiting, and relieving the severe mental depression. Undoubtedly this drug has marked antithermic and antitoxic properties. Professor Baccelli has advocated its use given hypodermically as a cure for tetanus and this case tends to prove that it may be useful in the treatment of bubonic plague" (London *Lancet,* Vol. II for 1899, p. 1589).

Mr. Francis Evelyn Place—an English veterinary surgeon—reports a few notes which he states may form an appendix to the case of Dr. Atkinson for the reason that he has been treating teta-

nus in horses for the past two years by means of hypodermic injections of Carbolic Acid in large doses (London *Lancet,* Vol. I for 1900, p. 538).

Dr. Edward Gooddy of Llandudno, Wales, instigated by the interesting articles above alluded to, determined to try Carbolic Acid in large doses in the treatment of influenza as recommended by Mr. Arthur Wiglesworth of Liverpool, England (alluded to here last year) and now confirms the favorable reports of the latter. He wishes to record one case of an extremely large dose being administered accidentally without injury. The patient was questioned after recovery and stated that he had felt no ill-effects beyond a moderate feeling of heat in the pit of the stomach. Dr. Gooddy concludes that "the dose of carbolic acid which is to be looked on as poisonous apart from the action of the concentrated acid as a corrosive seems at present not be determined" (London *Lancet,* Vol. I for 1900, p. 1030).

Acid Chloralb (a combination of chlorine and albumin) has been little alluded to in the current medical literature of the past year. Several paragraphs have appeared but they are apparently old matter copied.

Acid Citric apparently continues to be used with effect in the treatment of atrophic rhinitis as originally recommended by Dr. Hamm of Brunswick, Germany (alluded to here last year).

Dr. Lewis S. Somers of Philadelphia, Pa., has followed up this line of treatment "in a number of cases resisting the usual forms of topical treatment, and with but few exceptions found that it did all that its originator claimed for it." He gives details of a few of those cases used to determine the value of this Acid. These received no other treatment except cleansing. He closes his report thus:

"The following conclusions seem warranted by my experience with citric acid in this most troublesome affection:

1. The drug is of great value in preventing the fetid odor of atrophic rhinitis.

2. The successful action depends upon its direct application to the diseased tissues; for this reason the removal of all foreign material is absolutely necessary.

3. After its use the ozena usually remains absent from one to two days, and in exceptional cases longer, depending upon the extent and severity of the morbid process.

4. It exercises no direct action upon the morbid tissue in the direction of restoration to its normal functions.

5. Unless used at more or less regular intervals its action is but transient, and the ozena speedily becomes prominent again.

6. To a moderate extent it inhibits scab formation.

7. Finally, citric acid is an important addition to the therapy of fetid rhinitis by enabling the rhinologist to successfully combat the chief and often only complaint of the patient—ozena." (*Ther. Gaz.,* Vol. XXIV, p. 147).

Acid Picric (Tri-Nitro-Phenol) is one of those articles which has received considerable prominence lately owing to its being employed in the manufacture of smokeless gun powder. The English Government recently found it necessary to restrict its exportation in order that it might not fall into the hands of their enemies. The price thus being increased considerably, reduced its usefulness somewhat, but it still holds its own in effectiveness in the treatment of burns of the first and second degree.

Dr. E. Hawthorn of Marseilles, France, has experimented to some extent with it in the treatment of all forms of chancres. He reported his results after having treated twelve consecutive cases with uniformly good effects. His plan consists in first washing the surface thoroughly with camphorated solution of carbolic acid. then he applies a dressing moistened with a saturated solution of Picric Acid. He cautions the user to apply it only to the affected parts as it is very apt to set up an eczematous or erythematous eruption of the healthy skin. Cicatrization was found to begin in about four or five days and healing would be accomplished within a month (*La Sém. Méd.,* Vol. 20, p. 110).

Drs. E. Desnos and Paul Guillon of Paris, France, have published an article on the "Treatment of Chronic Urethritis by the Instillation of Picric Acid" (*Journ. de Médicale de Paris,* Vol. XI, second series, p. 403). They claim that it acts almost as a specific. They find that notwithstanding poisonous symptoms have followed applications to large burned surfaces, its toxic action is comparatively slight when injected into the urethra. They used a solution varying from 1 to 200 to 1 to 100 and twenty to eighty drops at each injection. They are able to report on twenty-nine cases—twelve were tuberculous and seventeen were due to other microorganisms. They were all cases which had failed to respond to such agents as protargol, silver nitrate and copper sulphate. Of the

tuberculous cases, two were cured, seven were somewhat benefited. two were made decidedly worse and one showed no effect whatever. Of the simple chronic urethritis cases, thirteen were no doubt cured, two markedly improved and two showed no effect whatever.

Acoine (Di-Paran-Isyl-Para-Phenetyl-Guanidin Hydrochlorate)—the newly introduced local anæsthetic alluded to here last year—has not received any very marked prominence.

Dr. Trolldenier of Dresden, Germany, is still carrying on a series of experiments, chiefly on dogs and rabbits, which seem to verify the previous reports that it is less toxic than cocaine and that its effects last several days.

The ophthalmologists naturally are the ones who continue to make the largest use of it. However the only prominent clinical observer who has reported is Mr. Robert Brudenell Carter of St. George's Hospital, London, England, in an article "On Acoine as a local Anæsthetic in Sub-Conjunctival Injections." He concludes "that it promises greatly to facilitate the treatment of some of the more intractable inflammatory infections of the eye and that it takes away the only serious objection to the employment of a method which, in properly selected cases, appears to me to be of great and incontestable value." (London *Lancet,* Vol. II for 1899. p. 1082).

Actol (Silver Lactate) has been practically unheard of in the current medical literature of the past year.

Aïrol (Bismuth Oxy-Iodo-Gallate) has received some little prominence during the past year by being classed in the list of those imported medicinal articles which have recently been classed by the Treasury Department as definite chemical compounds and therefore free of duty. There evidently must be a larger use for this agent than would appear from the reports in the medical literature. Few observers in this country have thought it of sufficient value to make any statement in print concerning it. The following two prominent observers have appeared in Europe, however. First "The Application of Bruns' Airol Ointment to Laparotomy Wounds" by Dr. Oscar Frankl of Vienna, Austria. He has made use of it in the treatment of the stitch-abcesses occasionally following a laparotomy, and concludes that the Ointment has some value as an energetic antiseptic, yet from his experience an Airol powder or gauze proved to be preferable. for he finds such a gauze will

absorb the secretions effectively whereas the ointment produces no such result. (*Centralblatt für Gynäkologie,* Vol. 24, p. 569).

The other article published was entitled "Remarks upon the Article by Frankl in the Preceding Number" by Dr. Walter Stoeckel of Bonn, Prussia. He reports that in the Bonn clinic, Bruns' Ointment has always worked with satisfaction not only in laparotomy cases but in the treatment of other wounds. He also finds however that if dusted on in the form of powder it absorbs the secretions better. He however much prefers to use a simple Kaolin powder sterilized. He finally concludes that there are few better healing devices than the simple antiseptic bandages (*Centralblatt für Gynäkologie,* Vol. 24, p. 593).

Dr. A. Döderlein of Tübingen, Germany, also recommends and writes "Upon Bruns' Ointment as Material for Dressing Wounds." His proportion of satisfactory cases was 90%, and his number of cases was 400 (*Centralblatt für Gynäkologie,* Vol. 24, p. 689).

Amyloform—the patented substitute for Iodoform formed by the combination of Formaldehyde with Starch—has received practically no attention in the literature of the year.

Anæsthesia has rather increased as a topic for discussion throughout the past year.

Dr. Carl Ludwig Schleich of Berlin, Germany, seems to have recently confined his investigations to infiltration anæsthesia. He has recently contributed an extended and important article on this subject in the *Berliner Klinische Wochenschrift* (Vol. XXXVII, p. 269). He believes that this form of administration will eventually entirely supersede general anæsthesia in many cases. In his experience the infiltration method is entirely without dangerous effects, due chiefly to the extremely small amount of the anæsthetic used locally. Operations upon fibromata, angiomata, lipomata, superficial operations like tenotomies, transplantations and suturing of fresh wounds, offer the best opportunities for its use. He completely fills the skin and subcutaneous tissue all about the site of the operation with the infiltration liquid but infiltrates the tissue only as much as necessary. He minimizes the pain produced by the hypodermic needle by applying a spray of ethyl chloride. Even major operations have been attempted successfully—herniotomies and cœliotomies. In operations on boils, carbuncles or abscesses, he has found it necessary to infiltrate the surrounding healthy uninflamed tissues. The drugs chiefly used by him were cocaine and

its salts, tropococaine and nirvanin. Many operators have already made extensive use of this local anæsthetic in amputations, resections, operations on bones, gynecological operations, ophthalmic operations, urethrotomies, hydroceles, hemorrhoids and the like. In referring to general anæsthesia, he recommends the use of a special solution consisting of:

Ethyl Chloride.	½	to 2	parts
Chloroform		4	"
Anæsthetic Ether.		12	"

He puts on record the statement that he has used this mixture in about 5000 cases without any bad results.

The use of the originally proposed Schleich mixture has not yet entirely died out, for the wave of enthusiasm over it gradually spread westward, and was showing its effect in the middle-west a year ago.

Dr. Robert M. Stone of Omaha, Neb., read a paper before the Section on Surgery and Anatomy at the meeting of the American Medical Association in Columbus, Ohio, a year ago in which he very warmly advocates the use of the mixture. He however attributes his results to the small amount of the anæsthetic used which is accomplished by a special mask recommended by him (*Journ. Amer. Med. Assoc.,* Vol. XXXIII, pages 1123 and 1243).

Upon the publication of Dr. Stone's paper, the East was heard from again in that Dr. Walter Lathrop of Hazelton, Pa., felt called upon to express his opposition to Dr. Stone's conclusions, but states that he has "been a most ardent supporter of Schleich's mixtures, and have given them, I believe, a fair trial, and have reached the conclusion, before stated, that the danger is great, and apt to be sudden. I have had no fatal cases, but have had so many that required hard work to *restore breathing* that I feel justified in warning against its use." (*Phila. Med. Journ.,* Vol. 4, p. 1045).

Other mixtures to produce more efficient anæsthetic properties are still being employed.

Dr. Cosimo Noto of New Orleans, La., has contributed an article "On the Association of Paraldehyde with Chloroform. A New Contribution to Study of Mixed Anæsthesia." Naturally Dr. Noto claims such a mixture to be superior to all other mixed anæsthetics. His experiments have been up to this time confined to six dogs, and have not yet been attempted with human patients. He claims that

one of the chief practical advantages in the use of Paraldehyde is based on the fact that when administered before the Chloroform is inhaled it aborts that rebellious and fretful condition noticed in patients when being forced to undergo Chloroform anæsthesia. Chloroform excitement has thus been completely suppressed, and the profuse salivation and vomiting did not occur. Dr. Noto looks forward to the future possibility of anæsthetizing without danger not only those patients who have heart disease but those in whom the administration of Chloroform is otherwise contraindicated (*New Orleans Med. and Surg. Journ.*, Vol. LII, p. 495).

Dr. S. Ormond Goldan of New York City, has published a supplementary article on the claims of the three anæsthetics "Nitrous Oxide; Ether; Chloroform" in a somewhat extended article, and closes with these remarks: "In conclusion, I think no one will deny that it is more the method employed and skill displayed in administering anæsthetics than the particular anæsthetic used that in most cases leads to the favorable termination of and rapid recovery from the operative procedure, whether long or short, in which the anæsthetic is more or less a factor. This is fully realized by anæsthetists, but rarely by the occasional administrator, who, as a rule, pays little attention to details upon which so often the patient's life depends." (*N. Y. Med. Journ.*, Vol. LXXI, pages 629 and 673.)

A very valuable and interesting symposium took place at a meeting of the New York County Medical Association on February 19th last in which the different departments of the subject were taken up by prominent observers: "Selection of Anæsthetic in Surgery" by Dr. John A. Wyeth of New York City, "The Amount of the Anæsthetic" by Dr. Thos. L. Bennett of New York City, "Nitrous Oxide and its Modifications in Prolonged Surgical Operations" by Dr. S. Ormond Goldan of New York City, "Experiences with Ethyl Chloride in General Anæsthesia" by Dr. James P. Tuttle of New York City. An interesting discussion followed in which Dr. H. A. Hare of Philadelphia took part (*Journ. Amer. Med. Assoc.*, Vol. XXXIV, pages 705 to 712). Shortly after this meeting Dr. John D. Thomas of New York City published a short note correcting a reference made at the above meeting to a supposed fatal case from the administration of Nitrous Oxide. In his note he attempts to prove that death was not caused by the anæsthetic (*Journ. Amer. Med. Assoc.*, Vol. XXXV, p. 511).

Analgesia produced by the injection of small quantities of cocaine hydrochlorate into the spinal canal according to the method of Dr. August Bier of Kiel, Prussia (alluded to here last year) has received considerable attention. Drs. A. Matas, F. A. Larue and Hermann B. Gessner of New Orleans, La., have successfully applied this intraspinal method in one particular case in the Charity Hospital of their City. They report that an internal hemorrhoid was clamped, a groove made around it with scissors and a ligature applied after two injections of 1 Cc. (16.2 minims) each of a one per cent. solution, when the distal portion was cut off—all of which was accomplished without any pain whatever. Anæsthesia of all the lower extremities was noted.

Dr. B. Schiassi of Budrio, Italy, reports having performed three major operations under intraspinal anæsthesia. He amputated a leg, removed a cancer from the rectum and a section from the pubis after the injection of only 0.9 Cc. (15 minims) of a one per cent. solution of hydrochlorate of cocaine to which was added a very small quantity of sulphate of morphine. The quantity of cocaine and morphine injected was so small that the general effects were not manifest, but the local effects below the point of puncture were very marked (*La Sém. Méd.*, Vol. 20, p. 94).

Dr. Th. Tuffier of Paris, France, reported to the Paris Biological Society at its meeting on November 11th, 1899, his hospital experience with injections beneath the arachnoid in the lumbar region. He exhibited a woman on whom he had performed a tedious vaginal hysterectomy. He made use of the equivalent of 15 milligrammes (about ¼ of a grain) of hydrochlorate of cocaine which produced anæsthesia. He reported another similar case at the meeting on November 29th with like results, and stated that he obtained complete satisfaction in quite long operations on the anus, the rectum, perineum, urethra, bladder and even in cystitis (*La Presse Médicale*, Vol. 7, second half, p. 151 of the Society Reports).

A rather new field for this operation has been attempted in obstetrical work. It apparently was brought about by the inability to procure, on short notice, an assistant to take charge of the anæsthetization. Dr. Oskar Kreis of Basel, Switzerland, has reported on six cases of labor, two of which called for the forceps in which this form of injection was used. Complete analgesia was obtained of all the parts below the ribs which was kept up long enough to not only perform ordinary obstetrical operations but to complete spon-

taneous delivery. He calls special attention to the fact however that anæsthesia is not obtained. The sense of touch and control of the muscles were retained by the patient. There being no pain due to the pressure and distension, voluntary muscular action does not aid in the expulsion of the head, for the patient does not "bear down." Dr. Kreis reminds his readers that in the case of an excitable woman general anæsthesia may be preferable for obvious reasons, and he would therefore possibly limit this form of anæsthesia to only those cases where either an assistant cannot be obtained or it is desirable for other reasons to dispense with him (*Centralblatt für Gynäkologie,* Vol. 24, p. 724).

Dr. William E. Lower of Cleveland, Ohio, reports the case of the amputation of a leg under this form of anæsthesia, at a meeting of the Cleveland Medical Society on February 23d last. The amputation was made at the middle third of the left leg, and for definite reasons general anæsthesia could not be employed. Complete anæsthesia of both foot and leg was produced after injecting a syringeful of solution of hydrochlorate of cocaine ($\frac{1}{5}$ of 1%) between the last dorsal and the first lumbar vertebræ. In about three minutes complete anæsthesia was obtained and the operation was performed with no evidence of pain. In the discussion which followed Dr. R. J. Wenner called attention to the danger which might follow from injecting the solution into the substance of the cord. Previous operators had injected into the subarachnoid space (*Cleveland Journ. of Medicine,* Vol. V, p. 118).

The administration of Ether as an anæsthetic has taken a very marked step forward during the past year or two and especially last year. It has apparently either displaced or is being used in equal amounts to Chloroform in many quarters. It thus becomes important that its quality should be carefully looked into, and all the definite requirements to maintain a high standard be fully complied with. The quality of the Ether as supplied by all manufacturers has largely improved, but no doubt can be still further improved. The present revision of the Pharmacopœia now being carried on is therefore looked to for an advance in the line of critical tests. One of the most important U. S. P. tests is that for foreign odors, but from evidences developed within the last year or two this test needs amendment. The Pharmacopœia demands as follows: "If 10 Cc. of it be poured, in portions, upon clean, odorless blotting paper, and allowed to evaporate spontaneously, *no foreign odor*

should become perceptible when the last traces of Ether leave the paper." The Ether usually offered now-a-days to the surgeon does not contain enough foreign odor in the prescribed 10 Cc. to be detected by the most acute sense of smell. However when as much as from 50 to 100 grammes (1¾ to 3½ ounces) of some grades of Ether which has passed this test, has been used in an operation occupying the ordinary length of time, and most of it respired by the patient and thus saturated with the lung vapors, the air of the operating room will have a distinct foreign odor in proportion to the uncleanness of the Ether. This foreign odor is rarely altogether absent from even very good Ether but varies considerably in amount. In short operations the odor would scarcely be perceptible, for the opportunity for accumulation had not been given. This odor is always disagreeable, and when in considerable amount is nauseating, especially to a patient saturated with the anæsthetic. On general principles every patient who undergoes Ether anæsthesia is liable to subsequent nausea and vomiting. This condition proves to be quite remarkable and cannot always be accounted for, but in a general way may be expected without surprise in proportion to the amount of the foreign odor discoverable by tests. The number of patients who have actually suffered from this bad symptom has diminished in the last few years, but the proportion is still not far from 25%, but possibly may be as low as 20%. This diminution is probably due to better management by the anæsthetist, which includes the use of a far smaller proportion of the anæsthetic, and again in a less degree to the improvement noticeable in the quality of the Ether used. The still further diminution in the development of this bad symptom may then be reasonably expected to continue from the above improvements alone. Of the large majority of patients who escape this bad symptom there must be many who only escape by a slight chance. In conditions so sensitive therefore, it is easy to understand that the presence or absence of the nauseating foreign odor becomes very important as deciding for or against the bad symptom, and the degree in which this nauseating foreign odor may be present will decide how many of the majority of patients will be influenced unfavorably by it. From the above reasoning therefore it is well to bear in mind the great importance of clean Ether, and that the Ethers of the market which may pass this odor test may yet give nauseating results. The Revisors of the Pharmacopœia should now be urged to im-

prove at least this one test in order to still further eliminate the objectionable hydrocarbon impurities. It is difficult to know exactly how to proceed to discover a more sensitive test other than using large quantities of Ether to obtain the proportion of foreign matter after evaporation. This would be an expensive requirement and therefore might be rarely carried out.

Another new inhaler has recently been offered to the profession by Dr. George R. Fowler of Brooklyn. A description and cut will be found in the *N. Y. Med. Journal* (Vol. LXXI, p. 177).

Aneson (Tri-Chlor-Pseudo-Butyl-Alcohol)—the local anæsthetic brought out some time ago as a substitute for cocaine—has received little or no attention in the medical literature of the past year.

Aniodol is the short name which has been adopted for the name of a solution which is described in a very unsatisfactory and loose way as a solution of formalic and allylic derivatives. It is apparently a solution of trimethanal with a derivative of the allylic series and then taken up with a specially prepared glycerin. It is claimed to be a powerful bactericide. To sterilize instruments a solution of 1 to 2000 is the strength necessary and is reported not to affect the operator's hands. When used as an injection and for dressings, a solution of 1 to 5000 appears to be sufficient. The laryngologists are reported to make use of it in solutions of ½ to 1%.

Dr. Sedan claims this agent to be non-toxic and yet a most powerful antiseptic (*Rev. d'Hygiène et de Police Sanitaire,* Vol. XXII, p. 154). For the treatment of skin affections it is offered in the form of a soap. In the strength of 1 to 3000 it has been used as a urethral injection in the treatment of gonorrhea.

Antinosin (Sodium salt of Tetra-Iodo-Phenol-Phthalein) appears to be still used by many observers but it is generally classed with other agents so that it is often difficult to draw any definite conclusions as to whether it is of more value than some others or only of equal value. The surgeon still makes use of it in the treatment of all forms of ulcers, and the ophthalmologists and laryngologists resort to its use.

Dr. Edwin Klebs of Chicago, Ills., in contributing an article to the symposium on "Diphtheria" before the Section on State Medicine at the annual meeting of the American Medical Association at Columbus, Ohio last year, recommends for local treatment the use of such mild, non-irritating antiseptics as chinosol of the

strength of 1 to 1000 or Antinosin in a 2 per cent. solution (*Journ. Amer. Med. Assoc.*, Vol. XXXIII, p. 1520).

Antipyrin (Phenazone) hardly needs any notice here on account of its very extensive and well-known use throughout the world. However one use a little out of the ordinary line is in the treatment of pertussis. Dr. Charles Gilmore Kerley of New York City read a paper before the Section on Pediatrics of the New York Academy of Medicine on February 8th last on "Drug Values as observed in the Management of 752 cases of Whooping Cough." He enumerates the various agents tried and finally concludes that while the bromides were probably of much value, Antipyrin was found to be the best, and when these two agents were given together they seemed to control the affection more effectively than either one alone. He found that the most effective dose for an eight months old child was 30 milligrammes (½ a grain) of Antipyrin and 130 milligrammes (2 grains) of sodium bromide every two hours (*Archives of Pediatrics*, Vol. XVII, p. 270).

The following may interest some readers. In the *Chemist and Druggist* of May 19th, 1900:

"Reference was made to the recent decision given by the Paris Court of Appeal with regard to the lawsuit which has been going on for some years between the Syndical Chamber of Pharmacists of the Seine and the Société Parisienne de Couleurs d'Aniline concerning the right of the latter company to the exclusive use of the word 'Antipyrine' in virtue of a trade-mark taken out by them. A decision in favor of the company had already been given by a lower Court, but the Court of Appeal gave a contrary judgment, practically on the ground that the name of a pharmaceutical product cannot be protected by a trade-mark when such name is not a fancy word but indicates the scientific nature of the product. As the case is one affecting the question of trade-marks in France, the following details of the recent judgment given against the company will be interesting:—

On January 27, 1897, the Syndical Chamber of Pharmacists of the Seine brought an action against the Sté. Parisienne de Couleurs d'Aniline with the object of nullifying the trade-mark consisting of the word 'antipyrine,' registered by the company on February 16, 1888. Judgment was given in favor of the company on the ground that the inventor or proprietor of a pharmaceutical product can secure the exclusive right to the use of the name of such

product, on the condition, however, that it is not an everyday and necessary article and does not reveal either the nature or special virtue of the product. The Judges of the lower Court considered the word 'antipyrine' to be a purely fancy word chosen as such by Dr. Knorr, the inventor of the product, who might have selected any other name. Also the Sté. Parisienne, who control the product in France, have never ceased to claim their right to use the word, so that it cannot be said to have fallen into the public domain. The legal effect of this decision, which is now under appeal, remains to be considered. No pharmaceutical product can be patented in France, but if it can be protected by a trade-mark the effect is to all intents and purposes the same. But in order to make such trade-mark valid the denomination must be purely a fancy one, and not one that would show the special nature or medical virtue of the product indicated. If it were otherwise, every manufacturer of a pharmaceutical product would easily find a way of evading the law. Under these circumstances the only point to be examined is to know whether the word 'antipyrine,' supposing it to have been regularly registered by the Sté. Parisienne de Couleurs d'Aniline, is a fancy word arbitrarily chosen in view of a legal registration, or if, on the contrary, it was intentionally adopted by Dr. Knorr in order to introduce the product to the medical world, and to answer the requirements of therapeutics. Everything points to the fact that the latter course was adopted by Dr. Knorr, and that the word 'antipyrine' was intended to designate clearly a specific remedy against fever, as indicated by its etymology. Antipyrine is also used as an energetic dolorifuge, and as such the Société claims it might have been registered as a trade-mark under the word 'analgesine,' but this name would have revealed one of the virtues of the product.

The judgment included costs against the Société both for the first hearing and the appeal. The case will probably come before the Court of Cassation, but it does not seem likely that the finding recently given will be revised." (*Chem. and Drug.*, Vol. LVI, p. 951).

Antitoxins to be used in the treatment of disease still remain a most important topic in the medical literature of the world. They have actually forced into existence an entirely new scientific industry. The standardization by the various manufacturers is carried on with the utmost care and skill. It requires a special line

of training to produce the bacteriologists and chemists necessary to put forth a standard article which the practitioner may have confidence in, and it is quite out of place for those ill-advised humanitarians to claim that the horses suffer, for the evidences are quite convincing that the animals are very well treated as to feeding, grooming and exercising, and are exempted from any heavy labor. It is rational then to expect a rapid improvement not only in the quality and uniformity of the serum but in the exactness of therapeutic results.

Prof. Ehrlich has recently shown that there are two distinct substances in the serum, one a sort of digesting ferment which serves to actually kill the bacteria, and the other to simply fasten the former to the bacteria. To the former he has given the name of "end body" or "complement." To the latter, the "between body" or "immune body." These two bodies appear to be powerless when alone and even when together they must be in proportionate amounts. The "immune body" does not appear to be found in the proper proportionate amount in the normal organism and only appears in much larger amount during immunization from infection. This constitutes an "immune serum." To cure an infection then by means of this serum a sufficient amount of the "immune serum" and of the "end body" is necessary to destroy the bacteria. If the proper proportions are not present infection is not retarded. Dr. A. Wassermann of Berlin, Germany, has written an article concerning these developments (*Deut. Med. Wochensch.*, Vol. XXVI, p. 285). He claims that in previous investigations only one of these factors, the "immune serum" has been considered, and therefore the results have not been what was expected, even when this was supplied in great abundance, for the reason that the other factor was entirely overlooked. The one benefit which was noticed and which was quite limited was due to the action of the large quantity of the "immune body" with the small amount of the "end body" which was found then present in the organism. When this reaction was accomplished as far as it could go, there was no other use for the remainder (although still abundant) of the "immune body" and its usefulness was checked. Dr. Wassermann thus very rationally claims that the two bodies should always be supplied together in proper proportions in this form of treatment. He accomplishes this by injecting the normal serum at the same time as the "immune serum," and reports that he has carried on his experiments

sufficiently to prove his theory. He reports such results that many authorities think he has confirmed his point. He further discusses this whole topic at some length, bringing up the question of different forms of "immune bodies" and "end bodies," studying the question of how far one will co-operate with the other—for instance those of the horse, goat and ox. This entire question opens up a very interesting and promising field.

It is now some six years since the diphtheria Antitoxin was first put on trial, and whereas many observers are not yet converted it is difficult to disprove the many marked evidences of its efficacy. The statistics which have now accumulated to an extremely large number cannot be as completely ignored as was at first attempted by the skeptics. The general practitioner is becoming much more impressed with the importance of this form of treatment, and Medical Societies are giving this whole subject of Serumtherapy very prominent attention. A most notable instance occurred early this year in the form of a Symposium on Serumtherapy held at the N. Y. Academy of Medicine under the auspices of the New York County Medical Association on the evening of March 19th last, on which occasion Dr. Edward K. Dunham of New York City introduced the subject by reading some "Remarks on Serumtherapy." He closes as follows:

"When an animal has a natural or acquired immunity to a given bacterial infection, the bacteria which gain access to the body either simply fail to multiply and die, or they become swollen and rapidly killed. In either case, they fall a prey to phagocytes, which complete their destruction. Whether the failure to multiply is due to lack of appropriate nourishment, to a sudden change of environment, or to a direct germicidal and bacteriolytic action exerted by substances within the tissues and fluids of the body are still matters of controversy. It is possible that the final result is not always brought about by exactly similar processes. It is not quite germane to the present discussion to pursue this very interesting line of inquiry, and I shall therefore leave it without entering into further particulars.

In preparing this brief prelude to a series of papers that must necessarily prove much more highly interesting and instructive, I have chosen for the thread connecting my remarks the theory which appeared to me to include in a single conception the greatest number of details concerning a very complex subject. We are not

yet in a position to assert that a given poison when introduced into the system will necessarily provoke the production of antitoxic substances. All the theories relating to the subject, however suggestive, are still on trial, and we remain dependent on observation and experiment for those data which may prove of clinical value to the practicing physician and surgeon." (*Journ. Amer. Med. Assoc.*, Vol. XXXIV, p. 896).

Diphtheria continues to be probably the most prominent affection treated with Antitoxin. Dr. William H. Park of New York City spoke at the above meeting on the "Use of Diphtheria Antitoxin in the Treatment and Prevention of Diphtheria." He introduces his subject as follows:

"The final test of the value of diphtheria antitoxin in diphtheria is the results derived from its use. The difficulty, however, of knowing what would have been the course of a case, if antitoxin had not been used or had been used, is so great that it is well to gather proofs from other possible sources, as well as from personal experience. Therefore, I will consider certain facts derived from laboratory experience and from statistics."

His paper is a very interesting and quite convincing one for he writes in a very rational way. His conclusions are as follows:

"Whether some samples of serum may or may not cause, along with their beneficial effects, really serious deleterious effects is a question; still, we know that many samples of serum produce practically no disagreeable results. I have seen 60 patients treated with but one rash resulting. I have also seen twenty treated with ten rashes developing. To select good serum and throw away the irritating is only a matter of expense. At present I see no other way of eliminating rashes and other deleterious effects from substances in some sera.

In closing let me simply say that from my own almost constant observation of diphtheria during the past eight years, that is both before and since the introduction of antitoxin, I believe that the early use of antitoxin does great good in diphtheria, and that it should be used immediately in all patients where the onset is active without waiting for cultures. In mild cases already fully developed or on the mend when first seen the use of antitoxin is a matter of minor importance, as they will do well anyway. Let me also recommend its use in all suitable cases for immunization. It gives us a guarantee of at least two weeks of safety, and this period can

be lengthened at will by repeating the dose." (*Journ. Amer. Med. Assoc.,* Vol. XXXIV, p. 902).

Dr. W. S. Plotner of Turtle Creek, Pa., gives "Some Reasons why Antitoxin is Condemned, and how the Objections to its Use may be Overcome." He states that he has "had more experience in the treatment of diphtheria than any other single infectious disease: having passed through two fairly severe epidemics, which included in its spread my entire family, not excluding myself, and losing a child in the second outbreak."..... "I am satisfied from careful observation that the objections to the use of the remedy are mostly induced by ill results following its *unreasonable* and *unscientific* administration." (*Penn. Med. Journ.,* Vol. III, p. 410).

Dr. John S. Billings, Jr. of New York City, makes "A Plea for the More Extended Use of Antitoxine for Immunizing Purposes in Diphtheria" and draws the following conclusions:

"1. The increased number of cases of diphtheria in New York city in 1899 is probably due, in part, to neglect of a most important prophylactic measure against the disease—*i. e.,* immunization by antitoxine.

2. Immunization furnishes one of the most potent means of preventing the spread of diphtheria and lessening the number of deaths from this disease.

3. It is probable that in some cases the immunizing dose of antitoxine hitherto recommended (150 units) is insufficient, and that at least 300 units should be used in children and 500 in adults. Owing to improvements in the mode of preparation and the increased concentration of the antitoxic serums now in use no ill effects are to be apprehended." (*N. Y. Med. Journ.,* Vol. LXXI, p. 234).

It may be well at this point to record where the arguments of some of the prominent skeptics may be found. One of the most conspicuous of these is Dr. J. Edward Herman of Brooklyn, N. Y., whose claims for "The Other Side of the Antitoxin Question" were alluded to here last year. He now publishes "A Consideration of the Failure of Antitoxin in Operative Cases of Diphtheritic Croup" and concludes his arguments with the statement that an experiment had been "tried in Trieste by the physicians of that city, who in 1895 treated practically all cases of diphtheria in general with antitoxin. The result was that more patients died in that year than

ever before. Kassowitz called Baginsky's attention to this fact, and in reply Baginsky contented himself by saying he didn't know anything about the circumstance. It seems as if some optical perversion prevents him from seeing that which he does not want to see. When the foolish ostrich shoves his head in the sand to cover his eyes, that act does not mislead or extinguish his pursuer any more than this evasive answer deceives the profession or removes the above-mentioned fact." (N. Y. *Med. Record,* Vol. 57, p. 92). Later he continues his criticism in "A Reply to an Attempted Defense of Antitoxine" in which he concludes with these emphatic words:

"Seneca probably had in mind people resembling the fanatics now at large who advocate criminal prosecution of physicians for refusing to use antitoxine, when he wrote: 'Many persons might have attained to wisdom had they not assumed that they already possessed it.'

It is the earnest hope of the writer that these lines may act as a hammer to drive a few more nails into the coffin of the patented article called antitoxine with which the mercenary Behring is exploiting the medical profession." (*N. Y. Med. Journ.,* Vol. LXXI, p. 634).

Dr. Adolph Rupp of New York City comments on the paper of Dr. John S. Billings, Jr., and after considering in some detail Dr. Billings' various tabulations, concludes:

"Thus far, all that is certain about immunization in diphtheria is that it has not realized the promises and expectations of its original promulgators; and, although its alleged immunizing power has dropped from a six months' to a six weeks' duration, its calculated effective dosage has been more than trebled. Practically this does not look well for "the most potent means of preventing the spread of diphtheria." (*N. Y. Med. Journ.,* Vol. LXXI, p. 315).

On April 28th, 1900 Dr. J. S. Billings, Jr. published a short note in reply to some of the points brought up by Dr. Herman, and reiterated the fact that the figures he gave were official from the Health Department of New York City and included all the cases of diphtheria, regardless of the mode of treatment (*N. Y. Med. Journ.,* Vol. LXXI, p. 752).

Dr. Edwin Klebs of Chicago, Ills., advocates the use of Serum injections in the treatment of diphtheria, and claims that it "should be made in every case in which a diagnosis of diphtheria

can be made even with probability, but should not be registered as diphtheria until the diagnosis is made sure by microscopic or bacteriologic examinations." (*Journ. Amer. Med. Assoc.*, Vol. XXXIII, p. 1520).

Dr. A. Anderson of Sheffield, England, made a report on "The Serum Treatment of Diphtheria" in which he points out that the mortality was exceedingly high everywhere before Antitoxin was introduced and that it is now noticeable at this date that the character of the disease has very definitely altered, being less virulent than formerly. He notes that more throat affections are recognized as diphtherial than heretofore, and it is extremely unlikely that such a virulent disease should have become so benign in a few years. From his reading of the statistics he would draw the conclusion that the older methods had comparatively little effect on the death-rate whether treated as early as the first day or as late as the fifth. His description of how he meets various conditions will be interesting reading to those who desire to keep posted. (*Quarterly Med. Journ.*, Vol. VIII, p. 173).

At a meeting of the Medical Association of the Greater City of New York held on April 9th last, the subject for discussion was Diphtheria, and Dr. John Blake White of New York City read a paper on "The Diagnosis and Treatment of Diphtheria." He opens as follows:

"Believing that the time is now at hand when a careful investigation into the merits of treatment for diphtheria may be undertaken with some likelihood of reaching conclusions without prejudice, I have accepted the invitation to open this discussion to-night, with the hope that in the various opinions expressed we might definitely dissipate much of the darkness which surrounds the diagnosis and treatment of diphtheria.

. . . . . .

Statistics thus far have proved that among the host of remedies proposed for the treatment of diphtheria not one is entitled to superior confidence. There are local resorts with which of course we are all familiar, to dissolve the pseudo-membrane, and there are also others supposed to act antiseptically, and so bring about chemical changes to modify or annihilate micro-organisms.

. . . . . .

It is pleasing to note, however, a return of good sense abroad, and that the waves of skepticism are starting in various directions,

calculated to engulf the delusive claims of antitoxin in like manner as befell the fallacious lymph of Koch. In France the treatment is discredited, and recently the learned bodies in Moscow have denounced its fallacy in terms not to be mistaken. The *British Medical Journal* laments the fact that the weekly mortality in Paris from diphtheria shows a steady increase over previous years, notwithstanding the fact that antitoxin is 'universally used'." (*Pediatrics,* Vol. X, p. 41).

Dr. Henry D. Chapin followed with some remarks on "The Heart and Circulation in Diphtheria." He concluded that there can be no question that lives may at times be saved by keeping the patient quiet and at the same time properly supporting the heart. Next Dr. John Winters Brannan read a paper on the "Treatment of Diphtheria as Carried Out in the Willard Parker Hospital," speaking in favor of the use of Antitoxin. Dr. Joseph E. Winters however followed in opposition. Further discussion was held for and against its use, during which the President, Dr. Robert F. Weir of New York City, "said that it had been rather depressing to him to listen to such a discussion as that of this evening, because it brought home to him what he had met with in his own experience in surgery. None of the serums had proved satisfactory in their results. The last to try the confidence of the surgeon was the one which seemed most promising of all, namely, tetanus antitoxin. Last summer in the city of New York and its vicinity it was put to a most severe test, and it was found wanting." (*Pediatrics,* Vol. X, p. 58).

On the occasion of the so-called "Jacobi Festschrift" Dr. William H. Park of New York City read a monograph on "The Use of the Diphtheria Antitoxic Globulins of the Blood Serum Instead of the Entire Serum in Diphtheria." He introduced the subject as follows:

"Ever since the discovery of the value of diphtheria antitoxin in the prevention and treatment of diphtheria, it has been the desire of those using and producing the serum to separate the diphtheria antitoxin from the blood serum, with the hope that in this way the antitoxic effect might be retained, while the deleterious effects sometimes produced by injections of blood serum, as evidenced in the rashes and the effect on the red blood cells, might be avoided. As investigations progressed it has become more and more evident that the antitoxic substances in the blood are closely combined with

the globulins of the blood, and that whatever precipitates them precipitates the antitoxin also. In fact, without globulin there appears to be no antitoxin, and wherever antitoxin exists globulin does also."

. . . . . .

He apparently felt obliged to make the following summary:

"As a whole, these results are very disappointing, as this antitoxic globulin apparently contains the greater part at least of these substances which cause the more or less deleterious effects of the blood serum, and as there seems no probability of separating the antitoxic properties from the globulin, the present outlook for a substance which, while being a specific neutralizing substance for diphtheria, will at the same time be absolutely harmless, is not encouraging. What is true for diphtheria antitoxin is also probably true for other protective serums." (*Pediatrics,* Vol. X, p. 121).

Dr. Frank W. Wright of New Haven, Conn., made his Presidential Address before the New Haven Medical Association on January 17th last upon "Five Years' Experience in Private Practice with Diphtheritic Antitoxin Serum," during which 268 persons were treated with Antitoxin, of which 209 recovered and 59 died, giving a mortality of 22 per cent. His conclusions "are that diphtheritic anti-toxin serum usually cures favorable cases and often unfavorable ones, it prolongs life, lessens the severity of the disease, tends to prevent stenosis and the need for intubation in laryngeal cases, and when intubation is necessary it lessens the mortality; it prevents complications and sequelæ and materially shortens the course of the disease." (*Pediatrics,* Vol. IX, p. 236.)

Reports from some of the foreign observers may profitably be recorded here. Dr. A. J. Tonkin of Manchester, England, reports on "Two Hundred Consecutive Cases of Diphtheria Treated with Antidiphtheritic Serum." He draws the following conclusions:

"The foregoing figures and statements tend to establish the following results as to the use of antitoxin:—1. The general mortality rate is reduced. The mortality for cases treated during the first three days of illness is reduced to about 3 per cent. and that for all other cases to about 12 per cent. 2. Laryngeal cases treated early are markedly affected for the better, the death-rate being very considerably reduced. 3. The tracheotomy mortality is very much lessened. 4. There is less need for tracheotomy if treatment be begun early. 5. All ages and both sexes are equally affected. 6.

The chances of nephritis are lessened. 7. When treatment is begun early albuminuria may not appear, will probably not be severe, and will disappear soon. 8. Paralysis is lessened for cases treated on the first and second days of the illness. The paralysis mortality is much reduced. 9. Extension of disease to the larynx and parts below was not noted after injection of antitoxin. 10. The only disadvantage noted after its use was a slight discomfort for a few days from urticarial rashes and pains in the joints in a small percentage of the cases. The conclusions arrived at may be taken as a plea for early diagnosis and early antitoxic treatment." (London *Lancet*, Vol. II for 1899, p. 1082).

Mr. H. W. Mills of Ruardean, Gloucestershire, England, publishes "Some Notes on Sero-Therapy." Out of the total number of cases he reports upon, 76 were injected with Antidiphtheritic Serum—27 times for the treatment of existing diphtheria and 49 times prophylactically in cases of relatives who had been in close contact with diphtheritic patients. Two other cases were those of tetanus and puerperal fever treated by their appropriate Antitoxins .....“Of the 27 consecutive cases of diphtheria treated with anti-diphtheritic serum all recovered.”.....

“In the 49 cases in which anti-diphtheritic serum was used prophylactically no case of diphtheria occurred, though the cases treated thus were all relatives (with the exception of myself and a nurse) living in close intimacy, sleeping in the same room and often in the same bed as a patient actually suffering from diphtheria, and inhabiting mostly small cottages. I have not the slightest doubt but that many of these cases would, if they had not been protected, have caught diphtheria. In several cases the children of a family succumbed one after another until the parents, fearing lest the whole family should be prostrated, finally and unwillingly allowed the rest to be protected by inoculation, when the progress of the disease was at once stopped and no further case occurred.

Finally, it seems to me that the prophylactic use of anti-diphtheritic serum confers complete immunity for a certain period—the length of which is not known—and should be resorted to as unhesitatingly as vaccination is resorted to in the case of the relatives and immediate attendants of a small-pox patient. There is no pain, no after effects, no interference with a person's ordinary pursuits, and, above all, it relieves the mind of nervous persons from the dread of catching diphtheria.” (London *Lancet*, Vol. II for 1899, p. 1806).

Dr. T. G. Brodie of London, England, has carried on some experiments on "The Physiological Action of Diphtheria Toxin" in order "to determine the more immediate effects of diphtheria toxin, and to find the causes of death when this happens within forty-eight hours after an injection. Throughout these experiments cats were the animals usually employed." (*Brit. Med. Journ.*, Vol. II for 1899, p. 1282).

Dr. A. Jefferis Turner of Queensland, New South Wales, reports some interesting statistics on "The Diphtheria Mortality of the Three Principal Australian Colonies for the Past Fifteen Years with special Reference to the Influence of Antitoxin on the Death-Rate" showing a very definite reduction. (*Intercolonial Med. Journ. of Australasia*, Vol. V, p. 39).

An interesting discussion took place between the following English observers in London: Dr. F. de Havilland Hall, Dr. Richard T. Hewlett, Dr. N. Cullinan and the Hon. Stephen Coleridge on "The Statistics of the Antitoxin Treatment of Diphtheria." This will be found in the London *Lancet* (Vol. I for 1900, pages 1030, 1093, 1094, 1167 and 1168).

At a meeting of the New York Pathological Society on October 11th, 1899, Dr. W. H. Park of New York City stated that he had noted a very distinct change in the appearance of a diphtheria bacillus which had been under continued cultivation for some four years. He finds that it is now twice the length that it was, and has little appearance of a diphtheria bacillus. He obtained a photograph of its present condition.

There has been recently going on among some English observers, an interesting discussion on the comparison of diphtheria in man and "gapes" in birds which will be found in the *British Medical Journal* (Vol. I for 1900, pages 933, 994, 1506 and 1566).

The next important affection treated by its appropriate Antitoxin is probably tetanus. Unfortunately little definite progress has apparently been made with this form of treatment although sufficient encouragement is noted to not give up entirely. Much was looked forward to in the way of intracerebral injections but disappointment has occurred in many cases. In the way of a preventive the French veterinary surgeons report numerous successful results, particularly among those animals which are prone to develop tetanus after being operated upon. The attacks seem to take the form of

epidemics and these surgeons report that they have quite eliminated the disease. Dr. Ch. Dopter of Paris, France, has written a comprehensive paper on this subject, giving the statistics of his experiments on animals, and accompanied with a bibliography which will be of value to those who are following up this subject (*Gaz. des Hôpitaux,* Vol. 73, p. 493).

On account of the frequency of discouraging results, an attempt has been made to enumerate here all the successful cases that can be found in the prominent literature of the past year.

Dr. John D. Rice of New Eltham, London, S. E., England, reports "A Case of Tetanus Successfully Treated with Antitoxin" in which he states:

"There are three points of interest in the above case: (1) the large quantity of antitoxin required (110 cubic centimetres), due probably to the local seat of infection not being detected and excised; (2) the absence of any abscess at the seat of infection; and (3) no complications except an erythematous rash and an enlarged gland." (London *Lancet,* Vol. II for 1899, p. 1012).

Dr. E. B. Adams of Springfield, Mass., reports a case of a German boy 12 years old (*Phila. Med. Journ.,* Vol. 4, p. 1286).

Mr. Sheo Naudon Tiwary of Ajmere, India, reports the case of a boy of 16, having fractured his left leg a little above the ankle. (*Indian Med. Record of Calcutta,* Vol. XVII, p. 580).

Dr. G. Lloyd Roberts of Carnarvon, Wales, reports the case of a farmer 33 years of age, which he states presents features of interest and of some rarity apart from the question of treatment. (*Brit. Med. Journ.,* Vol. I for 1900, p. 1019).

Dr. C. H. Wise reports a case of tetanus treated with Antitetanus Serum and Chloral Hydrate in which large doses of the latter were tolerated. (*Brit. Med. Journ.,* Vol. I for 1900, p. 1406).

Dr. H. L. Van Natta of Seal, Ohio, reports the case of a girl five years of age who stepped on a rusty nail which penetrated the sole of her foot to the depth of half an inch, in which recovery took place. He draws the following conclusions:

"First, all poisoned wounds giving rise to tetanic symptoms should be thoroughly cauterized; secondly, I discontinued the antitoxin entirely too early. After getting a temperature of 99½° the remedy should have been continued by giving at least ten cubic centimeters every eight hours until we had a normal temperature. It is very evident that the toxin is the cause of the fever, and it has

not been entirely destroyed until we have a normal temperature." (*Ther. Gaz.,* Vol. XXIV, p. 375).

Dr. Thos. Hunt Stucky of Louisville, Ky., reports two cases (*Amer. Pract. and News,* Vol. XXIX, p. 441).

Dr. P. A. Hilbert of Melrose, Minnesota, reports the case of a boy 12 years old whose feet were scratched by a wire fence, successfully treated (*New England Med. Monthly,* Vol. XVIII, p. 427).

Dr. v. d. Crone of Hohenlimburg, Germany, reports a case of a boy 8 years old who fell and sustained a severe lacerated scalp wound (*Deut. Med. Wochensch.,* Vol. XXVI, p. 51).

A discussion took place at a meeting of the Philadelphia County Medical Society on January 24th last in which Dr. E. Laplace reported "A Case of Tetanus Treated by the Subdural Injection of Antitoxin and Carbolic Acid, with Exhibition of Case." This was the case of a man 36 years old who after puncturing his foot with a rusty nail developed tetanus on the tenth day. Carbolic Acid injections hypodermically of a strength of 1 to 3 were also employed every three hours after the tenth day of the attack. The discussion which followed is interesting. (*Penn. Med. Journ.,* Vol. III, p. 497).

Another case of tetanus treated with Tetanus Antitoxin and Carbolic Acid is reported by Dr. G. W. Wagoner of Johnstown, Pa.:

"This case may be classed as one of chronic tetanus for the reason that the symptoms of the disease were not developed until 13 days after the injury. The prognosis is very much better in chronic than in acute cases. But a hopeful case may continue so long and cause so much suffering in spite of the usual remedies, that this case seems deserving of record because of the prompt relief and rapid recovery under the use of carbolic-acid injections, intelligent nursing and the resources of a modern hospital." (*Phila. Med. Journ.,* Vol. 4, p. 883).

Dr. E. Behring of Marburg, Prussia, has recently carried on a series of experiments upon animals which appear to demonstrate the necessity of direct contact of the Tetanic Antitoxin with the infected tissues, bringing it as closely into contact with the point of infection and its vicinity as possible. He would recommend it to be used in the uterus or in the vagina in case of puerperal tetanus. In cases of tetanus neonatorum he would apply in the peritoneum. In diphtheria he would make local applications, spraying the nasopharynx with diluted Antitoxin, used in addition to the injections. (*Die Therapie der Gegenwart,* Vol. 41, p. 97).

The following cases in which intracerebral injections were employed may be recorded. Mr. Charles Firmin Cuthbert of Gloucester, England, reports his notes on a case thus treated which although fatal he fully believes that sufficient encouragement has been given by previous observers to continue this line of treatment. He states that although his case did not terminate in recovery perhaps this is all the more reason why it should be reported. (*Brit. Med. Journ.,* Vol. II for 1899, p. 1413).

Dr. Paul Jacob of Berlin, Germany, publishes his "Clinical and Experimental Experience in Intradural Injections" (*Deut. Med. Wochensch.,* Vol. XXVI, p. 46).

Dr. Albert Kocher of Bern, Switzerland, reports two cases of intracerebral injections. One the case of a man 32 years old injured on the head twenty-seven days previously who recovered, the other a five year old child injured on the eyelid a week previous who finally died. (*Correspondenz-Blatt für Schweizer Aerzte,* Vol. XXX, p. 107).

At a meeting of the New York Surgical Society held on November 22nd last, Dr. Robert Abbe of New York City read a paper on the "Effects of Intracerebral and Subcutaneous Administration of Tetanic Antitoxin in Tetanus as Observed in Nine Cases" of which four recovered. His results would show that this form of treatment is a valuable adjuvant and claims it superior to the subcutaneous method. (*Annals of Surgery,* Vol. XXXI, p. 366).

Drs. M. Loeper and R. Oppenheim of Paris, France, have published the results of some interesting observations in the way of a comparison between hypodermic and intracerebral injections of Antitetanus Serum. (*Archiv. Gén de Méd.,* Vol. III, new series, p. 426).

At a meeting of the Royal Medical and Chirurgical Society held in London on January 9th last, Mr. Alexander G. R. Foulerton and Dr. H. Campbell Thomson contributed a paper giving the results of an investigation into the nature of the changes produced in the nerve cells of the cerebral cortex by the action of tetanus toxin. From their experiments they would conclude that the changes occurring were not the same as those produced by pneumococcus, glanders and the other infections tried. (London *Lancet,* Vol. I for 1900, p. 98).

The treatment of snake-bite continues to receive considerable attention although the reports vary considerably. It is reported

"that the Madras Government has passed an order sanctioning the excess expediture over the original grant of 600 rupees incurred by Capt. R. H. Elliott in connection with the prosecution of his researches into the properties of snake venom, and has made him an additional grant of 200 rupees to cover the cost of further experiments. The Surgeon-General has been requested to report if Capt. Elliott's services will be available for special duty at the end of September when his tour of service terminates." (*Nature,* Vol. 62, p. 301).

Dr. Walter Myers of Cambridge University (England), repeats the information now on official record that 20,000 persons are reported to have died from snake-bite in India during the year 1898, which would show the importance of studying the process of neutralization of such a toxin. He therefore makes a report from the Pathological Laboratory of the University on "The Standardisation of Antivenomous Serum" (London *Lancet,* Vol. I for 1900, p. 1433).

Major S. J. Rennie of Meerut, North-West Provinces, India, reports a "Case of Snakebite Treated with Calmette's 'Antivenene Serum': Recovery", in a Hindoo boy 12 years old with typical symptoms. (*Brit. Med. Journ.,* Vol. II for 1899, p. 1412).

Mr. Arthur Beveridge an English surgeon reports a case treated by Dr. Calmette's Antivenene which recovered five days after the injection. (*Brit. Med. Journ.,* Vol. II for 1899, p. 1732).

The treatment of leprosy by injections of Calmette's Antivenene has been attempted. Dr. R. S. Woodson, U. S. A., Fort Clark, Texas, has published a preliminary note on this form of treatment. (*Phila. Med. Journ.,* Vol. 4, p. 832). He follows this up with a more extended report. (*Phila. Med. Journ.,* Vol. 4, p. 1231).

A short note is published from Dr. Albert S. Ashmead of New York City, pointing out some of the errors made by Dr. Woodson. (*Phila. Med. Journ.,* Vol. 5, p. 81).

The so-called Antityphoid Extract of Dr. V. Jez of Vienna, Austria, is still on trial. It has been reported in a casual way that eight cases were treated in the University Hospital at Zürich, Switzerland, resulting in rapid improvement and freedom from the fever within four days. One other very severe case which had a duration of three weeks with a temperature as high as 40.5° C. (105° F.) recovered in seven days, although a relapse occurred which also responded to the same treatment.

Dr. Dyce Duckworth of London, England, publishes his "Notes on a Case in which Antityphoid Innoculations were Practised." Dr. Duckworth simply reports his case to add to the stock of knowledge respecting this line of treatment, "and, if possible to encourage its further adoption in the hope of securing a sufficient degree of prophylaxis against the invasion of enteric fever." (*Brit. Med. Journ.,* Vol. II for 1899, p. 1407).

The study of the prophylactic inoculation of Antityphoid Serum has received considerable attention among English observers, particularly in relation to their unfortunate experience in the South African War. Many hundreds of their troops have died from typhoid fever.

Dr. A. E. Wright and Major W. B. Leishman of the Netley School (England) now report and summarize the more important results which have been obtained up to date by the application of such inoculations. Those interested in this line of study will find this report very carefully drawn and quite complete (*Brit. Med. Journ.,* Vol. I for 1900, p. 122).

An interesting friendly criticism on the above report is made by Mr. Francis H. Welch of Lee, England (London *Lancet,* Vol. I for 1900, p. 338).

Dr. R. W. Marsden of Manchester, England, reports on his experience with the inoculation of Typhoid Vaccine among the patients and nurses of the Monsall Hospital in his City. His conclusions are as follows:

"I am well aware that the time which has elapsed since the adoption of the prophylactic measure is too short to draw any conclusive inference, yet the results so far observed are, I think, sufficiently marked to warrant this report, and even embolden one to hope that, at any rate for a limited period, either an immunity against typhoid can be thus produced, or at least one may give "an increased power of resisting infection by living typhoid bacilli." (*Brit. Med. Journ.,* Vol. I for 1900, p. 1017).

Dr. T. Wilson, an English practitioner, describes his plan of inoculating men belonging to the City Imperial Volunteers. He makes them abstain from alcohol for three days, take an aperient on the morning of the fourth day and inoculates them on the morning of the fifth day. The men are arranged daily in batches of about forty in number. The first lot to be inoculated are rather "funky" and a few almost faint while waiting for their turn. These he keeps

back until the following morning, when they usually appear to be all right. He reports in detail an illustrative case showing the course of illness following inoculation (*Brit. Med. Journ.*, Vol. I for 1900, p. 1018).

The study of the yellow fever bacillus continues to receive some attention although few definite results have been reported during the past year.

Dr. A. Matienzo of Tampico, Mexico, reports on some "Experimental Tests at Vera Cruz, Mexico, of the Doty-Fitzpatrick Serum for the Prevention and Cure of Yellow Fever", and draws the following conclusions:

"1. Both intravenous and subcutaneous injections of the serum produce a general reaction, revealed by the hyperthermia and acceleration of the pulse.

2. The injections, both subcutaneous and intravenous, neither controlled the disease nor manifested in the patient the least reaction upon the appearance, development or duration of the symptoms of yellow fever.

3. It is not possible to form conclusions on the inoculation of the preventive toxin on account of the small number of cases and the short time employed.

4. The reaction caused by the injections of the toxin in the convalescents of yellow fever demonstrates Sanarelli's assertion that the curative powers of the serum, in animals, is not due to the antitoxin substances; and confirms by its analogy to the typhoid serum the opinion, given by some bacteriologists, that the icteroides is an Eberthiform bacillus." (*Med. News*, Vol. LXXVI, p. 45).

One of the papers read at the Symposium on Serumtherapy at the meeting of the New York County Medical Association held on March 19th last was by Dr. Charles B. Fitzpatrick of New York City who contributed some "Remarks on the Bacterial Therapy of Yellow Fever." He was present that evening in place of Dr. Alvah H. Doty, the Health Officer of the Port of New York, who has made a considerable study in this line and whose work was alluded to here last year. His remarks took the form of a few extracts from a report which he was preparing on this subject together with observations collected from other investigators. He summarized as follows: "The serumtherapy of yellow fever is still in the stage of investigation and does not appear to warrant any conclusions other than that the blood-serum of the bacillus icteroides does not

cure nor modify the disease, and that further investigation is necessary." (*Journ. Amer. Med. Assoc.,* Vol. XXXIV, p. 905).

Prof. E. Maragliano of Genoa, Italy, has continued investigations with Antituberculous Serum, proving to his mind that the favorable results obtained from the experiments on animals have been confirmed on human beings (*Berliner klin. Wochensch.,* Vol. XXXVI, p. 1073).

Nothing has apparently been heard since last year from Drs. E. L. Trudeau and E. R. Baldwin of Saranac Lake, N. Y., who have been enthusiastic workers in this line. No doubt they are still investigating but not quite ready to make any definite report.

"A Case of Infective Endocarditis Treated by Anti-Streptococcic Serum, Nuclein, etc.," has been reported by Drs. R. Hingston Fox and E. Augustus Lermitte, two English observers, in which however death resulted. "The case unhappily progressed from the first to its fatal end little influenced by the treatment used. The record as to the efficacy of anti-streptococcic serum and nuclein is therefore a negative one, but inasmuch as these remedies received a thorough trial the facts are now published. So far as the experience of a single case goes it points to the uselessness of the serum when no streptococci, but only staphylococci, are found in the blood." (London *Lancet,* Vol. II for 1899, p. 1225).

At a meeting of the Harveian Society of London on November 2nd last, Dr. J. W. Washbourn read a paper upon the treatment with Antistreptococcic Serum. "He pointed out that the determination of the identity of various streptococci was a difficult matter. After reviewing the evidence he believed that there were distinct varieties of streptococci only distinguishable by their behavior towards serum; these varieties might produce either the same or different lesions in the human subject." After he had described the methods of preparing, standardizing and administering the Serum, an interesting discussion followed (London *Lancet,* Vol. II for 1899, p. 1299).

Another one of the papers of the Symposium on Serumtherapy read at the meeting of the New York County Medical Association on March 19th last was by Dr. Howard Lilienthal of New York City who spoke on "Antistreptococcus Serum." He states that three years ago he reported his observations based on his experience with five or six cases and from his acquaintance with the subject since, his views have not been modified. Also "that the serum

rarely if ever did harm, and that in desperate cases the patient should be given the benefit of this treatment in connection with other and better known therapeutic measures." He further states that he has not met with much encouragement.....

"As a final word it must be admitted that the efficacy of the remedy as now prepared has not been proved.

Treatment by the antistreptococcus serum is most strongly indicated in the presence of systemic infection by living streptococci, but the prognosis still remains bad. Antistreptococcus serum may be used in any case of grave sepsis when the exact bacteriologic diagnosis is in doubt, but never to the exclusion of other rational therapy." (*Journ. Amer. Med. Assoc.,* Vol. XXXIV, p. 906).

Dr. R. B. Mahon of Ballinrobe, County Mayo, Ireland, reports "A Case of Septic Thrombo-Phlebitis Treated by Injections of Streptococcus Antitoxin" in which he states that "there seems no reason to doubt the good resulting from injections of the antitoxin of streptococcus pyogenes." (*Brit. Med. Journ.,* Vol. I for 1900, p. 1220).

A French observer reports the successful use of the diphtheria Antitoxin in the treatment of pertussis—decreasing the severity and frequency of the coughing attacks (*Journ. de Méd. de Paris,* Vol. XI, p. 90).

Drs. J. W. H. Eyre and J. W. Washbourn of London, England, now report "Further Experiments with Pane's Antipneumococcus Serum." They previously described in detail some experiments on the protective properties of this Serum prepared by Dr. Pane of Naples. These investigators thought it advisable to extend their researches in the direction of testing the Antipneumococcus Serum against several varieties of the pneumococcus derived from different sources and have embodied their results in a report they now make. Their conclusions are as follows:

"1. The serum in doses of 1 c.cm. possesses for rabbits a considerable protective power against four out of five strains of pneumococci derived from different sources.

2. It has no protective power against one strain which in morphology, virulence, and cultural characteristics is a typical pneumococcus, and which was obtained from a fatal case of pneumonia.

3. There exist varieties of the pneumococcus which at present can only be distinguished by the action of antipneumococcus serum." (*Brit. Med. Journ.,* Vol. II for 1899, p. 1247).

In "A Preliminary Note on Antipneumococcus Serum", Drs. Joseph McFarland and Clarence W. Lincoln of Philadelphia, Pa., introduce the subject as follows: "Knowledge of pneumococcus infection and immunity, and the evolution of 'antipneumococcus serum' have been of slow progress and along paths beset with many difficulties." (*Journ. Amer. Med. Assoc.*, Vol. XXXIII, p. 1534).

In the Symposium on Serumtherapy at the meeting of the New York County Medical Association held on March 19th last, one of the papers read was by Dr. Alexander Lambert of New York City on the "Use of Antipneumococcus Serum." He states:

"The pneumonia serum at present does not seem to shorten the duration of the disease, nor cut short the pneumonic processes in the lungs, nor bring about the desired 'crisis.' But it does seem, in certain cases, to prevent a general pneumococcus septicemia, and thus in these cases it may save life.

There are problems in obtaining pneumococcus serum which at present baffle and puzzle us, and whether these can be solved can not be answered yet. This is no cause for discouragement, but simply one for continued work. Until we can obtain a serum which will distinctly cut short the disease processes, the antipneumococcus will be limited in its use and its usefulness." (*Journ. Amer. Med. Assoc.*, Vol. XXXIV, p. 900).

In "A Preliminary Report on the Etiology of Scarlatina" Dr. R. H. B. Gradwohl of St. Louis, Mo., reports on his investigations in searching out the bacterial cause of scarlet fever. He claims to have isolated the diplococcus scarlatinæ previously discovered by Dr. Class of Chicago, Ills. (*Phila. Med. Journ.*, Vol. 5, p. 683).

Dr. William J. Class of Chicago, Ills., has followed up his investigations as to "the specific causative factor of scarlet fever." He concludes as follows: "In regard to my belief in the germ itself, it will be seen from this communication that I have not lost any faith in regard to its being the cause of scarlet fever, and I feel confident that if other observers will give the matter a fair, unprejudiced investigation that they will arrive at the same conclusion." (*Phila. Med. Journ.*, Vol. 5, p. 1421).

Dr. Marx of Berlin, Germany, has published a "Contribution upon Hydrophobia Immunity", reporting the results of his experiments upon 41 rabbits, 4 guinea pigs, 1 dog and 1 goat (*Deut. Med. Wochensch.*, Vol. XXV, p. 671).

In the Symposium on Serumtherapy at the meeting of the New

York County Medical Association held on March 19th last, Dr. Robert J. Wilson of New York City spoke on "Antirabic Serum in Therapy." He opened his remarks with the statement that "Up to this date attempts to inaugurate a serum treatment for rabies have not, so far as we know, proved successful." In alluding to the experiments of Professors Tizzoni and Centanni he states:

"The report of their work showed a high degree of protective action in the serum. The method of inoculation of their test animals, however, is open to criticism and can not fail to cast a doubt in the mind of the reader as to whether the protective effect of the serum was rather apparent than real. This doubt is emphasized when we find that the serum is to be used only in conjunction with the already recognized effective preventive inoculations. There is a class of cases, however, where the serum, although of only doubtful value, might be used, that is, in cases where a long time has elapsed between the time of infection and the commencement of treatment."

. . . . . .

"The serum, unlike the attenuated virus, which depends on certain changes in the organism after inoculation to procure immunization, gives its protective action immediately on administration." (*Journ. Amer. Med. Assoc.*, Vol. XXXIV, p. 905).

It is reported that Pasteur has discovered an "Anti-Anæmic Serum" concerning which a definite report no doubt will soon follow.

Professors Broca, Sapelier and Thiébaut made a report to the Paris Academy of Medicine at a meeting held on December 26th last, on the discovery of a so-called "Anti-Alcoholic Serum" which took rather a sensational form throughout France, and little hope is expected from their researches.

In the Symposium on Serumtherapy at the meeting of the New York County Medical Association held on March 19th last Dr. William B. Coley of New York City contributed a paper on "The Mixed Toxins of Erysipelas and Bacillus Prodigiosus in the Treatment of Sarcoma." He concludes as follows:

"In estimating the percentage of cures, or rather, in estimating the value of the method by the percentage of cures, it is well to remember that the treatment is advised only in cases in which there is no hope of cure by operation, in other words in entirely hopeless ones. In a number of cases in which the only operation to be con-

sidered was amputation, the arm or leg has been saved for the patient by the use of the toxins. In my own series, in a very large number of cases treatment was given only after the disease had reached such an advanced stage that there was practically no hope of more than temporary improvement. The fact that even one case of inoperable sarcoma has been cured would seem entirely sufficient to offset the disappointment of a hundred failures. If instead of saving only 1 per cent. there is a probability of saving more than 12 per cent. of these otherwise hopeless ones, we certainly have sufficient encouragement to continue the method. It is but a short time since 12 per cent. of success after operation for cancer of the breast was regarded as a brilliant result. I believe a most promising field, and one that to the present time has been little developed, is the use of the toxins in small and safe doses directly after operation, as a prophylaxis against future recurrence." (*Journ. Amer. Med. Assoc.*, Vol. XXXIV, p. 906).

Considerable has been written for and against the wisdom of admitting the Serums into the various National Pharmacopœias. One of the latest advocates for their recognition is Mr. Joseph W. England a prominent pharmacist of Philadelphia, Pa., who offered his views in a paper read before the American Pharmaceutical Association at its meeting held in Richmond, Va., last May. (*Pharm. Journ.*, Vol. XI, Fourth Series, p. 239).

The recent Convention for the Revision of the U. S. Pharmacopœia held in Washington, D. C., had the subject under discussion, and it was finally concluded that as physiological tests for determining strength were still so indefinite and variable, they should not be introduced into the Pharmacopœia by the Revision Committee. This resolution which was passed would of itself have excluded the Serums, but in addition the exclusion was finally confirmed by a formal vote when the practical side of the question came to be considered. It is most important that the medical profession in particular should realize that as neither the physician himself, the pharmacist nor the chemist can make these Serums, the whole responsibility must depend upon the large manufacturer, so that no definite formula can be prescribed in the Pharmacopœia whereby a verification of the manufacturer's product can be obtained. Even though the pharmacists, for instance, were furnished with tests for a rough estimation, the physician would not accept such a package after it was once opened. He would insist

with such a product in obtaining an original package, having been sealed before it left the manufacturer's possession.

Antitussin (Di-Fluor-Di-Phenyl) is not a new compound but it has not received any very marked attention during the past few years. There are however occasional observers who report on its beneficial use in pertussis.

Dr. Max Heim of Düsseldorf, Rhenish Prussia makes a favorable report (*Berliner klin. Wochensch.*, Vol. XXXVI, p. 1102). He has used an ointment made according to the following formula:

Antitussin	5	parts.
Vaselin	10	"
Lanolin	85	"

He covers the neck, breast and back between the shoulders with this ointment and rubs it well in. He uses for each application an amount equal to about the size of a walnut. He prepares the skin first by washing well with warm soapsuds and drying with a rough towel. Out of his sixteen cases reported upon, nine apparently were already in the convulsive stage. Three of these were between the age of three and eighteen months and in a dangerous condition. Dr. Heim verifies the favorable experience of the previous observers, Fischer and Beddies, in its use upon the throat and pharynx.

Argentamin (Ethylene-Diamin-Silver Phosphate)—the Silver Nitrate substitute—has received little attention in the medical literature of the past year. It is however still being used among the genito-urinary practitioners. The only prominent observer reporting is Dr. Bergel of Inowrazlaw, Prussia. He much prefers its use in gonorrheal urethritis to solution of silver nitrate (*Therap. Monats.*, Vol. XIV, p. 361).

Argonin, the bactericide formed by mixing Silver Nitrate with a combination of Sodium and Casein, has not received much attention in the medical literature of the year. The only prominent observer reporting is Dr. T. A. Hopkins of St. Louis, Mo., who makes a report on "Argonin: Its use in Acute Urethritis." He states that since the first of the year he has "treated 12 cases of acute anterior urethritis of an unquestionable specific nature with Argonin, and in each case the recovery was prompt and without complication." .....

"In each case treatment was continued with Argonin, or Argonin

and an astringent injection, until the urethra recovered its normal tone. In no case was the continuation of treatment necessary beyond three weeks—as a rule, a week or ten days after the disappearance of the gonococci seemed to effect an entire cure."

"Regard for the general welfare prompted me to keep the patients longer under observation, and in no instance has there been a return of the trouble."

"These are results which I have been unable to secure with other treatment, and, considering the fact that there was an absolute absence of irritation from the treatment in most cases (and in all it was inconsequential), it is one that I shall use farther."..... "In its use complications are rare. By way of disadvantages but one can be urged against it, and that is the necessity of frequently making new solutions. With age the solutions become worthless, even though kept in amber bottles, and no others can be used; fresh solutions are necessary every second or third day. (*Amer. Therapist,* Vol. VIII, p. 139).

Aristol (Di-Thymol-Di-Iodide) is in such general use now that little special comment is made in the current literature. Nothing of particular importance therefore can be recorded here.

Aspirin—derived from the action of acetic anhydride on salicylic acid—has continued to receive attention as a so-called antirheumatic agent.

Dr. F. C. Floeckinger of La Grange, Texas, and connected with the Rio de Janeiro City Hospital in Brazil as surgeon, publishes "An Experimental Study of Aspirin, a New Salicylic-Acid Preparation." He carried on a series of experiments upon animals and upon his own person. He claims:

"One great advantage of this remedy over salicylate of sodium is that it is much more agreeable to take, and even during its prolonged use no aversion was experienced. As is well known, articular rheumatism is a protracted disease, and the discontinuance of salicylate of sodium is always followed by an exacerbation. By the administration of aspirin with sugar or in wafers it never becomes necessary to suspend the use of the drug in consequence of gastric irritation, and hence a cure can be obtained at an earlier period. The only disadvantage of the preparation is its insolubility."

.....

He concludes as follows:

"In general, I would remark that aspirin is a most valuable sub-

stitute for salicylate of sodium for the following reasons: (1) Its agreeable taste. (2) Its freedom from irritating effects upon the stomach. (3) The absence of tinnitus aurium after the administration of physiologic doses. (4) The absence of cardiac depression. (5) The fact that it does not impair the appetite, even during prolonged use.

I feel certain that other investigators will be able to demonstrate the advantages of aspirin, and should the price not be too high it will soon displace salicylate of sodium." (*Med. News,* Vol. LXXV, p. 645).

Dr. L. Goldberg of Berlin, Germany, reports that he has found complete relief from a single dose of Aspirin in cases of facial neuralgia, vertigo, tinnitus aurium and headache as well as in rheumatic affections (*Deut. Medizinal-Zeitung,* Vol. XXI, p. 229).

Dr. Friedeberg of Magdeburg, Prussia, reports that he finds this agent quite as efficient and sometimes even more efficient than salicylic acid. He finds it less effective in chronic rheumatism and gout than in acute articular rheumatism. His experience in neuralgic affections has varied somewhat. In a case where salipyrin had failed in treating sciatica, this agent proved effective. He advises that where salicylic acid is known to act unpleasantly this agent should be used from the beginning, so as not to upset the stomach or produce the ringing in the ears often caused by the former agent (*Centralblatt für innere Medicin,* Vol. 21, p. 369).

Dr. Karl Manasse of Wurtemburg, Germany coincides with Dr. Friedeberg's experience (*Therap. Monats.,* Vol. XIV, p. 246).

Dr. Herm. Liesau of Bremen, Germany, reports on "The More Extended Clinical Uses of Aspirin." He employed it in 80 cases including acute and chronic rheumatism, torticollis, sciatica, exudative pleuritis, pericarditis, rheumatic pains and the like. He noticed marked antipyretic, antineuralgic and diaphoretic effects (*Deut. Med. Wochensch.,* Vol. XXVI, p. 338).

Dr. E. Roelig of Nuremberg, Bavaria, has made use of this agent in 31 cases of rheumatic affections in which he avoided all other internal medication, and claims that it possesses all the favorable properties of the salicylates without the unsatisfactory ones (*Deut. Med. Wochensch.,* Vol. XXVI, Therap. Beilage, p. 6).

Dr. L. Renon of Paris, France, has used this agent in the treatment of the fever accompanying tuberculosis. He reports that in quite three-quarters of his cases the temperature has been reduced

from 1 to 3 degrees in the afternoon almost immediately after administration. He finds however that very copious sweating occurs which is apt to produce a temporary weakness which must be realized in advance as a probable sequence. This he claims to be the greatest inconvenience in the use of this agent. However after the temporary sweating has passed the patients claim that they feel much better (*Sem. Méd.,* Vol. 20, p. 221).

Asterol (a double salt of Para-Sulpho-Carbolate of Mercury and Tartrate of Ammonium) has been practically unheard of in the medical literature of the past year. It will be remembered that it is similar to Hydrargyrol (Para-Sulpho-Carbolate of Mercury) except that the Ammonium Tartrate in Asterol renders the latter soluble in warm water—a property greatly to its advantage. An additional advantage in this agent is that the watery solutions remain stable.

Benzosol (Benzoyl Guaiacol) has received little attention in the medical literature of the year. Only one prominent observer appears.

Dr. John North of Toledo, Ohio, has apparently made quite a study of creosote and its derivatives which would include guaiacol and its various compounds. Guaiacol Benzoate (Benzosol) seemed to give him the best results and he would therefore conclude that "In all forms of lung disease in which creosote or an intestinal antiseptic is indicated, Benzosol fulfills every indication better than any remedy I know of." (*Amer. Med. Compend,* Vol. XV, p. 645).

Bromides need hardly any attention here at this time, but it is thought that it may be of interest to record an article written by Dr. Archibald Church of Chicago, Ills., on "The Treatment of the Opium Habit by the Bromide Method." He hit upon the treatment, as he states, by accident. He concludes as follows:

"As compared with the difficulties of the ordinary methods that are pursued in correcting the addiction to morphine, it seems to me to be of very definite value in well-selected cases, and in such cases I should not hesitate, under appropriate conditions, to employ it. By appropriate conditions I mean full hospital facilities." (*N. Y. Med. Journ.,* Vol. LXXI, p. 904).

Bromipin is one of the more recent substitutes for the alkaloid and salts of Bromine. Little has been printed as yet concerning its exact composition and preparation but it is claimed to be a stable combination of bromine and sesame oil having an oleaginous

taste. It has been reported upon by several observers. It appears to be of special value in the treatment of neurasthenia, hysteria and epilepsy.

Dr. Kothe has used this agent in the treatment of epilepsy and gives an outline of his plan of treatment. He submits each case to a rest of some weeks with hygienic and dietetic treatment as a preliminary step. He administers no medicines until after some severe epileptic attack has terminated, which attack he has been waiting for. He then begins with a rectum injection of 15 grammes (231.5 grains) which is increased in the next six or seven weeks to 40 grammes (617.3 grains) when after a continuation of two or three weeks at this limit a gradual diminution is followed. It will thus be seen that the treatment extends over about three months. He is in doubt as to how much his success depends upon the Bromipin for he is a warm advocate of strict regularity and method of treatment (*Wien. Medizin Blätter,* Vol. XXIII, p. 237).

Dr. J. W. Frieser of Vienna, Austria, reports that he finds this a satisfactory substitute for the ordinary bromides as it does not affect the digestion and does not produce bromism. He has used it hypodermically in single doses of 10 grammes (154.3 grains) (*Klin.-Therap. Wochensch.,* Vol. VII, p. 645).

Bromoform has received less attention in the current medical literature of the year than in the year previous. Many observers find more favorable agents in the treatment of pertussis, but others again still maintain that this agent is most efficient.

In an article on "The Therapeutics of Pertussis", Dr. G. J. Kaumheimer of Milwaukee, Wis., reports most favorably upon the use of Bromoform in his treatment of forty cases, and expresses his preference for it. He administers it in drop doses—one drop for each year of age—from three to five times a day according to the severity of the case and its effects. He always cautions the parents and attendants about the necessity of shaking the bottle of Bromoform just before administering the dose (*Pediatrics,* Vol. VIII, p. 431).

Dr. T. Brown Darling of Edinburgh, Scotland, feels called upon to report the following case of Bromoform poisoning on account of the rarity of its occurrence even though the case recovered:

"On the morning of April 6th, 1900, I was urgently called to J. H., a girl aged 6 years, who had, at 8.30 A. M., in her mother's temporary absence from the bedroom, swallowed ʒjss of pure

bromoform. She had taken a liking for it through having 2 drops on sugar thrice daily for whooping-cough. Immediately after swallowing the drug the child was observed to walk to the parlor for breakfast as if intoxicated, and then suddenly become unconscious. The parents meanwhile, having smelt the bromoform in the breath, very properly administered ʒ ij of mustard in half a cup of water, and as this had not the desired effect, ʒ j of ipecacuanha wine was given.

When Dr. McCheyne Miller and I arrived shortly afterwards, we found the child extremely collapsed and almost moribund. We could feel no impulse at the wrist, but the heart was beating very irregularly, about 120. The respirations were very shallow, about 8 a minute, and the breath had a strong odor of bromoform. There was a marked lividity of the face and lips; both pupils were pin-point and did not react to light, and there was no conjunctival reflex.

We at once washed out the stomach by means of a No. 11 rubber catheter with tube and funnel attached. The fluid returned smelt strongly of bromoform, and we continued lavage with warm water and sodium bicarbonate for an hour and a half, until there was no longer any smell of the drug. We then washed out with Condy's fluid, and gave some strong coffee and sal volatile both by the tube and *per rectum*. Sinapisms had also been applied to the precordia.

The pulse gradually improved, and the heart became regular. The pupils appeared now more normal, and even at times dilated, but unless we kept rousing the child they were apt to contract again. At 11 A. M. there were signs of returning consciousness, but there was the greatest tendency to sleep. At 11.30 the child was able to answer questions, the words at first being drawled out very slowly. I was able to leave the child in the parents' charge by 11.45, but she had to be kept from sleeping during the whole day. Her stomach did not retain anything till evening. Next morning she was in her usual health, and able to enjoy her food.

Regarding the amount of the drug taken (ʒ jss), I can vouch for it myself, as the ʒ ij bottle had been renewed the previous evening, and there was only ʒ ss remaining in it." (*Brit. Med. Journ.*, Vol. I for 1900, p. 1340).

Mr. Wilbur L. Scoville of Boston, Mass., offers the following suggestions for the administration of this agent:

"Will you kindly allow me to suggest to your readers a formula

for a bromoform mixture which has the advantage of containing a minimum of alcohol (or none), admits of accurate dosage, is susceptible to change in dosage without altering the proportion of the other ingredients. It admits also of adding other medicaments if desired, and is very palatable:

℞ Bromoform.....	℥ ss	(about	2	grammes)
Tinct. Tolutanæ.....	℥ i	("	4	")
Mucilaginis Acaciæ.....	℥ ii	("	8	")
Syrupi	℥ iv	("	16	")
Aquam Menthæ Viridis, ad.	℥ ii	("	60	")

ℳ Place the mucilage in the bottle, add an equal volume of syrup, then add the bromoform and tincture of tolu in portions, shaking well after each addition. A thin emulsion ensues, to which the rest of the syrup and the mint water are to be added, with agitation.

This emulsion slowly deposits, but without separation of bromoform or tolu, and can be quickly rendered homogeneous at any time by simple agitation.

The above formula contains two minims of bromoform per teaspoonful. It may be increased or diminished at will. If it is desired to eliminate alcohol altogether syrup of tolu may be employed in place of the tincture and simple syrup." (*Pediatrics,* Vol. IX, p. 76.)

Camphor is still looked upon as such an important article, not only medicinally but chemically, that the previously reported attempts at procuring a monopoly of the crude product has now apparently been accomplished by the Japanese Government. One very good object attained by this concentration is the very marked industrial development of the Island of Formosa. Much capital has been put into the industry and improved up-to-date methods are being carried out under experienced Japanese officials.

Nothing new of any importance has appeared in the medical literature concerning the medicinal use of this article.

Castoria is a proprietary article probably too well known to need comment, but it is thought that it might be well to repeat here for the sake of ready reference the formula originally patented by Dr. Samuel Pitcher, about thirty years ago. The composition of the formula reads as follows:

Senna Leaves	135 lbs.
Sugar	210 "
Sodium Bicarbonate	48 ounces
Rochelle Salt	4 "
Spirit of Gaultheria	18 pints
" " Pumpkin Seed	2 ounces
" " Chenopodium	2 "
" " Peppermint	2 "
" " Anise	2 "
Water at 65° C. (149° F.)	35 gallons

The sodium bicarbonate is dissolved in the 35 gallons of water at 65° C. and the whole portion of senna leaves is exhausted with this water until 240 pounds are obtained. The 210 pounds of sugar and the 4 ounces of Rochelle Salt are dissolved in this product, to which is added the various spirits.

Chinosol, the antiseptic, disinfectant, deodorizer and bactericide, has not been mentioned frequently in the medical literature of the year. Its local use however continues to be of some service. Among others Dr. Edwin Klebs of Chicago, Ills., reports having made use of it in the proportion of 1 to 1000 as a local antiseptic in the treatment of diphtheria (*Journ. Amer. Med. Assoc.*, Vol. XXXIII, p. 1520).

Drs. R. Kossmann and G. Zander of Berlin, Germany, have made use of a 20 per cent. solution of this agent with a 3 per cent. solution of carbolic acid, to sterilize the hands in midwifery practice. They claim that this agent is superior in efficiency to all other sterilizing agents. They claim that it has the additional advantage of being non-poisonous and produces no inflammation of the skin (*Centralblatt für Gynäkologie,* Vol. 24, p. 574).

Chloretone (Tri-Chlor-Buytl Alcohol) the hypnotic and anæsthetic introduced a year ago and alluded to here last year, is still being investigated and used to some extent.

Dr. R. D. Rudolf of Toronto, Canada, has been carrying on further experiments with this hypnotic and now publishes some "Notes on Chloretone." He summarizes his results as follows:

"1. Chloretone would seem, as has been found by Houghton and Aldrich, to be an ideal general anesthetic for physiological work. Then we think there might be some doubt about the recovery of the animals, however, and this would limit its use to where recovery

is not desired. The preliminary use of chloroform or ether might be used here, but this increases the risk, of course.

2. It has little or no effect upon the pulse, respiration and blood pressure for hours, but eventually, if the dose be large enough, these become depressed and the animal dies, the heart stopping before the respiration.

3. Chloretone has a most marked and profoundly depressing effect upon the body temperature, lowering this more than any other drug with which we are acquainted, with the possible exception of alcohol. This depressing effect is evident before the animal is even drowsy, and is in ratio to the dose given. It may be partially prevented by keeping the animal very warm.

4. Any drug which can exert such an effect on the total heat of the body is one which requires to be used with great caution in medical practice. This is doubly important as the drug is very slowly got rid of, and we know of no antidote, with the exception, perhaps, of external warmth." (*Canadian Pract. and Review,* Vol. XXV, p. 295).

Dr. W. M. Donald of Detroit, Mich., has reported on this agent as a safe hypnotic, in that he has been able to produce a five to six days' sleep by the administration of 7.8 grammes (120 grains) with no bad or untoward effects (*Ther. Gaz.,* Vol. XXIV, p. 18).

Dr. T. A. Dewar of Detroit, Mich., claims that it has a "threefold nature as a hypnotic, an antiseptic, and a local anesthetic, and in each field it is capable of fulfilling every indication more completely than any single representative of each of those respective classes." He reports on a few surgical cases occurring in his practice (*Ther. Gaz.,* Vol. XXIV, p. 98).

Dr. Warren B. Hill of Milwaukee, Wis., read a paper before the Wisconsin State Medical Society in June last on this hypnotic, and states:

"In conclusion, I would say that the nearest approach to my ideal hypnotic is found in chloretone. Its action is better understood than that of most of the others of its class, the sleep which it produces is the nearest to the physiological sleep of muscular fatigue, and its action is continued with decreasing doses, which fact reduces the tendency to form a drug habit to a minimum. Abundant clinical and laboratory evidence shows it to be the safest of all hypnotics. As yet there have been very little, if any, disagreeable after-effects reported from its use. As a local anæsthetic

it is ideal, combining, as it does, its anæsthetic with its germicidal properties, coupled with the fact that it has no deleterious effect upon repair procedures. With a feeling that this remedy has before it a brilliant future and a deserved popularity, I commend it to you for your careful consideration." (*N. Y. Med. Journ.,* Vol. LXXII, p. 284).

In a supplementary paper written by Dr. Reynold W. Wilcox of New York City on "Recent Advances in the Treatment of Insomnia", he states that he wishes to add the name of this comparatively new hypnotic which seems to meet all the requirements which he had foretold was necessary in the treatment of insomnia (*Med. News,* Vol. LXXVI, p. 563).

Cinnamon is still to be looked upon as an important medicament aside from its efficiency as a condiment. Undoubtedly its use in the treatment of influenza alluded to here last year continues. A more recent use is in the treatment of all forms of tropical diarrhea, including dysentery. Dr. A. Norris Wilkinson of Twatutia, North Formosa, sends the following interesting communication from the Island of Formosa:

"In the Section of Tropical Diseases held at Portsmouth, Dr. Henderson of Shanghai in his address on Sprue or Psilosis mentions cinnamon as a remedial agent and also that he has found it useful for chronic diarrhœa; but I and also Dr. Myers of Takow, South Formosa, who first mentioned it to me, go further and use it in the powdered form systematically in all cases ranging from ordinary diarrhœa to severe cases of dysentery. But it must be recognized that at any rate in Formosa diarrhœa is a concomitant or perhaps a symptom of true malarial fever, and in severe cases of dysentery with the regular dysenteric stools there is also high fever, and I have found the plasmodium malariæ in the blood of all. I always take quinine when I have slight looseness of the bowels, and I consider it a premonitory symptom of the disease, the diarrhœa stopping immediately after a few doses.

The first severe case of diarrhœa was in a lady seven months pregnant, which later became true dysentery. She was first treated with the ordinary astringent remedies and quinine, when the stools became so frequent and dysenteric, accompanied with tenesmus, that it gave rise to grave fear of premature birth, and the treatment was changed to ipecacuanha with the preparatory opium. Full term was safely reached, but four to five days later the old trouble re-

curred with fever. Large doses of quinine (30 grs. in the day) and ipecacuanha were again tried, but failure resulted; then cinnamon in teaspoonful doses was given, mixed with a little milk to mould it into the shape of a bolus, and chewed night and morning. A mixture of quinine sulphate, potassium bromide, and antifebrin was also given three times a day, combined with starch enemata containing opium and chloral. In a few days the patient was practically out of danger, though consecutively the liver, spleen, and ovaries became inflamed; in a few weeks she had quite recovered.

Another case is that of a Chinese boy, aged 18, who was having twenty to thirty motions containing blood in the day, accompanied with malarial fever. After taking the above quinine mixture with catechu and cinnamon, he was in three days quite recovered.

I use nothing but the above mixture here now for fever, as I cannot rely on quinine alone, and it also has a very beneficial action on the temporarily enlarged spleens one meets with in the course of fever, and even in the chronically-enlarged spleens if used in conjunction with small quantities of mercurial ointment." (*Brit. Med. Journ.*, Vol. I for 1900, p. 316).

Citrophen (Phenetidin Citrate) has not been reported upon in the medical literature of the past year.

Cocaine and its salts although, of course, much used during the past year have not increased their usefulness in many new fields. However Dr. P. Neustube of Kiew, Russia, has obtained very favorable results in the use of a 50 per cent. solution of the hydrochlorate in the treatment of the persistent vomiting of pregnancy. He would claim that it was the most successful agent in his experience. He explains its beneficial action in that it lessens the irritability of the vomiting center in the medulla, as well as in its anæsthetic effect on the stomach. He administers an initial dose of 10 drops, to be repeated in one hour. The next in 3 hours, if necessary. Later from 5 to 6 drops are given three times a day until the vomiting is under control. He uses in conjunction a mustard plaster application to the stomach, cracked ice by the mouth and a 2 per cent. ointment or solution of Cocaine in the form of tampons applied to the cervix (*Wien. Medizin Blätter,* Vol. XXIII, p. 133).

Dr. E. F. Clowes of Wotton-under-Edge, England, reports his most successful use of a 10 per cent. Solution of Cocaine Hydrochlorate in a case of rigid or slowly dilating os (*Brit. Med. Journ.*, Vol. I for 1900, p. 1340).

The addiction to Cocaine and the formation of a Cocaine habit is still all too prevalent, and in the opinion of many it is a more dangerous habit than even that of opium. Attention has been called to a new development in this line in our Southern States. The practice of Cocaine sniffing, particularly among the negros, seems to be on the increase.

It would be of no special value to attempt to enumerate here even a small proportion of the various cases of Cocaine poisoning, therefore only two will be mentioned as possibly of interest to some observers studying this subject.

Dr. Bergmann of Wolfhagen, Germany, reports a case of acute Cocaine poisoning occurring in a patient suffering from sciatica, in which 1 Cc. (16 minims) of a 5 per cent. solution was injected into the gluteal region, and happening to strike the nerve, at once relieved the pain. A second injection, however, this time in the calf of the leg, produced alarming symptoms of poisoning. Dr. Bergmann argues that about the only way such a small dose could produce toxic effects is by entering directly into the circulation by reason of striking a vein (*Muench. Med. Wochensch.*, Vol. XLVII, p. 392).

A fatal case is recorded by Dr. Henry Ernest Knight of England, produced probably by at least 30 grains of Cocaine taken at one dose by a woman eight months advanced in pregnancy who had been addicted to the use of this article for two years without being observed (*Quarterly Med. Journ., for Yorkshire and adjoining counties*, Vol. VIII, p. 307).

Creosotal (so-called Creosote Carbonate) has still an extended use, particularly in the treatment of phthisical subjects.

Experiments however are being tried with some degree of success in the treatment of scrofulous affections and in ozoena. Further definite reports are awaited.

Creosote (Beechwood) continues to take rather a retired position in favor of the Guaiacols, but there are still some practitioners who make repeated use of it and find it still of value.

Dr. Frederick Cleveland Test of Chicago, Ills., has published some clinical observations on the use of Creosote in various conditions, stating that he relates these to by no means develop new facts but merely to show what may be regarded as interesting results in Creosote administration. He gives the clinical notes of ten cases, and believes that by so doing he may lend his influence in widening

the range of usefulness of this agent (*N. Y. Med. Journ.*, Vol. LXXI, p. 508).

Dr. Holland of San Moritz, Switzerland, in relating his experience in the treatment of pulmonary tuberculosis by drugs, enumerates many of the well-known agents which he tried and places Creosote at the head of the list, but comes to the following conclusion:

"For several years after Koch's discovery of the tubercle bacillus the writer gave a fair trial to the treatment by inhalations and sprays. One remedy was taken up after another, but I could not satisfy myself that any of them ameliorated the tuberculous condition. Indeed, in my opinion the best results were obtained by trusting to abundance of food and pure air, and now I have abandoned all attempts at curing tubercular disease by any so-called specific therapeutic agents." (*Ther. Gaz.*, Vol. XXIV, p. 6).

Dr. Irwin H. Hance of Lakewood, N. J., expresses about the same opinion when he writes on "The Use of Creosote in Pulmonary Tuberculosis." He opens the subject as follows: "The action of creosote upon tubercular processes in the lungs has long been a matter of controversy." He concludes as follows:

"I believe that scrupulous care as to diet and hygienic surroundings does far more than drugs to restore health in the early stages of phthisis, and in the advanced stages the patient frequently suffers more from the effect of drugs than from the disease itself." (*Ther. Gaz.*, Vol. XXIV, p. 7).

Dr. Malinowsky, a Polish physician, reports that he found the following mixture gave excellent results when applied in the form of a spray to the throat and nasal cavities in cases of scarlet fever and diphtheria:

Beechwood Creosote...	0.50	grammes	(7.7	grains)
Thymol	0.50	"	(7.7	")
Camphorated Alcohol..	25.00	"	(385.8	")
Spirit of Turpentine..	25.00	"	(385.8	")

The spray was used for ten to twenty seconds every two hours, when the false membranes would become detached in about twenty-four hours. Of course he advises the continuation of general treatment as is usually the case (*La Sem. Méd.*, Vol. 19, p. 384).

Creosote Carbonate (called at times Duotal for short) still appears to be the favorite form when giving Creosote.

Dr. Julius Pollak of Vienna, Austria, reports his experience with it in the treatment of pulmonary tuberculosis. His cases were

thirty-two in number. In twenty-seven, he reports that the appetite was markedly improved, in the remaining five however the administration had to be suspended after three weeks on account of the loss of appetite. This proportion in relation to the appetite is quite small and it is therefore urged as a valuable assistant to the usual dietetic and hygienic treatment (*Wein. klin. Wochensch.,* Vol. XIII, p. 59).

Dionin (Ethyl-Morphine Hydrochlorate) is the name given to one of the more recent synthetic local analgesics which has thus far been confined to ophthalmological practice. It takes the form of delicate colorless crystals which are usually offered in the form of a powder, readily soluble in water and alcohol.

Dr. A. Darier of Paris, France, brought up the subject at the Paris Ophthalmological Society in March last. His results were in the main excellent. His experiments included the use of other analgesics but they were all found inferior to this new agent. None of the recognized toxic effects occurring with most other agents were noted when Dionin was used. Dr. Darier reports that a 5 per cent. solution gives the best results (*La Clin. Ophthal.,* Vol. 6, p. 77).

Dr. A. Graefe of Berlin, Germany, publishes his clinical report on two hundred cases treated with Dionin. His conclusions are that favorable results may be looked for in all diseases of the cornea with the exception of those associated with trachoma; in diseases affecting the conjunctiva; in iritis; in iridocyclitis and in diseases of the vitreous humor. (*Deut. Med. Wochensch.,* Vol. XXVI, Therap. Beilage, p. 9).

Dr. Wolffberg of Breslau, Prussia, reports 21 operations for cataract in which he used Dionin. He found that this agent was an excellent analgesic but had little antiseptic properties. He found also as others have observed that combined with atropine it produced mydriasis more rapidly (*Therap. Monats.,* Vol. XIV, p. 237).

Dr. James W. Ingalls of Brooklyn, N. Y., reports that he has recently used this agent in two severe cases of iritis in which the pain was entirely relieved, and expresses his confidence in it as being a valuable local analgesic without any unpleasant constitutional effects. He reports that a 5 per cent. solution appears to produce considerable smarting and even violent sneezing in some cases. If the strength be reduced however to 2 per cent. no smarting or conjunctival swelling follow its application, and the results are quite satisfactory.

Dr. J. W. P. Smithwick of La Grange, N. C., has made use of this agent in the treatment of various forms of cough. He has applied it in 12 cases of chronic bronchitis, 7 of pulmonary tuberculosis, 3 of pertussis and 8 from various other causes. 16 were apparently cured, 9 were benefited and 5 showed no beneficial results. No toxic effects seemed to follow its administration, and although it proved to be an inferior analgesic to morphine, it had other advantages for it can be given without fear to children. No tendency towards forming a habit was noticed. (*Merck's Archives,* Vol. II, p. 214).

Dolomol Compounds, although so prominent in the medical literature of the previous year, have been little heard of during the past year.

Dormiol (the combination of chloral hydrate and amylene hydrate) which used to be called Amylene-Chloral, is still before the profession as a harmless hypnotic.

Dr. Ernst Schultze of Andernach, Prussia, is pushing his investigations in the treatment of various kinds of insomnia with this compound. His number of administrations now amount to over 1000 and sleep and rest have resulted in 75 per cent. of the cases. Its action was especially gratifying in cases of melancholia and hypochondria. The sleep produced lasted from five to eight hours without producing any unpleasant after-effects. He reports however that in a few cases of hypochondria headache was complained of on the day following its use. His average dose was 1.5 grammes (23.2 grains) and his maximum dose was 3 grammes (46.3 grains). In comparing the various hypnotics his experience would lead him to place this agent as equal to sulphonal or trional. He found all three valuable alternates. In certain cases one was found to succeed where the other failed (*Neurol. Centralblatt,* Vol. 19, p. 249).

Dr. J. Moir of Edinburgh, Scotland, publishes an article on "Dormiol in Insomnia" in which he reports five cases successfully treated (*Med. Press and Circ.,* Vol. LXIX, p. 573).

Dr. Peters, of Aachen, Rhenish Prussia, reports the results of his use of this agent for nine months. He administered it 45 times. In 20 cases of affections of the nervous system, 3 of those of the lungs, 1 that of the heart, 1 of the intestines, 5 of the kidneys, 2 of the liver, 1 of the peritoneum, 2 of the genital organs, 5 of the bones and muscles, 1 of the circulatory system, 2 of chronic poisoning, 2 of convalescence after influenza and scarlet fever. His minimum dose of 0.5 gramme (7.7 grains), and he rarely had to

increase it to 2 grammes (30.9 grains). His proportion in which it produced more or less deep sleep was 84 per cent. of his cases. He enumerates some of its prominent advantages as being easy to take, harmless within the range of the above dose, cheaper than the other hypnotics and fully as efficient as such agents as paraldehyde, amyl hydrate or trional. (*Muench. Med. Wochensch.*, Vol. XLVII, p. 463).

The experiments on animals and its use in insane cases of human beings by Dr. E. Meltzer of Colditz, Saxony, were reported here last year, and it may be well to record at this time Dr. Meltzer's formula as being of value after his extended experience with it:

Dormiol	10.0	grammes	(154.3 grains)
Mucilage of Acacia..	10.0	"	(154.3 ")
Simple Syrup.....	10.0	"	(154.3 ")
Distilled Water.....120.0		"	(about 4 fluidounces)

The mixture should be thoroughly shaken before administering. He calculates that a large tablespoonful contains 1 gramme (15.4 grains) of Dormiol.

Egol, the name given to a new class of antiseptics derived from the phenols, has not been heard of during the past year.

Endomentol (Nicotine Salicylate) has not been heard of in the medical literature of the past year.

Epicarin is the name given to a new combination produced by bringing together Beta-Naphthol and Creosotic Acid. This produces a condensation product which has been found of value by the dermatologists. It appears in the form of a yellow powder with a reddish tinge. It is readily soluble in alcohol and ether. It has been used in the treatment of psoriasis, eczema, scabies and other skin affections. It is recommended in the form of a 10 per cent. solution or a 10 to 20 per cent. ointment. From the successful use already noted in a limited way, undoubtedly more will be heard concerning it later.

Erythrol Tetranitrate (Tetranitrin) has not received much attention in the literature of the past year. However one investigator reports his short notes on some cases treated with this agent. For those who desire to follow up more closely its physiological effects, the pulse tracings of four cases which Dr. Hugh Walsham of London (England) gives will be interesting (*Brit. Med. Journ.*, Vol. II for 1899, p. 1259).

Ethyl Bromide (Hydrobromic Ether) seems to be still the favorite anæsthetic for short operations among many surgeons, but during the past year its sphere of usefulness appears to have broadened somewhat.

Dr. George R. Fowler of Brooklyn, N. Y., has used it as he states "to produce a comfortable preliminary condition of anæsthesia when surgical anæsthesia is to be maintained with sulphuric ether." His favorable experience encourages him to make further trials. He describes his procedure as follows:

"From one to two drachms of ethylic bromide are placed upon the inhaler, and, in from thirty to forty-five seconds, according to the freedom with which the patient breathes, the administration of the sulphuric ether is begun, without changing the inhaler, and proceeded with as in ordinary ether anæsthetization." (*N. Y. Med. Journ.*, Vol. LXXI, p. 640).

Dr. Walter R. Parker of Detroit, Mich., has published an article on the "Use of Ethyl Bromide as a General Anæsthetic." His cases were confined to his ophthalmic practice and numbered about one hundred. He claims that it is at least as safe as chloroform or ether, and is without their disagreeable effects (*The Physician and Surgeon* (Ann Arbor), Vol. XXII, p. 232).

Dr. Paul F. Sondern of New York City has written an article on "Ethylic Bromide as an Anæsthetic for short Operations" (*N. Y. Med. Journ.*, Vol. LXXI, p. 911). He emphasizes some particular points to bear in mind in giving this anæsthetic, and notwithstanding the necessity of precautions being taken he believes it to be one of the safest and best anæsthetics to use in such operations as "for adenoids and other short throat operations." He was led to a closer study of this anæsthetic by his six months' observation at the Hôpital St. Antoine in Paris, France. His remarks as to the usual process of manufacture being objectionable, is undoubtedly from the French standpoint, for that one as used in this country has been very successful for many years past and produces an efficient article. It is however very important that precautions against decomposition of the finished product should be strictly attended to. If a small quantity of finely divided metallic silver be put into each bottle of the anæsthetic when freshly made it will convert any free bromine which may be evolved, either by accident or from age, into an inert silver bromide. This harmless protective material permits of the ready use of the anæsthetic at all times, for when it is poured

onto a handkerchief or towel for inhalation no attention need be paid to the particles of silver bromide present. It will be in the form of either the metallic silver unacted upon or inert silver bromide, and therefore need not call for any precautions for its elimination on the part of either the physician or the patient.

Ethyl Chloride (Muriatic Ether) still continues to have few commenters in this country. Its use appears to be confined to the other side of the water. A pure grade of Ethyl Chloride has been given the name of "Kelene," and its use is quite extensive, particularly among dentists. It is put up in specially prepared long tubes holding from 10 to 15 Cc. (about 2½ to 4 fluidrachms), one of which is claimed to be sufficient for a single local operation. A special mask is provided for when this pure article is given, in order to not only obtain the full effect but to avoid waste.

In an article entitled "The More Restricted Use of General Anæsthesia," Dr. Oscar Bloch of Copenhagen, Denmark, recommends the use of this agent for general anæsthesia either entirely or partly. He reports upon 393 operations in which he produced slight general anæsthesia with chloroform to the extent of just producing a quiet sleep and then following it up by complete local anæsthesia with this agent by practically freezing the site of the operation. If the patient happens to experience a little pain, a few more drops of chloroform are administered. His cases included those of herniotomy, tracheotomy, cholecystotomy, arthrotomy and empyema. He also enumerates 503 operations with Ethyl Chloride alone, and 115 operations without any anæsthetic whatever. He remarks upon the astonishingly small amount of chloroform needed even in major operations if his method be carried out. Out of his 393 patients 267 inhaled only 6 Cc. (less than 100 minims) of chloroform. His observations will be read with interest by those who are making a special study of anæsthesia (*Revue de Chirurgie,* Vol. XX, p. 58).

Dr. Georg Lotheissen of Innsbruck, Austria, in writing on "The Dangers of Anæsthesia With Ethyl Chloride", states that this anæsthetic stands next to chloroform in regard to its mortality. The statistics from chloroform anæsthesia gave one death in 2075, from Ethyl Chloride Anæsthesia one death in 2550. He repeats the observation of others in regard to its advantages in causing extremely rapid insensibility, very little discomfort to the patient and no unpleasant after-effects. He reports one case of death. (*Muench. Med. Wochensch.,* Vol. XLVII, p. 601.)

Eucaine (Benzoyl-Vinyl-Di-Aceton-Alkamin) has received a great deal of attention in the medical literature of the past year, therefore only a few of the prominent writers will be mentioned here.

Dr. William H. Poole of Detroit, Mich., read a paper before the Surgical Section of the Mississippi Valley Medical Association at Chicago, Ills., on October 6th, 1899, on the use of this agent as an anæsthetic in eye, nose and throat work. His conclusions are:

"1. Eucain is decidedly less toxic than cocain, therefore superior to it.

2. Its aqueous solutions keep well and can be sterilized by boiling without destroying the activity of the drug.

3. It produces anesthesia equally well and sometimes better than cocain.

4. It is superior to cocain in that it does not cause heart depression or other unpleasant effects.

5. It does not cause mydriasis or disturbances of accommodation, which is an advantage in some cases.

6. It is less dangerous to the cornea than cocain inasmuch as it does not cause desquamation of the superficial epthelium." (*Med. News,* Vol. LXXV, p. 521).

In a case of "Amputation Through the Arm vs. Excision of the Elbow; A Case of Conservative Surgery", Dr. Hermann B. Gessner of New Orleans, La., made use of Eucaine-B infiltration anæsthesia in which most gratifying results followed, where excision was contraindicated on account of its inevitably fatal results. He concludes as follows:

"I believe this patient would have died on the table or during the course of the after-treatment had excision been performed at the time of his admission. On the other hand, delay, for the purpose of building him up, would likely have resulted in progressive degeneration of the kidneys. Amputation was therefore the operation to be chosen." (*Journ. Amer. Med. Assoc.*, Vol. XXXIII, p. 1407).

Mr. Arthur E. Barker of Harley-street, London, W., England, publishes "A Note on Some Further Experience of Operations under Local Analgesia Produced by Eucaine B." He brings up a few points, which although noticed by every surgeon who has attempted to produce local analgesia by injection, may be of interest and profit to repeat here:

"At first the surgeon suffers from the feeling that he may be causing pain to the patient, and this is a certain check to his manipulations. There is something "uncanny" in making a dissection on an individual who is perfectly conscious and perhaps talking to you at the time, and it is hard to realise that he is not suffering and consequently the surgeon may hesitate. But when a few cases have been operated on in this way and we are sure of our position this hesitation wears off and we proceed more rapidly, to the patient's great benefit, of course. Some of the cases, I must say for myself, have filled me with amazement. The patients have appeared perfectly indifferent and very often in the best of spirits all the time. Even those who feel a little pinch or drag here or there make light of it as a rule. I heard one patient humming a tune to himself during a radical cure of hernia which I was doing."

.....

"Selection will always be necessary, but I think that even from this limited number of trials I have learned much in this direction and that local analgesia will always be a useful procedure in certain cases, though it will not for a long time take the place of general anæsthesia. Of course the 53 cases tabulated above form but a small group in proportion to the number of operations done in the course of the year in which I have used general anæsthesia, but as far as they go they are fairly representative." (London *Lancet,* Vol. I for 1900, p. 156).

Dr. T. Vincent Jackson of Wolverhampton, England, reports the operation of "Suprapubic Cystotomy Painlessly Performed after the Hypodermic Injection of Eucaine" in a man 50 years old. He concludes as follows:

"I publish this case as evidence of the great value which the employment hypodermically of a solution of eucaine may be in the performance of a major operation which can be rapidly executed." (London *Lancet,* Vol. I for 1900, p. 928).

Euchinin (Euquinine)—the compound formed by the reaction between Ethyl Chloro-Carbonate and Quinine—is still being pressed forward to the attention of the medical profession, but little new has been stated during the past year. Much that now appears of value is in the way of results from previous observers.

Eudesmol, the crystalline camphor obtained from eucalyptus oil and thus closely allied to eucalyptol, has been practically unheard of during the past year.

Eudoxin (Bismuth salt of Nosophen) is still being employed in some quarters, but little new has been reported during the past year.

Eugenol (Eugenic Acid)—one of the oxidation products of oil of cloves—has not been commented upon in the medical literature of the past year.

Eugol—claimed to be a colorless solution containing B-Naphthol, Extract of Hamamelis, Eucalyptol, Salol, Menthol, Boric Acid and a small per cent. of Formaldehyde—has been practically unheard of during the past year.

Eulactol is the name adopted for a special preparation of milk and eggs which has recently been recommended by Dr. J. W. Frieser of Vienna, Austria as being in his experience one of the best concentrated foods for patients in a weakened and convalescent state. It is claimed to contain the proper proportion of proteids, fats and carbohydrates, and is recommended in 60 gramme (about 2 ounce) doses each day given in coffee. (*Klin. Therap. Wochensch.*, Vol. VII, p. 166). Reports from further observers are awaited.

Eumenol (claimed to be an Extract of the Root of the Chinese Tang-kui) is not attracting any attention in this country. Experiments were reported last year from Germany, but little has been heard of it since.

Eunol (a combination of Alpha or Beta-Naphthol and Eucalyptol) has not been heard of in the medical literature of the past year.

Euphthalmin (the Hydrochlorate of a Mendelic Acid derivative of Methyl-Vinyl-Di-Aceton-Alkamin) is still favored by some ophthalmologists as a substitute for atropine and homatropine.

Dr. Gaetano Vinci of Messina, Sicily, has made quite a practical study of this agent, particularly on animals—both cold and warm-blooded. (*Therap. Monats.*, Vol. XIII, p. 665).

Dr. Albert B. Hale of Chicago, Ills., read a paper before the Chicago Medical Society on January 24th last, enumerating the useful agents in ophthalmic practice in which he commented upon this article. He found a five to ten per cent. aqueous solution about the proper one to use. He would claim that it is the most acceptable mydriatic for not only the ophthalmologists but the neurologists and general practitioner (*Chicago Med. Recorder*, Vol. XVIII, p. 124).

Europhen (Iso-Butyl-Ortho-Cresol Iodide) needs hardly to

be mentioned here on account of its wide-spread use. Those who continue to make use of it do so now more or less as a routine practice.

Dr. Edmund Saalfeld of Berlin, Germany, has been one of the most enthusiastic investigators with this agent, and now again alludes to its value as a substitute for iodoform in about every class of case in which the latter would be indicated. He apparently prefers a mixture containing 9 parts of powdered boric acid to 1 part of Europhen. He publishes the details of his treatment of 160 cases of chancres and other venereal sores. He again calls attention to its very prominent advantage of being practically odorless (*Therap. Monats.*, Vol. XIV, p. 139).

Exalgin (Methyl-Acetanilid), the analgesic which has received such prominent attention within the last few years, brings forth little comment in the medical literature of the past year.

Fersan is the name given to a new iron compound obtained from the red corpuscles of fresh ox blood, and is urged as being a most preferable form in which to administer iron, for all other forms apparently fail to give complete satisfaction. Its endorser Dr. Adolf Jolles of Vienna, Austria, states that it is a powder resembling chocolate and having a slightly salty taste. It is readily soluble in warm water, not coagulable by heat, passes through the gastric digestion unaltered, but is completely absorbed when it reaches the intestinal tract. It contains iron and phosphorus combined with about 80 per cent. of soluble albuminoids. It is apparently produced by treating the blood centrifugally and adding concentrated hydrochloric acid. This forms an albumose base and an acid albumin, which latter contains the iron and the phosphorus.

One of the recent observers who gives the details of his successful use is Dr. James Silberstein of Vienna, Austria, who writes "On a New Iron Preparation, Fersan" (*Therap. Monats.*, Vol. XIV, p. 369).

Another recent observer is Dr. Julius Pollak of Vienna, Austria, who writes on "A few New Medicaments in the Treatment of Phthisis." He has used it in 50 cases successfully (*Wien. klin. Wochensch.*, Vol. XIII, p. 575).

Filmogen (Pyroxylin dissolved in Acetone and a small portion of Castor Oil added) has not been heard of in the medical literature of the past year.

Formaldehyde—the well-known antiseptic, disinfectant, de-

odorizer and germicide—has been largely commented upon apparently all over the world, and it would be quite out of the question to attempt to give here even an abstract of all that has appeared. Some of the main points therefore will only be alluded to in order to emphasize them. This agent and its 40 per cent. solution called "Formalin" has quite displaced sulphur dioxide, but it should be stated in behalf of the latter that apparently few realize the fact that water is necessary in conjunction with the vapor generated to produce effective results. Therefore steam should be generated in conjunction with it. The Health authorities in the prominent cities seem to be the most energetic workers in the line of general disinfection with this agent. The Chicago Health Department continues to push its investigations and is learning new points all the time. Accidents have recently been reported in Chicago from the use of Formaldehyde. It may be remembered that the fact was alluded to here on a previous occasion that the method there used was by spraying on sheets, and it is now noted that the vapors coming from these sheets have injuriously affected users of it—particularly the public officers undertaking the work. They may eventually find some better method than the sheet method, by discovering some form of generator to accomplish the results, but as long as they keep the proportion of accidents down as low as they are now doing, when the large number of disinfections is considered, the sheet should not necessarily be condemned.

Drs. R. Walther and Arthur Schlossmann both of Dresden, Germany, have continued their work in investigating the use of this agent. They have now made a report on "New Ways of Using Formaldehyde in Disinfecting Dwellings" (*Muench. Med. Wochensch.*, Vol. XLVI, p. 1535).

Dr. M. Friedemann of Britz, (near Berlin) Germany, has also experimented on the "Disinfection of Rooms with Formaldehyde." He used different forms of apparatus in a comparative way, noting how effective the disinfection was in each case. He pointed out the fact that all parts of the dwellings thus treated were temporarily rendered uninhabitable on account of the adherence of the Formaldehyde to the walls and furniture. He however believes in this method as being the most ready at hand, far the quickest and surely most practical (*Deut. Med. Wochensch.*, Vol. XXV, p. 828).

A report is made by Dr. A. W. Fairbanks of Boston, Mass., on some "Experiments upon the Disinfection of Rooms with Formal-

dehyde Gas in the City Hospital at Charlottenburg, Berlin", accompanied with remarks by Dr. Ernst Grawitz of Berlin. Three very complete experiments were tried and the cultures for such disinfection were carefully tabulated. The conclusions arrived at are entirely too long to take the space here to relate. Those who are particularly interested are referred to the *Boston Medical and Surgical Journal* (Vol. CXLI, pages 593 and 619).

Dr. John E. Walsh of Washington, D. C., read a paper before the Richmond Medical and Surgical Society on January 4th last entitled "Formaldehyde Disinfection", in which although convinced of the advantages of the sheet method of disinfection, he fully realized the fact that Formaldehyde vapor only destroys the organisms on the surface. (*Virginia Med. Semi-Monthly,* Vol. 4, p. 642).

Dr. John E. Owens of Chicago, Ills., Chief Surgeon of the Illinois Central Railroad Company reports on the "Value of Formaldehyde in the Disinfection of Buildings, Rooms, and Cars", in a paper read before the American Academy of Railway Surgeons in Omaha, Neb., last year. The discussion which followed is of interest (*Journ. Amer. Med. Assoc.,* Vol. XXXIV, p. 518).

Dr. Alexander von Rositzky of the Hygienic Institute of the University of Gratz, Austria, gives the results of his experience "Concerning a Simple Method for Clothes' Disinfection with Formaldehyde for the Practicing Physician." His plan appears to be very simple and can be undertaken with little trouble (*Muench. Med. Wochensch.,* Vol. XLVI, p. 1372).

Naturally the surgeon proper should also find this agent of much value. Dr. G. E. Crawford of Cedar Rapids, Iowa, read a paper before his State Society at Des Moines on May 17th last on "Formalin as an Antiseptic in General Surgery, Gynecology, and Obstetrics." He makes use of a 4 per cent. solution and gives a table of working solutions made from it. He states:

"The conditions in which formalin is distinctively superior in every way to any other antiseptic is in the packing and drainage of pus cavities and sinuses, etc., the cases in which iodoform gauze has been so much employed. There is not a condition that I know of in which iodoform is used but formalin will answer the purpose better. Its inhibiting power is a hundredfold greater; it deodorizes a foul wound, whereas the other only adds a stronger and more disagreeable smell to the one already present.

Iodoform is one of the feeblest antiseptics—in fact, it must be sterilized itself before it is fit to use at all; and, if used freely, is more likely to poison the patient than the microbes. There is no good reason why this "skunk" of modern surgery should not be banished from respectable society. It has nothing better upon which to base its claim for the popularity it has so long held with the profession than the onion poultice has among the laity. Two years since I bought five yards of iodoform gauze and I have it yet, and expect it to be an abundant supply for all future use.

In obstetric practice formalin meets all the requirements of an antiseptic to disinfect the hands and the external parts, and as a vaginal douche when one is needed. In difficult deliveries, where there is a great deal of handling and bruising of the parts, or laceration of the perinæum or cervix, a daily douche of an eighth- or a fourth-per cent. solution is of great value. It purifies the parts, lessens the liability of secondary infection, and deodorizes the lochia, which become very offensive in some of these cases. A perinæum properly sutured invariably heals perfectly under this treatment, and an immediate operation on the cervix would be much more likely to be successful than with any other method. In these cases, as in all others, the innocuous character of formalin adds greatly to its merit." (*N. Y. Med. Journ.,* Vol. LXXI, p. 1036).

Dr. Ely Van de Warker of Syracuse, N. Y., writes on "Formalin; Its Good and Bad Qualities." He reports several poisoning cases in conjunction with the good results recorded (*The Amer. Therapist,* Vol. VIII, p. 85).

Favorable reports come from the field of veterinary medicine, in the treatment of bovine anthrax by injections of Formaldehyde solution. Favorable results have been reported heretofore, and now Dr. J. H. Bell brings out an additional one. He states that out of twenty-eight cases recently treated in this way twenty-two have recovered. Out of the six remaining cases, all of which died, four were hopeless when first coming under treatment. Dr. Bell injects 1 Cc. (about 20 minims) of a 1 to 1000 solution into the swelling. Such an injection is repeated morning and evening for three consecutive days, then once for three days. He advises to begin the treatment as early as possible to produce the greatest number of successful results.

Mr. F. Wyatt-Smith of Reigate, England, reports a case of rodent ulcer in a man 76 years of age which he treated successfully

with a 20 per cent. solution of Formaldehyde in glycerin and water (*Brit. Med. Journ.*, Vol. I for 1900, p. 194).

Dr. Adler reports his preference for the use of Formaldehyde solution in the treatment of excessive sweating of the feet. He admits that the treatment has to be repeated but this disadvantage is not a great one for the application may be readily and rapidly applied by means of a brush (*Deut. Med. Wochensch.*, Vol. XXV, Therap. Beilage, p. 65).

Encouraged by such a report as Dr. Adler made led Dr. H. Hirschfeld to make use of this agent in the treatment of the night sweats of pulmonary tuberculosis. He now reports his experience with its use in treating thirty patients by tanning the skin with an application of a solution made according to the following formula:

Commercial Formaldehyde (40%) 50 grammes ($1\frac{3}{4}$ ounces)
Absolute Alcohol . . . . . 50 " ($1\frac{3}{4}$ ")

He applies the solution to different parts of the body alternately, applying a protecting covering over the part painted. The sweating is arrested almost immediately and that part of the body keeps free from five days to a month, after which the treatment is repeated (*La Sem. Méd.*, Vol, 19, p. 361).

It will be remembered, particularly by those residing in the neighborhood of New York City, that some experiments were tried with a so-called electrical cure for tuberculosis, contrary to the wishes and knowledge of the managing authorities at St. Luke's Hospital in that City. The scheme was to introduce into the system, by means of static electricity, a sufficient quantity of Formaldehyde solution to destroy the tubercle bacilli. Thirty per cent. of the more advanced cases and seventy-five per cent. of those seen early were claimed to be cured. The whole matter was pretty effectually hushed up on account of the way in which it was undertaken, and probably few now know the ultimate results obtained. The profession at large rather took the stand that the experiments were not being carried on in a truly scientific manner.

The report comes from France that patients suffering from influenza are being treated with inhalations of Formaldehyde Gas by confining them in isolated rooms for forty-eight hours. It is reported that the cough ceases immediately and they are relieved of the fever within twelve hours. The patients are then removed to another room which is free from this vapor, and this enables them

to be gradually brought back to ordinary conditions. This completes the cure.

Dr. A. G. Cipriana of Cagliari, Island of Sardinia, reports ten cases of otorrhea which he treated with a 2 per cent. solution of Formaldehyde, producing prompt relief. Although insufflations of a form of iodoform were employed as an adjunct in the treatment, he reports that he feels convinced that the complete relief was entirely due to the Formaldehyde (*The Therapist,* Vol. IX, p. 260).

Considerable has been written for and against the use of Formaldehyde for preservative purposes in various foods. Particular preparations of this article come by the trade names of "Conerine," "Freezine," "Milk Sweet" and "Preservative." The question has been brought into Court on more than one occasion in this country, and the ruling is generally against the use of such agents.

In England also the preservative question has been much agitated, and much has been written.

Dr. H. E. Annett of Liverpool, England, has written an article on "Boric Acid and Formalin as Milk Preservatives". His conclusions are as follows:

"From a consideration of the results of the above tests—chemically of the effect of boric acid and formalin on the different digestive ferments, and physiologically of the effect of these re-agents on the nutrition of young kittens—one is forced to conclude that these chemicals when used as preservatives of milk (and probably of other foods) are very injurious to the health of the consumer and particularly so to the health of young infants. Further, it is easy to conceive that the great infant mortality-rate from diarrhœa of many of our large towns may be closely connected with the practice, especially during the summer months, of systematically 'doctoring' milk by means of the preservatives used by milk-purveyors, dairymen, and milkmen. These experiments on young animals will constitute the first of a large series by which 'that sufficient information' as to the injurious effects of the use of preservatives in milk will be provided in order to make an action under the Sale of Foods and Drugs Act possible." (London *Lancet,* Vol. II for 1899, p. 1282).

Dr. Alexander G. R. Foulerton of Sutton, Surrey, England, has made a careful and quite extensive series of experiments on "The Influence on Health of Chemical Preservatives in Food." Formaldehyde is included in his list of preservatives. He concludes that

Formaldehyde "would probably have absolutely no injurious general effect in the proportions used, but would tend to lessen somewhat the digestibility of the milk. The necessity for legislation on this question lies in the fact that these preservatives are, in the quantities used, tasteless and so cannot be detected by the consumer. If, for instance, a preserved milk could be distinguished from fresh milk as readily as salted beef can be distinguished from fresh beef no necessity for legislation would arise. The consumer would know exactly the kind of article that he was buying, and there the matter would end. There would then be no more reason for prohibiting the sale of preserved milk than there would be for prohibiting the sale of salted beef on the ground that the latter was not suitable for making beef-tea for invalid diet. But since the public have no means of distinguishing between a fresh and a preserved milk special legislation does seem absolutely necessary. And such legislation to satisfy the requirements of the public health should provide that no preservative whatever the use of which is not sanctioned by the Local Government Board or the Board of Agriculture should be used for milk; that the proportion of such preservative should not exceed a certain maximum amount to be fixed officially; that the nature of the milk should be declared by the vendor, and that it should be sold only as 'preserved milk.' And, finally, the penalties for infringement of the law should be sufficiently heavy to render the sale of 'preserved milk' as fresh milk unprofitable.

With regard to other articles of food special cases must be dealt with on their own merits, but I do not think that there is any other article of food in which the use of a preservative is so important as it is in the case of milk. It is, for instance, difficult to find any good reason for the presence of salicylic acid or other special preservative in such articles of food as jam, cheese, and pickles, whilst the use of certain preservatives as substitutes for alcohol is a matter of fraud pure and simple. So also the use of a tasteless preservative in butter cannot be regarded as other than fraudulent unless the fact is declared; by using such a preservative the vendor is enabled to sell as fresh butter what under former conditions would have been sold at a lower price as salt butter. The use of boric acid, again, for salting bacon and ham may or may not cause injury to the consumer, but in any case the latter should have the opportunity of exercising his own judgment on the matter as to whether he will eat that class of preserved food. And, in short, it appears to me

that if the regulations suggested above for milk were applied to all other articles of food of a perishable nature the requirements of the public health would be safe-guarded as far as possible, and at the same time the legitimate use of preservatives would not be interfered with." (London *Lancet,* Vol. II for 1899, pages 1427 and 1577).

In an article on "The Use and Abuse of Preservatives", Dr. Samuel Rideal of Victoria-street, London, S. W., England, comes to the following conclusion:

"I am, therefore, inclined to agree with Mr. Foulerton that experiments on animals have, after all, but a very slight bearing upon the problem under investigation. As Dr. Liebreich points out, even regarding Dr. Annett's experiments in their most favourable light they by no means prove that boric acid and formaldehyde are poisonous for young children, even in quantities largely in excess of those which would be possible in a milk diet when the preservatives were regulated in the way suggested." (London *Lancet,* Vol. I for 1900, p. 228).

A combination made up of Formaldehyde, Tri-Oxy-Methylene (Paraform) and Iodine has been recommended under the short name of "Igazol" in the treatment of pulmonary tuberculosis in its early stages. It is reported to be in the form of a readily volatile powder which is inhaled in the vapor form.

A report on an improved Formaldehyde generator which is being used by Dr. Alvah H. Doty, Health Officer of the Port of New York, is made by Mr. George L. Taylor, Civil Engineer in New York City. It is described in the *N. Y. Medical Journal* (Vol. LXX, p. 688), but no illustration accompanies the article.

Gallobromol (Di-Bromo-Gallic Acid) has been unheard of in the medical literature of the past year.

Glonoin (Nitroglycerin), although still largely used, apparently nothing new has developed with it, for no special mention has been made of it in the current medical literature of the past year.

Guaiacol —now generally understood as referring to the synthetic product obtained from Pyro-Catechin—has been much in use during the past year and many observers have recorded their results. Only a few of the prominent ones therefore can be alluded to here. Combinations with other agents have been quite numerous during the past year.

A combination of Guaiacol and iodoform with olive oil or steril-

ized vaselin has had some practical use in France in the treatment of pulmonary tuberculosis and tuberculous pleurisy. In the Policlinique of Lille, France, they have made use of a Phosphate of Guaiacol with extract of gentian made up in the form of a pill, in the treatment of tuberculosis.

In an article by Dr. Willson O. Bridges of Omaha, Neb., on "The Specific Treatment of Croupous Pneumonia," he speaks of the probability in his experience of Guaiacol and creosote carbonate being about as near specifics in the treatment of pneumonia as it can be hoped to reach. He states that he cleared up his own mind pretty definitely during the past winter, when he had an opportunity to put this treatment into practice. He gives the details of some eight cases, some of which were exceedingly severe. (*Journ. Amer. Med. Assoc.*, Vol. XXXV, p. 74).

Dr. G. P. Stanley of Tamworth, New South Wales, gives the results of his trials from the external application of Guaiacol to reduce high temperatures. He claims that he obtains rapid reduction of temperature with little trouble in administering, and with neither local nor general ill-effects. The average amount used was five drops at each application which required no dressing or covering whatever. (*The Australasian Med. Gaz.*, Vol. XVIII, p. 522).

Dr. William Nuss of Cleveland, Ohio, reports his successful results in the use of this agent in the treatment of orchitis and epididymitis. He relates three cases. He applies a few drops of Guaiacol at intervals immediately over the swelling. In some cases only one application appears to be necessary but more obstinate cases, of course, require repeated application.

At the annual meeting of the Colorado State Medical Society at Denver in June last:

"Dr. Jesse Hawes discussed 'The Local Use of Guaiacol in the Treatment of Frequent and Painful Urination.' He said that this agent is applicable only in those cases in which the cause of the symptom is located in the extreme inner portion of the urethra. The diagnosis of deep urethritis having been made, guaiacol is applied through a speculum to the affected mucous membrane. It acts as an anesthetic and stimulant, and does not give rise to strangury as does silver nitrate. The patient retains the urine for hours after the application." (*Journ. Amer. Med. Assoc.*, Vol. XXXV, p. 448).

A combination of Guaiacol with formaldehyde has been given the

contracted name of "Guaiaform", and has been made use of by some observers. Little of special value can be attributed to this combination as yet.

Guaiacetin (a carboxyl substitution product of Guaiacol) is reported by Dr. Wilhelm Meitner of Wostitz, Austria, as giving wonderfully successful results in his treatment of tuberculosis. He speaks of its advantages as being promptness in reducing the temperature, checking the night sweats and reducing the mucous secretions considerably. It also has rather a beneficial effect than otherwise on the digestion. (*Wien. klin. Rundschau,* Vol. XIV, p. 258).

Guaiasanol is one of the latest synthetic combinations prepared from Guaiacol, and is chemically Di-Ethyl-Glycocoll-Guaiacol Hydrochloride. The particular advantage for it is that it offers a soluble form in which to give Guaiacol. Little definite information has been reported clinically as yet. Dr. Alfred Einhorn of Munich, Bavaria seems to be about the only prominent observer so far (*Muench. Med. Wochensch.,* Vol. XLVII, p. 10). The doses given vary from 3 to 12 grammes (46.3 to 185.2 grains) daily. It is reported to be non-poisonous.

Guaiaquin (Quinine Guaiacol-Bi-Sulphonate) has received practically no attention in the medical literature of the past year.

Hedonal is a new hypnotic recently brought forward. It is described chemically as being the Ester of Methyl-Propyl-Carbinol-Carbamic Acid. It appears in the form of colorless crystals with a somewhat disagreeable taste, and readily soluble in hot water. It is reported that it splits up in the system into carbonic dioxide, ammonia and urea, and acts as a diuretic (as a rule in animals, but not universally in human beings). It is claimed that after administering a dose of 2 grammes (30.9 grains) a prolonged sleep results in from twenty to thirty minutes and lasts about seven hours.

Dr. Arthur Schüller of Vienna, Austria, reports on it as being a new hypnotic of the urethane group. His cases amounted to 21 in number. He rather inclines to believe that its best effects are produced in mild cases of insomnia. It surely appears to be preferable to either chloral or paraldehyde. If alternated with trional he observed that it might be given for quite a prolonged period. (*Wien. klin. Wochensch.,* Vol. XIII, p. 526).

Drs. Paul Schuster and A. Eulenburg both of Berlin, Germany, report some 79 cases between them of insomnia with practically the

same successful results. They administered it in the form of the powdered crystals immediately applied to the tongue, using some aromatic elixir to wash it down and thus avoid the disagreeable taste (*Deut. Med. Wochensch.,* Vol. XXVI, Therap. Beilage, pages 19 and 20).

Drs. Nawratzki and Arndt, two German observers of "Dalldorf," rather consider this agent the ideal hypnotic, and being so readily soluble is well-adapted to hypodermic injections. They have used it in this way and find no ill-effects from such use. They have observed that it is a very marked diuretic and in some cases this action is so pronounced that it interrupts continued sleep. (*Therap. Monats.,* Vol. XIV, p. 372).

Heroin (claimed to be a Di-Acetic Ester of Morphine) has received considerable attention during the past year. The hydrochloride seems to be the preferable salt and it has been used largely in producing the narcotic, analgesic and sedative effects for which morphine has previously been relied upon. The combinations in which it appears for popular use are greatly on the increase which is surely to be deplored, on general principles. A few of the combinations which are recommended by advertising largely may be alluded to. A combination with bitter almond oil is used to form "cough drops". Some suitable excipient is used with it to form the so-called "cough pills." Simple syrup is used with it in order to offer a so-called "sedative syrup." Trional is combined with the alkaloid Heroin to produce a "sleeping powder." The alkaloid Heroin with alcohol and syrup of tolu is used for a "sleeping draught." The alkaloid, marshmallow powder and extract of rhubarb are used to form "Heroin pills for constipation," and others might be mentioned.

Dr. C. G. Santesson of Stockholm, Sweden, is carrying on "Some Experiments Concerning the Action of Heroin upon Respiration," showing that its action is depressing. (*Muench. Med. Wochensch.,* Vol. XLVI, pages 1375 and 1767).

Dr. Wilhelm Klink of Frankfort-on-Main, Germany, reports on the results of "Large Doses of Heroin Without Intoxication Signs." Two patients apparently took by mistake 50 milligrammes ($\frac{4}{5}$ of a grain) of this agent three times in one day without producing bad effects. Dr. Klink remarks however that it would not be wise to repeat such doses on other patients. (*Muench. Med. Wochensch.,* Vol. XLVI, p. 1376.)

Dr. Julius Pollak of Vienna, Austria, has written on Heroin Hydrochloride (*Wien. klin. Wochensch.*, Vol. XIII, p. 61).

Dr. Henry D. Fulton of Pittsburg, Pa., reports his experience with this agent in affections of the respiratory organs after five years' observation, in which he states that it "promises to be a remedy of real value and, indeed, a very important addition to our therapeutical resources, even if further study and investigation do not widen its field of usefulness beyond the clinical results so far obtained." (*N. Y. Med. Journ.*, Vol. LXX, p. 960). Other observers report in a like strain.

Dr. Morris Manges of New York City whose report on the therapeutics of Heroin was alluded to here last year, now makes a second report in which he states:

"A sufficiently long period having elapsed since the introduction of heroine, the new substitution product for codeine, during which it has been used very extensively, we are now enabled to pass judgment upon its real value, and to definitely determine in what manner this drug has fulfilled the expectations raised in its behalf." (*N. Y. Med. Journ.*, Vol. LXXI, pages 51 and 79). This is a very complete report and brings the subject up to date.

Dr. W. Ross Thomson of New York City in commenting upon Dr. Manges' report in which he thoroughly agrees, thinks it worth while to cite two of his own cases in order to emphasize the fact more clearly that continued vomiting sometimes follows its use. (*N. Y. Med. Journ.*, Vol. LXXI, p. 171).

Dr. William J. Robinson of New York City also reports two cases of continued vomiting. He remarks in conclusion:

"I wish to make a suggestion: Heroine being a derivative of morphine, is it not just possible that the emesis in my cases and in the others reported was not due to the heroine *per se*, but to some chemical change which transformed the heroine (= diacetyl morphine) into apomorphine or a body similar to it? I have not had the time to investigate the subject, and the foregoing is simply an hypothesis. But the hypothesis seems to me quite plausible, and I believe that investigation along that line would not remain fruitless. I shall undertake the task at the first opportunity." (*N. Y. Med. Journ.*, Vol. LXXI, p. 206).

Dr. Manges replies in a short correspondence to Drs. Thomson and Robinson to show that he distinctly pointed out this peculiarity. (*N. Y. Med. Journ.*, Vol. LXXI, p. 278).

Dr. James R. L. Daly of Spuyten Duyvil, N. Y., in making a report on "A Clinical Study of Heroin", cites the clinical history of eight cases taken at random from a clinical field of over 100 cases of pulmonary tuberculosis in all stages of the disease, and claims that it will surely illustrate the efficacy of the drug, at least in hospital practice. (*Boston Med. and Surg. Journ.*, Vol. CXLII, p. 190).

Dr. Kurt Witthauer of Halle, Prussian Saxony, reports his experience with the Hydrochloride given in conjunction with cherry laurel water. He has obtained successful results in various forms of laryngitis, pleuritis, pneumonitis and in the dry forms of pulmonary tuberculosis. His most favorable results however were obtained in treating simple inflammation of the trachea. He advises beginning with doses of 2.5 milligrammes (about $\frac{1}{25}$ of a grain) and then increasing up to 5 milligrammes ($\frac{1}{12}$ of a grain)—given three times a day (*Die Heilkunde*, Vol. IV, p. 267).

Dr. F. C. Floeckinger of La Grange, Texas, has published some "Clinical Observations on Heroin and Heroin Hydrochloride as compared with Codeine and Morphine." His doses are apparently the same as Dr. Witthauer's. He has noticed no dangerous effects when the doses were confined within the limitations mentioned. (*New Orleans Med. and Surg. Journ.*, Vol. LII, p. 636).

Hetol (Sodium Cinnamate) is one of the newer agents recommended in the treatment of pulmonary tuberculosis. It was first introduced by Prof. Landerer of Stuttgart, Germany, and claimed by him as a specific.

Dr. C. A. Ewald of Berlin, Germany, has taken up the investigation of its use and reports his results in 25 cases of pulmonary tuberculosis, when given by intravenous injections. He admits that he selected his cases to meet the conditions in which Prof. Landerer stated the best results were to be expected, and undoubtedly some good resulted from its use for the patients usually gained in weight, but general hygienic treatment was found to be equally important as in the use of most other remedies for this affection. Unsatisfactory results were noted whenever general hygienic treatment was omitted. His results however were not as satisfactory as Prof. Landerer reported, for he calculated that only 8 per cent. of his cases could be called successes with this treatment. It is however urged that as this form of treatment is quite harmless, further investigations be taken up. (*Berliner klin. Wochensch.*, Vol. XXXVII, p. 449).

Hiccough. Dr. J. Noir, a French practitioner reports his experience in carrying out the observations of Prof. Lépine of Lyons on the effect of traction on the tongue upon the apparently dead body, in relation to its effect on hiccough. Prof. Laborde first suggested this line of treatment and Dr. Noir has now tried it with success. He reports first on a case of a 6½ year old extremely nervous girl who had spasms of violent hiccoughing lasting for as much as six hours. She became so much exhausted that her parents had given her up for dead. Traction on the tongue however for a minute and a half immediately stopped the spasm and it did not recur. Another case reported is that of a tuberculous and cachetic patient affected with diabetes who had been troubled for several days with severe spasms of hiccoughing. Every form of medicinal treatment was tried without avail. Traction on his tongue was continued for about two minutes with like favorable results, however the spasms recurred after several days. The patient then practiced traction on himself with equal success. It is to be hoped that other observers will make a trial of this treatment and report their results. (*Progrès Médical,* Vol. XXIX, p. 5).

Holocaine, the new local synthetic substitute for cocaine, is still largely used with great advantage and with some of the objectionable features of cocaine eliminated. The general practitioner uses it with some satisfaction and finds that it acts quicker, is less painful and does not dilate the pupil. Cases of foreign bodies in the eye are now immediately relieved by the general practitioner with great facility.

Hydrogen Dioxide, particularly in the form of its solution, has now a very large field of usefulness. Its value can hardly be overestimated. French observers are speaking very emphatically of its use as a disinfectant. It is being used in France in the form of a 10 per cent. solution for uterine injections, for infiltrations of urine with consecutive gangrene, in suppurating appendicitis and in perirectal abscesses. In affections of the upper air passages, it is injected into the trachea. No irritation is noticed when thus injected, and whereas it is acknowledged that it is not a specific in pulmonary affections, it actually does increase the appetite, make the respiration easier and improve the general health.

At the Ninth Annual Meeting of the New York State Association of Railway Surgeons held at the Academy of Medicine, New York City, on November 16th, 1899, several observers called atten-

tion to the fact that this agent was at times harmful, and it may be well for those who care to follow up this subject to refer to the remarks made at that meeting. (*Med. News,* Vol. LXXV, p. 771).

Dr. L. Duncan Bulkley of New York City in writing "On Some of the Uses of Peroxide of Hydrogen in Dermatology" speaks of the advantage of this agent in *hirsuties,* which he believes has not been heretofore mentioned, in that it certainly retards the growth of hair. He remarks as follows:

"This I have noticed in a number of instances for the past two or three years, much to the delight of several patients. This result is slow, but with a faithful continuance of the remedy the fine growth of hairs certainly diminishes; some of the stronger ones seem to grow and they can be removed by electrolysis.

In applying the peroxid to such cases it is often well to begin by diluting it one-half with water, and increasing the strength gradually, for when a strong specimen is applied to the healthy skin it will sometimes cause a desquamation, which is unpleasant." (*Journ. Amer. Med. Assoc.,* Vol. XXXIII, p. 1598).

Dr. C. H. Browning of Oberlin, Ohio, writes to the Editor of the *Journal of the American Medical Association* (Vol. XXXIV, p. 59) as follows:

"In connection with Dr. Bulkley's paper, in the JOURNAL of Dec. 23, 1899, I want to give voice to a use for hydrogen dioxid that has been too little known. The idea was original with Dr. Geo. W. Crile, of Cleveland, Ohio, and I am only giving his suggestion and my own experience with it.

Gunpowder burns are very troublesome things, and the ordinary treatment has usally failed to prevent the black stain remaining permanently. Dr. Crile's suggestion is to apply peroxid on the first or second day after the burn, and see that it gets thoroughly into the center of each pigment spot. The application is practically painless, and the consequent bubbling removes the inorganic remains of the powder. I have found it necessary to prick each point thoroughly open, and have used the solution of U. S. P. strength with perfect results, absolutely no pigment remaining."

Dr. H. E. Kendall of Sydney, Nova Scotia, writes to the Editor of the *Medical Record* (Vol. 57, p. 928) as follows:

"I have not seen anywhere peroxide of hydrogen spoken of as a local anæsthetic, and as it has proved very satisfactory in my hands I venture to mention it in your paper. Injected under the epider-

mis it produces immediate and complete anæsthesia of the whole skin. I have used it for over a year, in opening abscesses, cutting off redundant tissue in in-growing toe-nails, opening the pleural cavity, and in one case the abdominal cavity. I do not think any absorption takes place, as the intercellular inflation from the gas generated seems to produce such pressure that the skin cuts like frozen tissue."

Dr. von Bruns of Tübingen, Germany, in recommending this agent in the treatment of infected wounds believes that it acts partly chemically and partly physically. The oxygen evolved in its decomposition when applied to the tissues produces the noticeable foamy condition which acts beneficially in loosening up the necrotic matter. He makes use of a 1 per cent. solution either in the form of irrigations or moist dressings. (*Berliner klin. Wochensch.*, Vol. XXXVII, p. 405).

It may be of service to some to repeat here the now well-recognized fact that a small amount of solution of Hydrogen Dioxide poured over the closely adhering dressing of a wound, will not only relieve the pain incident to removing the dressing, but will alleviate any irritation which might be set up.

Good results are again reported from the use of the vapor of Hydrogen Dioxide in the treatment of pertussis. Dr. Baroux of Armentières, France, now reports on 13 cases with excellent results. He uses a strength of 12 volumes, and pours 80 grammes (about 3 ounces) on a clean, white linen cloth one meter (about 3 feet) square which he suspends from a cord stretched across the middle of the small room in which the patient is lying. He replenishes this solution every four hours. He recommends the use of two such rooms to obtain the best results, one to be occupied in the day time and the other at night. Internally he prescribes the following mixture:

Tincture of Drosera.....	2.0 grammes	(30.9	grains)
" " Belladonna..	3.0 "	(46.3	")
" " Aconite.....	4.0 "	(61.7	")

He claims that any case of pertussis irrespective of the stage in which it is first seen, is successfully treated in eight days by this method. (*Gaz. des Hôpitaux*, Vol. 73, p. 347).

Dr. Stout of Philadelphia, Pa., recommends the use of equal parts of alcohol and Hydrogen Dioxide solution to wash out the ear after

the removal of an excess of wax. (*Phila. Med. Journ.,* Vol. 5. p. 1090).

Oxydol is the coined name given to a solution of Hydrogen Dioxide as made by an English firm, which according to their claim is more permanent than any other now offered. Of course no allusion is made to the mode of preparation or whether any extraneous substance is added to promote its keeping qualities.

Ichthalbin (Ichthyol-Albumen), the substitute for Ichthyol, continues to be recommended by some observers.

Dr. Samuel Wolfe of the Samaritan Hospital, Philadelphia, Pa., has written on its use as proving its full value "as a local measure in erysipelas, eczema, pruritis, urticaria, lupus and other affections where there are skin lesions; also in gouty and rheumatic joints, in enlarged glands, and in local disturbances where swelling, hyperemia or inflammations are present." (*Merck's Archives,* Vol. II, p. 9).

Dr. Otto Binder practicing in Suczawa, Austria, has made use of this agent in several hundred cases under various conditions, and makes a general report on its broad field of usefulness. (*Wien. Med. Wochensch.,* Vol. L, p. 1082).

Dr. Rolly of Heidelberg, Germany, reports his clinical observations on the use of this agent in catarrhal affections of the alimentary tract, especially in children where it can be given in place of calomel and thus avoid the usual purgation (*Muench. Med. Wochensch.,* Vol. XLVII, pages 460 and 576).

Ichthyol (Ammonium Ichthyol-Sulphonate) continues prominent in the medical literature of the past year. It would be quite out of place to enumerate here each individual mention of this article for the past year, and therefore an attempt will be made to only speak of some prominent and possibly typical instances of its very varied uses.

Dr. B. F. Travis of Chattanooga, Tenn., recommends it in the treatment of corneal ulcers without regard to their cause. After some little experience with a number of cases he has adopted a 30 per cent. solution diluted with glycerin and distilled water as the most useful one, but for use at home by the patient he recommends a weaker solution. To counteract the momentary pain which is apt to occur, he advises the previous use of a 1 per cent. solution of holocaine. (*The Med. Herald,* Vol. XVIII, p. 515).

The report of a series of 250 cases of erysipelas has recently been

published as having been successfully treated exclusively with Ichthyol. The ages varied from six months to eighty-seven years. An ointment was used of vaselin and Ichthyol, varying in strength from 13 to 30 per cent. (*Med. Press and Circ.,* Vol. LXVIII, p. 480).

Dr. M. Eberson of Tarnów, Austrian Galicia, relates five clinical cases of trachoma in which this agent produced satisfactory results. He claims that it completely relieves the annoying symptoms and produces little pain and no cicatrices. No infection seems to follow after its use. (*Therap. Monats.,* Vol. XIV, p. 313).

Dr. A. Seibert of New York City reports on fifty-six cases of scarlet fever treated with inunctions of Ichthyol made with 5 to 10 per cent. Ichthyol in lanolin. He began collecting his cases in 1894. (*Jahrb. für Kinderheilk. und Phys. Erzieh.,* Vol. 51. p. 308).

Prof. Talamon, an Italian observer, recommends the following local application in the treatment of psoriasis:

Salicylic Acid.	3 grammes	(46.3 grains)
Ichthyol.	10	"	(154.3 ")
Pyrogallic Acid.	6	"	(92.6 ")
Lanolin or Vaselin.....100		"	(about 3½ ounces)

(*Riforma Medica,* Vol. IV, p. 707).

Dr. H. Beaman Douglass of New York City in writing on the topic of "Atrophic Rhinitis" recommends this agent as giving the greatest relief when used locally. (*Post-Graduate,* Vol. XV, p. 768).

Dr. Gustav Woyer of Vienna, Austria, has made quite an extensive use of this agent in his gynecological practice. The greatest service has been obtained in using the Ichthyol-Glycerin tampon, producing prompt anodyne effects. (*Wien. Medizin. Presse,* Vol. XL, p. 1946).

Dr. Richter of Glatz, Prussia, reports the successful use of this agent in the case of a girl of nineteen suffering from tuberculosis of the urinary tract. (*Deut. Med.-Zeitung,* Vol. XXI, p. 254).

Dr. G. Edlefsen of Hamburg, Germany, reports good results from the use of this agent in chronic rheumatism. He made use of a preparation which is offered under the name of "Ichthyolvasogen." He publishes his results in a paper on the use of this new preparation in joint affections. (*Therap. Monats.,* Vol. XIV. p. 19).

A combination of Ichthyol and formaldehyde, sold under the name of "Ichthoform," has been studied experimentally by Professors S. Rabow and B. Galli-Valerio of Lausanne, Switzerland, with such favorable results that they would recommend it as a substitute for iodoform externally and internally in the way of an intestinal antiseptic. (*Therap. Monats.,* Vol. XIV, p. 202).

Dr. Aufrecht of Berlin, Germany, also reports favorably on this compound (*Therap. Monats.,* Vol. XIII, p. 692). He also describes another combination—silver and Ichthyol-Sulphonic Acid—to which has been given the name of "Ichthargan." It takes the form of a brown amorphous powder without odor and readily soluble in water, glycerin and diluted alcohol. It contains 30 per cent. of silver. Its marked antiseptic and bactericidal properties were demonstrated largely by experiments upon mice. He experimented on himself as well.

Iodalbacid is one of the newer albuminous combinations containing 10 per cent. of iodine combined with albumin. It is manufactured and offered for sale by an enterprising house in Frankfort-on-the-Main (Germany) as being a much more stable compound of iodine than the usual iodides. It therefore appears to act with less rapidity but more continuously, and without producing iodism. It appears as a yellow powder with a very slight odor and taste, and is sparingly soluble in water. Dr. Arthur Briess of Vienna, Austria, has experimented with it in 25 cases of syphilis in Prof. Neumann's Clinic in Vienna. The dose varies from 2 to 5 grammes (30.9 to 77.2 grains). In cases of recent syphilis it appeared to fail in some instances, and other agents had to be prescribed. In the larger number of cases however it acted well and comparatively rapidly. The treatment was kept up at times for several months and Dr. Briess reports that most of those cases which recovered suffered from late relapses. (*Wien. Med. Wochensch.,* Vol. L, p. 699).

Iodine is undoubtedly too well known to call for much comment here. However it will be of interest to some to learn that Dr. Charles A. Elsberg of New York City recommends a new solution of Iodine for local application. His attention being called to the repeated comment during the past few years on the abuse of the Tincture of Iodine, he felt called upon to emphasize its true value. He writes as follows:

"Although I have applied the iodin-solution over large areas of skin, in many cases, I have never seen a case of iodin-poisoning

from its use. Only in one case did I succeed in obtaining a well-marked iodin reaction from the urine.

In conclusion, although the local use of iodin in the above-mentioned conditions is well-known, it has seemed to me that the very good results I have obtained would justify this renewed recommendation of the agent. After a careful observation of a considerable number of cases, it has seemed to me that with this 20%-solution of iodin distinct therapeutic results can be obtained, which cannot be obtained with the much weaker officinal tincture of iodin which is generally recommended and used." (*Phila. Med. Journ.*, Vol. 4, p. 882).

Iodipin—the combination of iodine with the fatty acids in oil of sesame—is still being experimented with.

Dr. Viktor Klingmüller of Breslau, Prussia, has written an article "On Iodipin." His experience with it in subcutaneous injections included 100 cases. He concludes that it is of much value in that it is very easy to administer and its effects are pretty certain, energetic and lasting. (*Deut. Med. Wochensch.*, Vol. XXVI, p. 423).

Dr. Kindler of Moabit (near Berlin), Germany, has not only used this agent subcutaneously but in the form of an oil-pack. In subcutaneous use the spot where the injection is to be made is first anæsthetized with ethyl chloride spray. The amount injected was usually 10 grammes (154.3 grains) each day, but a break was made in the regularity of the injections after each tenth one. No abscesses had been recorded. He used the oil-pack in several cases of gonorrheal articular rheumatism, but obtained no more satisfactory results than when simple warm oil was used as an application. The internal administration of this agent had to be given up on account of the objectionable oily taste being too prominent when used for any length of time. In eight cases of asthma good results followed and iodism was not noted, which is the claimed advantage over the potassium iodide treatment. Varied results followed its use in different forms of syphilis. (*Fortschritte der Medicin*, Vol. XVII, p. 1001).

Dr. J. W. Frieser of Vienna, Austria, also reports his experience with this agent. He would class it as superior to all other iodine preparations, particularly for the reason that it does not produce iodism. Under his observation it is rapidly and completely absorbed in the intestines and acts particularly well in the tertiary stage of syphilis. (*Wien. klin. Rundschau*, Vol. XIV, p. 315).

Dr. A. Sternberg of Wurtemburg, Germany, states that he believes the usually recognized splashing in the stomach is not a sufficiently diagnostic sign of dilatation. This agent gives a reaction for iodine in the saliva in about sixty-five minutes when the stomach is normal. If the reaction is delayed longer than this time, he assumes that the motility of the stomach is impaired. A differential diagnosis between organic gastric trouble and functional disturbances may thus be made. (*Deut. Medizin.-Zeitung,* Vol. XXI, p. 421).

Iodoform can surely not yet be spared, notwithstanding the numerous substitutes offered.

Dr. Edmund C. Brush of Zanesville, Ohio, read a paper before the Fifteenth Annual Meeting of the American Medical Association held in Columbus, Ohio, in June, 1899, on the topic "Would Surgery Suffer if Iodoform Was Abolished?" In preparing his paper he attempted to reach some decision either for or against it, by writing to 100 representative surgeons, asking them to answer the following questions:

"What germicidal powder do you prefer?"

The second question was to mention a second choice of powders.

"Have you seen any bad effects from using iodoform?"

"Would, in your opinion, surgery suffer if iodoform was abolished?"

. . . . . .

"A careful summing up of the answers given to the inquiries makes a strong case against the use of the drug excepting to a limited extent and in a limited number of cases. Many surgeons think that surgery would not suffer if there was no such thing as iodoform. There is no doubt that the indiscriminate use of iodoform has done untold injury. If those who use it in local tuberculosis and in specific cases had something else just as good, iodoform would really lose its chief supporters.

So the answer to the title of this paper, 'Would surgery suffer if iodoform was abolished?' can be written, 'Yes, to a very limited extent!'

Let me predict that in five years, by reason of the discovery of better things, the answer can be written, 'No, not in the least!'" (*Journ. Amer. Med. Assoc.*, Vol. XXXIII, p. 1526).

Drs. V. Cornil and Coudray of Paris, France, have carried on a series of observations to determine the action of Iodoform on the

normal tissues. Their experiments consisted in injecting one part of Iodoform thoroughly emulsified in eleven parts of oil into such animals as dogs, guinea-pigs and rabbits. Their results will be interesting reading to those who desire to follow up this study. (*Sem. Méd.,* Vol. 20, p. 159).

Dr. Zera J. Lusk of Warsaw, N. Y., reported at the Annual Meeting of the N. Y. State Medical Association on October 24th, 1899, the cure of three cases of tuberculous peritonitis due to the application of an extensive Iodoform poultice extending from the ensiform cartilage to the pubes on either side of the spinal column. He used the proportion of one part of Iodoform to six of vaselin. He has made successful use of a similar poultice to the chest, in a case of pulmonary tuberculosis, and again when applied to the knee in tuberculous synovitis. (*Transactions N. Y. State Med. Assoc.,* Vol. 16, p. 481).

Cases of poisoning are still too frequent. Only two of the prominent instances will be mentioned here.

Dr. Burr B. Mosher of Brooklyn, N. Y., reported, at a meeting of The Kings County Medical Association, a case of acute Iodoform poisoning in a boy 6 years old where an Iodoform gauze wick had been placed in the excised portion of the eighth rib for the purpose of draining an empyema. (*Archives of Pediatrics,* Vol. XVI, p. 873).

Another case was an infant two weeks old, and reported by Dr. J. C. Josephson of Baltimore, Md. As some of the symptoms resembled opium poisoning, tincture of belladonna was prescribed which lends interest to this particular case. (N. Y. *Med. Record,* Vol. 57, p. 638).

Iodoformogen (10 per cent. Iodoform)—the combination of iodoform with albumen, offered as a substitute for iodoform—has not been alluded to in an original way during the past year.

Iodol (Tetra-Iodo-Pyrrol)—the Iodoform substitute—is still in use in some quarters, but little appears in the medical literature directly concerning it.

Iodonaftan is another new combination of iodine. It proves to contain 3 per cent. of iodine combined with a naphtha product. No clinical reports have yet been made, but it is recommended to dispense it in the form of an ointment. The claims made for it are that it has a rather agreeable odor, is permanent in the air and possesses anodyne properties.

Iodopyrin is a combination of 60 per cent. antipyrin and 40 per cent. iodine which has been offered before, but sufficient experience had not been obtained to recommend it very enthusiastically until Dr. Junkers of Erfurt, Prussian Saxony, had reported his practical experience which has now extended over eight years and in a great variety of affections. The hydrochloride is the salt generally used and is of a yellow color. The dose he employed was 1 gramme (15.4 grains) for adults every three or four hours. For children from 1 to 10 years old he gave 100 to 500 milligrammes (from 1.5 to 7.7 grains). To those over 10 years he gave 500 to 750 milligrammes (7.7 to 11.6 grains). He found it particularly useful in muscular rheumatism. In the acute articular form it gave better results than the salicylates, by not producing the unpleasant after-effects. In some cases of chronic rheumatism he found the usual phenomena of iodism present. (*Therap. Monats.,* Vol. XIII, p. 604).

Iodothymoform—the new disinfectant combination of last year, prepared by the action of thymol upon formaldehyde under certain conditions—has not been heard of during the past year.

Itrol (Silver Citrate) has received no more attention during the past year than in previous years. Only one observer praises it very enthusiastically in skin affections.

Dr. Oskar Werler of Berlin, Germany, reports that in all cases where an antiseptic and disinfectant was needed it responded favorably. It produced no irritation of the skin but acted in a mild and harmless manner. He recommends beginning with small doses and gradually increasing them in order to produce complete freedom from pain and local irritation. (*Wien. klin. Rundschau,* Vol. XIV, p. 258).

Kryofin—the antipyretic closely allied to phenacetin—has received attention from only one prominent observer—Dr. Albert Breitenstein of Basel, Switzerland. He wrote an article "On Kryofin" and states that he made use of it particularly as an analgesic in the treatment of headaches. He reports an aggravating case of migraine of long continuance being relieved by only two doses of 450 milligrammes (7 grains) each. Headaches attributed to acute alcoholism were promptly relieved. He believes that it is a safe and certain agent and that it gives rise to no unpleasant after-effects. (*Therap. Monats.,* Vol. XIV, p. 137).

Lactophenin (π-Lactyl-Phenetidin), also closely allied to

phenacetin, has received considerable attention through advertising mediums, but little direct reporting of clinical experience has appeared.

Lanoform is the name given to a mixture of lanolin with 1 per cent. of formaldehyde, and probably has some use as an antiseptic, but little or no comment has been made upon it during the past year.

Largin, the new silver compound with albumin, containing 11.2 per cent. of silver and closely allied to protargol, has received somewhat more attention during the past year than in the year previous. The ophthalmologists have given it increased attention.

Dr. Marczel Falta places it far above protargol in its germicidal properties. The tissues appear to take up this agent very rapidly, particularly in cases of conjunctivitis and affections of the lachrymal ducts. Dr. Falta finds that patients will bear as strong a solution as 10 per cent. even when slight pain and reddening is produced. It has a marked checking effect on the copious secretion in conjunctival affections. (*Wien. klin. Rundschau,* Vol. XIV, p. 57).

Mr. Sydney Stephenson of Hanwell, London, W., England, has contributed an article on "The Practical Applications of Largin in Diseases of the Eye." After giving a detailed account of eight cases he draws the following conclusions:

"The application of largin, even in concentrated form, is painless, but, when prolonged beyond a few weeks, may stain the conjunctiva. It acts well in blepharo-conjunctivitis, and in some cases of dacryocystitis. It is an efficient substitute for silver nitrate in any of the conjunctival inflammations associated with the Koch-Weeks bacillus, such as acute infectious ophthalmia and acute or subacute trachoma. It acts admirably as a temporary remedy after any of the operations commonly practised for the relief of chronic trachoma. In gonorrheal ophthalmia, on the contrary, it is, in my experience, distinctly inferior both to protargol and to silver nitrate. In diplobacillary conjunctivitis, too, it does not succeed so well as zinc sulphate. In short, largin seems likely to gain a permanent place among the somewhat restricted number of remedies employed in everyday eye work." (*Brit. Med. Journ.,* Vol. I for 1900, p. 622).

Prof. Ernest Finger of Vienna, Austria, advises the treatment of gonorrhea by this agent. He has obtained the best results by beginning with the use of protargol, continuing for three or four days

and then substituting Largin. He makes use of solutions varying in strength from one-quarter to one per cent. (*Wien. Klinik,* Vol. XXVI, p. 1).

Liquid Air has received little attention in the medical world during the past year, although it is a well-known fact that it is being tried for a great variety of purposes.

Lycetol (Di-Methyl-Piperazin Tartrate)—the uric acid solvent—has been kept prominently before the profession by considerable advertising, but little can be found in the medical literature of any clinical reports in relation to its use.

Lysol (the saponified product of coal-tar, chiefly composed of cresols)—the substitute offered for Carbolic Acid—has apparently become well-established as an agent in the hands of the surgeon, and the comments which appear usually take the form of mentioning its use as quite a routine practice.

Malarin, the new antipyretic alluded to here last year, has received practically no attention during the past year.

Mallein, the so-called "animal antitoxin", continues to be confined to diagnostic purposes in determining the presence of glanders in the horse.

"A recent report issued by the Tramway Department of the Glasgow (Scotland) Corporation has attracted considerable attention, and is very important as demonstrating the value of mallein as a diagnostic and, it may be, also as a curative in glanders. The tramway stud of horses is a large one—at present 4,439—and therefore the experience of the manager and of the veterinary surgeon in this matter is very important. During the last few years up till July, 1899, the stud enjoyed almost complete immunity from glanders, but at that date two animals destroyed after severe street accidents were found to be affected with the disease, although they had shown no clinical symptoms. All the horses from the same depot as these two were thereupon submitted to the mallein test, and of over 700 about 10 per cent. reacted and were destroyed, although apparently in good health. In the majority of these animals the disease was found in its very early stages. The test was then applied to the animals in several of the other depots and revealed the unexpected fact that a large proportion of the horses reacted, although to all appearance in splendid condition. This led the authorities to adopt isolation of reacting animals instead of their destruction, and the repeated application of the mallein test

on these isolated animals showed the interesting fact that they gradually ceased to react. Indeed, of 278 animals that reacted on the first test with mallein not one reacted on the seventh test, and these animals were all drafted back to work. The report affords one more proof that glanders may be rapidly and widely disseminated even through well-managed studs and stables without any clinical evidence of its presence. It may perhaps be taken to indicate that mallein is not only a valuable diagnostic, but also has some controlling power over, if not curative action upon, the disease. The Tramway Department now test all horses as soon as possible after purchase, and thereafter every three months. Any animals that react are at once isolated, then tested monthly, and only returned to work when the last two injections of mallein have failed to produce a reaction. The experience of Glasgow in this matter should be important in all centres where there are large studs of horses, and where glanders is always looked upon with dread." (*Brit. Med. Journ.*, Vol. I for 1900, p. 594).

Mercurol is the name given to a new compound consisting of yeast nuclein and metallic mercury. It appears in the form of a fine colorless powder containing about ten per cent. of mercury and is recommended to be used where solutions of corrosive sublimate are applicable. The coagulation of albumen does not take place with Mercurol and therefore this is its chief advantage.

Dr. Frederick Fraley, Jr., of Philadelphia, Pa., reports "Some Clinical Experiments with Mercurol in Cases of Acute Gonorrhea." He concludes as follows:

"The best results were in the cases with simple anterior urethritis, and in the cases either of short duration (two to four days) or of comparatively long duration (ten days to two weeks), the explanation of the latter being that the disease had already exhausted some of its virulence.

In those cases which involved the posterior urethra the results were not so good, but this may be due to having used the remedy in too weak solution. Judging, however, from the rapid improvement of these cases under the use of potassium permanganate we may fairly say that the latter is the better agent for irrigations, while mercurol is superior for injections. It would seem, however, that an unirritating remedy which has cured patients of gonorrhea in a period averaging less than four weeks is one that is not to be despised, remembering that the length of treatment in the hands of

good physicians averages six weeks before a complete cure is effected." (*Ther. Gaz.*, Vol. XXIII, p. 732).

Dr. Ferd. C. Valentine of New York City reports "A Case of Acute Gonorrhea Treated by Mercurol Irrigations." After enumerating a number of cases he concludes:

"In all these cases the discharges have been examined from time to time for the gonococcus, and it was surprising in how short a time they were found to disappear. The treatment has been attended by very few complications. It might be wise to warn our professional brethren against the substitution of bichlorid of mercury for mercurol, as I have been led to believe, from the pain following the ingestion from prescriptions put up by outside pharmacists, that this mistake has been occasionally made." (*Phila. Med. Journ.*, Vol. 5, p. 1147).

Methyl Salicylate (Synthetical Oil of Wintergreen) is still a favorite agent with many observers. Its successful results in rheumatic affections still continue to be reported, and yet again disappointment is not lacking from other quarters. Its most satisfactory field of usefulness appears to be that of an alternate with other well-known remedies applicable to this affection.

Dr. Edmund Rottenbiller of Trencsén, Austria-Hungary, reports on the use of this agent in 122 cases of acute rheumatism. He made use of the natural oil of wintergreen, but takes pains to state that he is not prejudiced at all against the synthetic product. He found no difficulty in getting all the patients to take this agent, and none of the disagreeable symptoms which usually follow the administration of the salicylates were noted. (*Klin.-Therap. Wochensch.*, Vol. VII, p. 582).

Reports continue to be made of the successful use of this agent in the treatment of orchitis.

The late Dr. B. Pillsbury of Middletown, N. Y., reported the following case of poisoning by this agent:

"I report this case since I find, among such records as I have examined, but one case of poisoning by oil of wintergreen, that one ending in recovery. Gilbert G——, a middle-aged farmer, took by mistake for whiskey two ounces of oil of wintergreen at 4 P. M. He went about his work, but in two hours began to have a copious diarrhœa, which continued constantly until his death. His daughter, with rare good judgment, gave him mustard as an emetic, the whites of a dozen raw eggs, milk, and very little water. It was not until

near 9 P. M. that a doctor arrived. He found the patient sweating prodigiously, feeling as if on fire inside; pulse 100, not intermittent; the skin was aflame. On the following day the skin was still intensely red, and the victim was harassed by a terrific itching. In the afternoon the pulse was still non-intermittent, but running as fast as possible. The odor of oil of wintergreen was perceptible in the fecal evacuations. Death occurred from exhaustion forty-one hours after the wintergreen was taken. (N. Y. *Med. Record,* Vol. 58, p. 150).

Methylene Blue (Tetra-Methyl-Thionine Chloride)—the anilin derivative—still continues to be confused with Methyl Blue, due many times to thoughtlessness. A case in point is that of Dr. Willy Meyer of New York City who states in an article published by him (N. Y. *Medical Record,* Vol. 57, p. 705) that he made use of Methyl Blue in the preparation of the patient before Bottini's operation for the cure of prostatic hypertrophy, when he must have intended to refer to Methylene Blue. Attention is called to this matter by Dr. Charles Teubner of San Francisco, Cal., in the following note:

"Sir: In the MEDICAL RECORD for April 28, 1900, in Dr. Willy Meyer's article on "Bottini's Operation for the Cure of Prostatic Hypertrophy," he mentions his use of methyl blue in two- to three-grain doses three times daily, combined with quinine in eight-grain doses. He must mean methylene blue, which is used in cystitis, pyelitis, malaria, rheumatism, and carcinoma. Methyl blue, on the contrary, is never used internally, but is dusted on the throat in diphtheria in a two-per-cent. mixture with sugar powder.

Methylene blue with sodium hydrate is changed to a violet color; methyl blue with sodium hydrate (NaOH) is changed to a reddish-brown." (N. Y. *Med. Record,* Vol. 57, page 927).

It would be quite out of the question to mention here all the references made concerning the use of Methylene Blue throughout the past year, therefore only a few of the prominent ones of special interest at this time will be enumerated.

Dr. Charles Moir of Louisville, Ky., reports on "Methylene Blue as a Local Application in Diseases of the Mucous Membrane: with Report of Three Cases." These cases were purulent affections of the tonsils and nasal passage. (*Amer. Pract. and News,* Vol. XXVIII, p. 406).

Dr. Charles H. Lewis of the Columbus Hospital in New York

reports on the successful use of intrapleural injections of this agent for pleuritic effusion. He draws out 100 Cc. (about 3½ fluidounces) of the effusion and dissolves 1 gramme (15.4 grains) of Methylene Blue in it. This solution is then injected and proves to give far less pain than would be produced by an aqueous solution. (*La Sem. Médicale,* Vol. 20, p. 26).

Dr. Joseph Alan O'Neill of New York City has contributed an article on "The Prophylaxis and Treatment of Gonorrhea by Methylene Blue." His warning may be of service to some observers:

"I have seen troublesome gastric symptoms follow the administration of the methylene blue of the shops, but with the following formula put up for me in elastic capsules I have had uniformly satisfactory results: ℞ Methylene blue, gr. i.; oil of nutmeg, gtt. i.; oil of sandalwood, gtt. ii. I never continue the use of the above formula for more than ten days without intermission, and while giving it I instruct the patient to drink freely of water." (N. Y. *Med. Record,* Vol. 57, p. 498).

Dr. Ch. Vallon and Wahl of Villejuif, France, have contributed an article on "Methylene Blue as a Hypnotic" (*Le Progrès Méd.,* Vol. X, third series, p. 257).

Dr. Bodoin has made successful use of this agent as a sedative in those forms of insanity which are associated with considerable mental excitement. His favorable experience was noted in 14 cases of quite a variety of forms of cerebral excitement. He injected from 65 to 97 milligrammes (1 to 1½ grains) into the gluteal muscles in each case which resulted in producing relief in a few hours, and lasted from one to four days.

Dr. H. R. Coston of Fayetteville, Tenn., reports "A Case of Inoperable Cancer of the Vagina Treated with Local Applications of Methyl Blue" (?) (*Ther. Gaz.,* Vol. XXIV, p. 232).

Some interesting experiments have been continued on the duration and rate of elimination of Methylene Blue, and at a meeting of the Société Médicale des Hôpitaux, Drs. Achard and Clerc reported their observations. (*La Presse Médicale,* Vol. 8, p. 53).

Dr. Heinrich Rosin of Berlin, Germany, in reporting on "A Method of Determining the Reducing Power of Urine, Blood and Other Fluids of the Body", recommends Methylene Blue as the indicator. (*Muench. Med. Wochensch.,* Vol. XLVI, p. 1456).

Dr. Charles E. Simon of Baltimore, Md., makes use of an "Eosinate of Methylene-Blue as a Blood-Stain", using it almost exclusively

in his laboratory work. He also finds it a convenient agent in the study of the various exudates, such as gonorrhea discharges and the like. (*Maryland Med. Journ.*, Vol. XLIII, p. 197).

Naphthalan (Naftalan)—the proprietary article made by dissolving 2.5 to 4 per cent. of anhydrous soap in purified petroleum naphtha—continues to be quite largely used by the dermatologists. A formula has been recommended of equal parts of Naphthalan, Lanolin, Zinc Oxide and Boric Acid. Dr. F. Gernsheim of Vienna, Austria, reports that its successful use is by no means universal but that the best results may be expected in the treatment of bedsores and acute exanthemata. (*Therap. Monats.*, Vol. XIV, p. 277).

Dr. P. G. Unna of Hamburg, Germany, has gone over with some care the field of usefulness of this agent in skin affections, and reports that in his opinion all deep-seated chronic lesions are not benefited, but that whenever an excessive irritation calls for a sedative it is of some use. (*Monats. für Prak. Dermatol.*, Vol. XXX, p. 321).

Dr. Josef Grünfeld of Vienna, Austria, reports very favorably on the use of this agent in the various forms and stages of eczema, in an article he published on "The Therapeutic Uses of Naftalan." His success was equally good in four cases of herpes zoster and in three cases of hyperidrosis of the feet with fissures. (*The Therapist*, Vol. X, p. 44).

Naphtalin (Naphthalene)—one of the hydrocarbons obtained from coal-tar—has received somewhat less attention in the current medical literature during the past year.

Apparently the only prominent observer who makes a report is Dr. Agostino Borini of Turin, Italy, who has made use of it as a vermifuge, and enumerates certain precautions to follow. (*Gaz. degli Osped. e delle Cliniche*, Vol. XXI, p. 52).

Nirvanin (Di-Ethyl-Glycocyl-Para-Amido-Ortho-Oxy-Benzoic Acid-Methyl-Ester-Hydrochloride)—one of the more recent substitutes for cocaine—has received considerable attention during the past year, and many comments will be found throughout the current literature. It will therefore only be profitable here to enumerate a few of the prominent ones.

Dr. Braquehaye has made a study of this new local anæsthetic in his surgical practice. He calls attention to the fact that no more than 49 milligrammes ($\frac{3}{4}$ of a grain) should be used at one time. The cases in which he has used it successfully include those of cysts,

fatty tumors, different forms of neuromata, epitheliomata, hernias and in dental surgery. His use also extended to operations on the eye and the bladder, and he would conclude that stronger solutions and larger doses than cocaine should be used, as its toxicity and anæsthetic properties are much less, but by gradually increasing the dose the same anæsthetic effects can be produced with far greater safety. (*Bull. Gén. Thérap. Méd.*, Vol. 138, p. 587).

Dr. F. C. Floeckinger of La Grange, Texas, has experimented with this agent with similar results. He tabulates 24 cases. (*New Yorker Med. Monats.*, Vol. XII, p. 343).

Dr. Charles A. Elsberg of New York City has written on "The Anæsthetic Properties of Nirvanin. A Contribution to the Study of the Infiltration Method of Local Anæsthesia." He concludes as follows:

"1. Nirvanin has distinct and valuable anæsthetic properties when injected into the tissues according to the infiltration method.

2. Nirvanin is ten times less poisonous than cocaine, and more than three times less poisonous than eucaine.

3. It has distinct antiseptic properties; a solution of one per cent. or more can be kept as a stock solution and will remain sterile.

4. It is a stable compound and can be boiled a number of times without diminishing to any degree its anæsthetic properties." (*N. Y. Med. Journ.*, Vol. LXXI, p. 47).

From a pharmacological study of Nirvanin, it would seem to be not altogether a harmless agent, and therefore the question of dose must be more carefully considered than some are apt to appreciate.

Nosophen (Tetra-Iodo-Phenol-Phthalein)—the Iodoform substitute—is still being prominently brought before the profession by the energetic promoters of this agent. Some surgeons make use of it as a routine practice and therefore little special comment would be expected from them. It would therefore be quite out of place to attempt to enumerate such allusions, so only the following observer's studies will be mentioned here. Dr. Edwin Klebs of Chicago, Ills., in writing on "Studies on Internal Antisepsis" speaks very favorably of both Nosophen and Antinosin. (*N. Y. Med. Journ.*, Vol. LXXI, p. 217).

Orexin (Phenyl-Di-Hydro-Quin-Azoline)—the appetite promoter and stomachic—is still quite a prominent agent in the hands of the profession. The Tannate of Orexin appears to have met with considerable success. The few observers who have already re-

ported on this form state that it has the advantage over other preparations of Orexin in that it produces no burning sensation in the stomach, and contrary to expectation no constipating effect is produced.

Orthoform (Methyl Ester of π-Amido-*m*-Oxy-Benzoic Acid)—the synthetic local anæsthetic constituted like cocaine—has lost none of its prominence during the past year.

Dr. August Luxenburger of Munich, Bavaria, reports on his "Clinical and Experimental Experience with Orthoform", and concludes that whereas it cannot be classed as true antiseptic it is surely a harmless and most valuable anesthetic. He used it in the form of an ointment and in fine powder—dusted on at times to extremely irritating, granulating surfaces—with the result that within a period of five minutes complete anæsthesia is established and lasts not only hours but in some cases days, depending upon conditions. (*Muench. Med. Wochensch.*, Vol. XLVII, p. 48).

Dr. Bardet reported at a meeting of the Paris Therapeutical Society on February 7th last the results of his experience in comparing the action of Orthoform with that of such other local anæsthetics as cocaine and nirvanin, with advantages in favor of the former. He found the following formula of much value in the case of painful nipples and in other cases where there was no superficial lesion:

Orthoform	5 grammes	(77.2 grains)
Ether..sufficient to dissolve		
Oil of Sweet Almond.....20	"	(308.6 ")

He made the interesting observation that if Orthoform be combined with iodoform the disagreeable odor of the latter was much decreased. He attempted to establish a proportion for such a decrease and approximates that if equal parts of Orthoform and iodoform be taken three-quarters of the disagreeable odor of the latter is eliminated. He advises the following ointment for relieving the pain in ulcerated hemorrhoids:

Zinc Oxide.....20	grammes	(308.6 grains)
Oil of Sweet Almond....20	"	(308.6 ")
Simple Cerate.....20	"	(308.6 ")
Balsam of Peru	x drops	
Orthoform 10	grammes	(154.3 ")

(*Rev. de Thérap.*, Vol. LXVII, p. 117).

Dr. Oui of Lille, France, has had a similar experience in the use of this agent in cracked nipples. He has made use of it both in the form of a paste and in alcoholic solution, producing satisfactory results, but he has a preference for a saturated alcoholic solution placed on a compress which he directs to remain for at least fifteen minutes. (*Gaz. hebdom. de Médicine et de Chirurg.*, Vol. 47, p. 521).

Other observers bear out Dr. Bardet's results, including Dr. Manquat who speaks of its usefulness in dentistry. It very much diminished the pain when extracting a tooth, and in the operation of destroying the pulp the caustic action produced by arsenic is much lessened by combining it with Orthoform. The following formula is recommended:

Orthoform.	5 grammes	(77.2 grains)
Arsenous Acid....	5 "	(77.2 ")
Alcohol 150	Cc.	(about 5 fluidounces)
Water. 150	"	(" 5 ")

More than one observer has made use of this agent hypodermically in the treatment of syphilides, using the following formula given by Dr. Danlos of Paris, France:

Vaselin. 1	Cc.	(16.2 minims)
Mild Mercurous Chloride..0.05	gramme	($\frac{4}{5}$ of a grain)
Orthoform. 8.00	"	(123.5 grains)

(*La Riforma Medica,* Vol. IV, p. 443).

Dr. Frank H. Murdoch of Pittsburg, Pa., in writing on the topic "The Diagnosis of Gastric Ulcer with Report of Cases", states: "A most important point to be remembered is the fact that the pain of gastric ulcer, at least after the patient has been put upon a proper diet, is promptly relieved by orthoform." (*Phila. Med. Journ.,* Vol. 5, p. 298).

Dr. G. E. Decker of Davenport, Iowa, reports on "Dermatitis Following the Use of Orthoform." He states that:

"During the last year and a half the writer has used orthoform as a dressing in minor injuries with results that justified all the statements made for it as an analgetic and antiseptic powder, except in two cases, which should be reported. The conditions in both these cases were identical, and, as no antiseptic but mercuric chloride was used, it seems clear that the orthoform was to blame." (*N. Y. Med. Journ.,* Vol. LXX, p. 781).

Noting Dr. Decker's two exceptional cases of unpleasant effects from the use of this agent, Dr. H. H. Wilson of Clayville, N. Y., reports one exception to his invariably good results with this agent. (*N. Y. Med. Journ.*, Vol. LXX, p. 976).

Dr. Wunderlich of Neudorf, Austria-Hungary, in reporting on "The Employment of Orthoform", speaks of 4 cases in which disagreeable local results followed the use of an ointment containing this agent, whereas when given in the form of a powder no such effects were produced. (*Muench. Med. Wochensch.*, Vol. XLVI, p. 1298).

Dr. E. Vogt has made use of this agent with much success in the treatment of herpes zoster with only exceptional instances in which unpleasant results followed. He advises the simple dusting on of the dry powder as far preferable to the use of ointments or even solutions. (*Rev. de Thérap. Méd.-Chirurg.*, Vol. 66, p. 829).

Dr. C. R. Gardner of Northampton, Mass., propounds the query "Is Orthoform Always Safe in Keratitis?" He treated a case of malignant ulcer of the cornea by using the following ointment:

Orthoform (new).....	200 milligrammes	(3 grains)
Iodoform.	400 "	(6 ")
Cosmoline	about 4 grammes	(1 drachm)

This produced infiltration and extension of the trouble. After discontinuance of its use a satisfactory result followed. (*Ophthalmic Record*, Vol. VIII, p. 570).

It has been reported from some quarters that chloral and Orthoform when brought together exhibit increased hypnotic properties, but it is not yet confirmed by sufficiently extended clinical experience.

Oxycamphor (Oxaphor)—obtained by chemically replacing one atom of hydrogen for the radical HO—alluded to here last year but under the head of camphor, has received more attention during the past year. The formulas recommended during the past year have differed only slightly from the one given here last year.

Dr. Franz Meyer of Berlin, Germany, reports on its use in thirty-four cases of dyspnœa, depending upon bronchial and pulmonary affections, and classes it with heroin in diminishing the excitability of the respiratory centre. His results varied and in such a way that he could not decide that they bore any definite relation to the cause of the dyspnœa. (*Deut. Aertze-Zeitung* for 1900, p. 100).

Dr. Hans Neumayer of Munich, Bavaria, has obtained similar results with Oxycamphor in the treatment of the dyspnœa accompanying cardiac and pulmonary affections. He recommends that it be given on an empty stomach in a large quantity of water. (*Muench. Med. Wochensch.*, Vol. XLVII, p. 349). Unfortunately the price of this combination is still excessive.

Paraldehyde (officinal) is now of such general use in the profession that little comment is called for. It may be worth while mentioning here for the sake of reference that Dr. Cosimo Noto of New Orleans, La., has brought it into new relations by publishing his views "On the Association of Paraldehyde with Chloroform. A New Contribution to the Study of Mixed Anæsthesia." (*New Orleans Med. and Surg. Journ.*, Vol. LII, p. 495). This compound has been alluded to previously under the head of Anæsthesia.

Peronin (Hydrochlorate of the Benzylic Ether of Morphine)—the proposed substitute for morphine—has been little commented upon during the past year although it is evidently still in use.

Petrosulfol is the name given to a new combination whose composition and preparation has not yet been definitely described except that it is like ichthyol and, as will be noted from its composition, contains sulphur. It has been used and recommended by Dr. S. Ehrmann of Vienna, Austria, who writes "On Petrosulfol, a new Bituminous Preparation, in the Treatment of Skin Diseases." He reports that his cases have reached the number of 500, on which he bases his favorable results. In treating an eczema he uses an ointment of varying composition; in the treatment of sweaty hands and feet, dusted on in the form of a powder. (*Wien. klin. Rundschau*, Vol. XIV, p. 355).

Pharmacopœias of the different nations are becoming, greatly to the credit of all, far more interesting works of authority than heretofore. The Pharmacopœia of the United States has received an increased interest during the past year, chiefly for the reason that the Decennial Convention for its revision has already met (May 2nd, 1900) and promulgated the principles on which the edition of 1900 is to be revised. The general principles adopted were about as follows: First in relation to the scope, "The Committee of Revision is authorized to admit into the Pharmacopœia any product of nature of known origin; also any synthetized product of definite composition which is in common use by the medical profession, the identity, purity or strength of which can be determined. No

compound or mixture shall be introduced if the composition or mode of manufacture thereof be kept secret, or if it be controlled by unlimited proprietary or patent rights." Owing to the very exacting food and chemical laws in some of the States in which the Pharmacopœia is relied upon as an official standard, the Committee was directed to exclude from the Pharmacopœia all articles which are strictly of a chemical nature and which are not used medicinally.

In relation to the question of Doses, the following principle was adopted: "For each pharmacopœial article (drug, chemical or preparation) which is used or likely to be used internally or hypodermically, the Committee is instructed to state the average approximate (but neither a minimum nor a maximum) dose for adults, and, where deemed advisable, also for children. It is to be distinctly understood that neither this Convention nor the Committee of Revision created by it intends to have these doses regarded as obligatory on the physician or forbidding him to exceed them whenever in his judgment this seems advisable. The Committee is directed to make a distinct declaration to this effect in some prominent place in the new Pharmacopœia." In regard to Nomenclature, "It is recommended that changes in the titles of articles at present official be made only for the purpose of insuring greater accuracy, or safety in dispensing. In the case of newly admitted articles, it is recommended that such titles be chosen as are in harmony with general usage and convenient for prescribing; but in the case of chemicals of a definite composition a scientific name should be given at least as a synonym."

In relation to Assay Processes, "The Committee is instructed to append assay processes to as many of the potent drugs and preparations made therefrom as may be found possible, provided that the processes of assay are reasonably simple both as to methods and apparatus required and lead to fairly uniform results in different hands. As regards the products of such assays, tests of identity and purity should be added whenever feasible. Physiological tests for determining strength should not be introduced by the Committee." An effort was made to introduce the Serums into the new Pharmacopœia but after some discussion which brought out the fact that there are yet no reliable tests they were excluded.

In relation to the purity and strength of the Pharmacopœia articles, "The Committee is instructed to revise as carefully as possible the limits of purity and strength of the pharmacopœial chemi-

cals and preparations for which limiting tests are given. While no concession should be made towards a diminution of medicinal value, allowance should be made for unavoidable, innocuous impurities or variations due to the particular source or mode of preparation, or to the keeping qualities of the several articles. In the case of natural products, the limits of admissible impurities should be placed high enough to exclude any that would not be accepted by other countries.

Regarding the strength of diluted acids, tinctures and galenical preparations in general, it is recommended that the Committee keep in view the desirability of at least a gradual approach upon mutual concessions towards uniformity with similar preparations of other Pharmacopœias, particularly in the case of potent remedies which are in general use among civilized nations."

In relation to General Formulæ, "It is recommended that general formulæ be introduced, as far as the particular nature of the several drugs will permit, for fluid extracts, tinctures and such other preparations as are made by identical processes, and that the general formulæ to be followed in each case be merely indicated by reference."

"The Committee is instructed to retain the metric system of weights and measures adopted in the Seventh Decennial Revision."

The Committee is authorized to prepare a supplement to the Pharmacopœia whenever it believes such action advisable.

It is hoped that an increased interest may develop, if it does not already exist, in the minds of medical practitioners from the interesting special article on the relations of pharmacy to the medical profession which was published by the *Journal of the American Medical Association,* beginning on page 986 of Vol. XXXIV. As is there stated this series of articles was written with the design of correcting abuses from advertising and from patronizing pharmaceutical specialties, and is well worth the careful attention of every practitioner who would aim at a high standard. For the convenience of those who would look up these articles, it might be of service to mention here that the second part occurs on page 1049, the third on page 1114, the fourth on page 1178, the fifth on page 1327 and the sixth on page 1405.

The British Pharmacopœia has not yet completed the full scope of its last Revision, for the Indian and Colonial Addendum to the 1898 edition has not yet been accomplished as further communica-

tions are being received from the different Colonies, including Canada. It was to be hoped that the final draft would be presented to the General Council at its November meeting so that the Addendum might be authorized for use by the end of this year. This Addendum will be an interesting index of the possibility of the nearer accomplishment of the long looked-for International Pharmacopœia, for the British Colonies are so widely separated geographically that it must include climatic and other interests to a greater extent than with other nations. If they can establish a degree of uniformity, particularly in the more potent remedies, it will be a great step forward to a universal Standard.

The Canadians are alive to the importance of uniformity in standards by reason of the fact that their proximity to the border of the United States brings into confusion the standards of the United States and Great Britain. The *Canadian Pharmaceutical Journal* has called attention to the fact that persons who travel from Canada to the United States and vice-versa find it quite embarrassing. "Accustomed in one country to have preparations of a certain strength, they find in the other that they are either very much stronger or weaker than those which they are accustomed to use at home." For instance the strength of Tincture of Aconite by the British Pharmacopœia is 1 in 20, while that of the U. S. Pharmacopœia is 1 in 2.75. A like difference occurs in such preparations as the Tinctures of Belladonna, Indian Cannabis, Cantharides, Cimicifuga, Colchicum, Digitalis, Gelsemium, Hydrastis, Hyoscyamus, Opium, Strophanthus and others.

The Belgian Royal Academy of Medicine has taken an increased interest in this subject of an International Pharmacopœia by apparently addressing all the foreign countries in relation to at least an attempt to come nearer to an accomplishment of the objects intended, if not the actual result looked-for by some greater enthusiasts.

In revising the Belgian Pharmacopœia, which is now going on, it is stated that about one-third of the present official preparations are to be dropped as being useless. There are, of course, many additions, including the well-known prominent synthetical compounds.

It is now reported that the Fourth edition of the German Pharmacopœia will be in force on January 1st next. Mr. Erich Harnack of Halle, Prussian Saxony, has written an article on this new German Revision, and states that the new drugs already announced

are twenty-five in all. The Committee on Revision endeavored to avoid all patented medicines, but to allow those already official to remain. The most marked change in this Revision occurs in the description of the drugs, as the crude material is described as either in the cut or powder form and thus full descriptions of the entire plant are eliminated. Particular emphasis is laid upon the anatomical and microscopic tests of the plants. In a general way the tests are stricter and the standard of purity is greatly increased.

The new Austrian Pharmacopœia is rapidly progressing, but as yet no definite date is stated for its issue.

In some quarters of Italy the professions of Pharmacy and Medicine showed a tendency to become impatient as to the issue of their new Pharmacopœia, but the Commission found so many new remedies being offered for admission that they asked for more time to study up the claims of each.

The revision of the Mexican Pharmacopœia is being carried out in a similar manner to that of the United States, and a work of far greater merit than the previous one is confidently expected.

Greece is now looking forward to having an official Standard which she has never possessed. She has relied either upon the foreign Standards or upon a private Standard. Now however Dr. A. Damberghis, Professor of Pharmaceutical Chemistry in the University of Athens, has published a new Pharmacopœia which has been recognized by the Government as official.

Phenacetin (Para-Acet-Phenetidin) is still a most prominent antipyretic and analgesic agent, and is very largely used throughout the world. It being such a universal agent little special comment is to be found. However, owing to the lack of actual knowledge of its physiological action, Drs. Horatio C. Wood, Jr., and H. B. Wood, both of Philadelphia, Pa., have made a study of its physiological action. Their conclusions are as follows:

"1. The moderate dose of phenacetin is without any distinct action on any vital organ.

2. Large doses lessen reflexes by a direct action on the spinal cord.

3. Doses of 0.5 gm. per kilo. body weight (equivalent to a little less than one ounce for a 150-pound man) kill by arrest of respiration.

4. Doses even up to 0.5 gm. per kilo. had no distinct effect on the circulation." (*Univ. Med. Mag.*, Vol. XIII, p. 360).

Phenalgin (Ammonium Phenyl-Acetamide)—the new coal-tar derivative offered last year as an antipyretic and analgesic—has had practically no attention paid to it during the past year.

Phenocoll (Amido-Para-Acet-Phenetidin)—the antipyretic—is still largely used, but little direct comment is found in the medical literature of the past year.

Phenosol (Salicyl-Acetic Acid-Para-Phenetidin)—the new synthetic antipyretic compound of last year containing 57 per cent. Phenacetin and 43 per cent. of Salicylic Acid—has received practically no attention during the past year.

Phesin, the derivative of Phenacetin, has received no attention this year.

Piperazin (Di-Ethylene-Di-Amine) is still kept before the profession, and appears to be in favor in some quarters.

Dr. William Fearnley of Harrowgate, England, publishes the following note:

"In the spring of 1896 I published in the British Medical Journal a striking case of a gouty patient of mine who had attacks of acute gout every year or oftener whom I advised to take piperazin, and who to the time of his death some years after never had another attack of acute gout. Since then I have had other most striking experiences, for instance:

One of the most ubiquitous, active, and tireless men in Harrogate at this day is a gentleman well over 60, who owes his vigour and health to his habit of taking piperazin. I found him three years ago a great invalid, with a man in attendance upon him throughout every night relieving his wife and daughter who took day duty. About ten months ago I was called to see him, and found him in bed with gout in both feet. He observed my chagrin, and quickly told me it was his own fault—that he had been very well and very busy lately, and had neglected his piperazin.

Harrogate is justly famous as a resort of the gouty, its famous sulphur baths are unequalled. With these baths and the daily unloading of the colon by our sulphur water few cases fail to get complete relief during an ordinary visit; but in the worst cases, where the health is badly broken, or where the patient can spare only a week or ten days, the addition of piperazin to the treatment is invaluable.

In every instance where I come across a gouty patient I never lose the opportunity of impressing him with two facts, namely, that as

long as he lives he will daily generate gout products which will undermine his health if allowed to remain in his system, and that piperazin is a sure solvent of these products. The expense and the trouble of taking it are its only drawbacks, but I impress on the gouty that it is as necessary for them as their daily bread." (*Brit. Med. Journ.,* Vol. II for 1899, p. 1792).

The above note called out the following comment from Dr. Arthur P. Luff of Weymouth Street, London, W., England:

"With reference to the memorandum on this subject by Dr. William Fearnley in the BRITISH MEDICAL JOURNAL of December 30th, 1899, I desire to enter an emphatic protest against what I consider is an altogether erroneous view of the treatment of gout, namely, that the continuous taking of any drug for the remainder of life is either necessary or desirable for the prevention of gout. I will put on one side any special reference as to the value of piperazin in gout, about which I, in common with many others, have considerable doubt, as I prefer to limit myself to the main point, that for the treatment or prophylaxis of such a disease as gout it is, in my opinion, wrong and dangerous advice in connection with such a drug as piperazin, to 'impress on the gouty that it is as necessary for them as their daily bread'." (*Brit. Med. Journ.,* Vol. I for 1900, p. 48).

A combination of Piperazin and quinic acid has been introduced under the fancy name of "Sidonal". It is offered as a most efficient uric acid solvent. A sample has been sent to Dr. Blumenthal to make use of in his Clinic and thus determine its value. After a trial he reported at a meeting of the Berlin Society for Internal Medicine that his results showed that it had a marked effect in checking the formation of uric acid in daily doses of from 5 to 8 grammes (77.2 to 123.5 grains). The excretion of uric acid was diminished from 40 to 50 per cent., whereas the hippuric acid was increased. (*Med. Press,* Vol. LXIX, new series, p. 325).

Protargol (the silver compound consisting of 8.3 per cent. of Silver combined with Protein) has lost nothing of its prominence during the past year.

Mr. Sydney Stephenson of London, England, has written an article on "The Place of Protargol in Eye Work", in which he gives it preference over silver nitrate but does not class it as an ideal agent. (*The Edinburgh Med. Journ.,* Vol. VII, p. 256).

Dr. F. C. Hotz of Chicago, Ills., has published "A Few Observa-

tions on the Efficacy of Protargol in Pyogenic Affections of the Eye." He read his paper before the Section on Ophthalmology of the American Medical Association at its meeting in Atlantic City, N. J., in June last, and the discussion which it drew out is interesting. He concludes as follows:

"In summing up my experience I may say that protargol is undoubtedly a very valuable remedy in the treatment of pyogenic affections, but the results are largely governed by the strength of the solution and the frequency and mode of application. During the acute period of pyogenic inflammation the solution should be not less than 20 per cent., and applied at least twice in twenty-four hours; if no decided improvement is noticed, either the strength of the solution or the frequency of application should be increased. It is very essential that the protargol be brought in thorough contact with the affected tissues, and this is, I believe, best accomplished by means of a cotton swab, well saturated with the solution, firmly rubbed over the affected portion of the cornea and conjunctiva, especially the retrotarsal folds. On account of its non-irritating and non-caustic action it is unnecessary to wash the eyes with salt solution or to apply cold compresses after the treatment; nor is it necessary to evert the lids for the treatment of the tarsal and retrotarsal conjunctiva, an advantage greatly appreciated by patient and physician if the lids are much swollen and the eyes very sensitive." (*Journ. Amer. Med. Assoc.,* Vol. XXXV, p. 470).

Dr. J. Ruhemann of Berlin, Germany, has made "A Study of the Internal Administration of Protargol", and points out its marked advantages. In one prominent case of advanced carcinoma of the stomach he states it greatly relieved the symptoms. (*Deut. Med. Wochensch.,* Vol. XXV, Therap. Beilage, p. 66.)

Dr. Wm. L. Baum of Chicago, Ills., has written on "Protargol in Gonorrhea", in which he follows the method of Prof. A. Neisser of Breslau, Germany, with satisfactory results in fifty patients. (*Medicine,* Vol. V, p. 555).

Dr. John Moir of Edinburgh, Scotland, has written an article on "Protargol versus Nitrate of Silver" (*Med. Press and Circular,* Vol. LXIX, new series, p. 421).

Pyoktanin (Methyl-Violet)—the analin dye "pus destroyer"—is still made use of in purulent ophthalmia, gonorrhea and follicular tonsillitis. The most prominent observer reporting this year

is Dr. M. F. Coomes of Louisville, Ky., of the Editorial Staff of the *American Practitioner and News* (Vol. XXIX, p. 194).

Pyramidon (Di-Methyl-Amido-Antipyrin)—one of the new substitutes for Antipyrin, now of two years' standing—has received some attention during the past year.

Dr. Klein has written a "Contribution to the Study of Pyramidon", and claims that it is an efficient analgesic in cases of migraine in which antipyrin was quite intolerant. A dose of 600 milligrammes (about 9.8 grains) at once relieved the pain. The antipyretic dose he found to be from 200 to 300 milligrammes (about 3.0 to 4.5 grains), reducing the temperature 1½ to 2 degrees, holding it down for about four hours and producing a copious perspiration. (*Les Nouveaux Remèdes,* Vol. 16, p. 76).

Dr. Julius Pollak of Vienna, Austria, has written on this agent. (*Wien. klin. Wochensch.*, Vol. XIII, p. 60).

Dr. W. Pauli reports two cases of unfortunate symptoms produced after the administration of this agent.

Pyrantin (Para-Eth-Oxy-Phenyl-Succinimid)—the new antipyretic compound of two years ago—has been unheard of in the medical literature of the past year.

Pyrogallol (Pyrogallic Acid) although still much in use, particularly in a chemical way, has received no prominent attention in the current medical literature of the year.

Pyrosal—the new synthetic antipyretic compound of last year containing 50 per cent. of Antipyrin, 36 per cent. Salicylic Acid and 14 per cent. of Acetic Acid—has received practically no attention during the past year.

Resorcin (officinal) continues to be a prominent agent and no doubt will remain so. Only a few of the many comments made throughout the past year can be referred to here.

Dr. James E. Blomfield of Sevenoaks, England, first felt induced to record the following short experience as it bears on the question of local infection of wounds in removing malignant growths:

"In the year 1891 a patient presented himself with a typical epithelioma of the lower lip. This was removed in a London hospital in May of that year. In June, 1892, the growth recurred, but I was struck with the fact that it did not originate in the original linear scar, but about one-eighth of an inch off. This I removed with the usual V incision. In September of the same year there was a second recurrence, but I do not recollect its exact relation to

the original scar. This I removed again, and remembering the action of resorcin on rodent ulcer, I put some of the powder into the wound. The result was that there was no immediate union, but delayed healing from a ragged ulcer with a better result than I anticipated. Since that date my patient has had no recurrence, and the cicatrix in the lip causes him no trouble.

There can be no doubt as to the value of resorcin in rodent ulcer. I have lately had a typical case, which was cured in five or six weeks by rubbing in the powder every night after removing the crusted covering and ceasing the application when the reaction was excessive." (*Brit. Med. Journ.*, Vol. I for 1900, p. 1340).

Dr. Léopold Chauveau of Paris, France, recommends the following solution to be used three or four times daily for the nasal obstruction noticed in the new born infant:

Resorcin.	1 gramme (15.4 grains)
Vaselin.	40 grammes (about 1½ ounces)

(*Gaz. hebdom. de Méd. et de Chirurg.*, Vol. 47, p. 325).

Prof. E. Besnier of France recommends the following formula in the treatment of acne vulgaris:

Resorcin.	3 to 5 grammes	(46.3 to 77.2 grains)	
Powd. Starch.	5 "	(77.2 "	)
Zinc Oxide.	5 "	(77.2 "	)
Vaselin	15 "	(about 4 drachms	)

This is applied in the evening and can be readily removed in the morning by the use of a little olive oil and tar water. (*Journ. de Méd. de Paris,* Vol. XI, second series, p. 451).

A condensation product of Resorcin with Chlor-Methyl-Salicyl-Aldehyde has been given the name of "Resoldol". Dr. Hermann of Charlottenburg, Germany, recommends it favorably in the treatment of catarrhal affections and ulcerations throughout the intestinal tract. He has made use of doses varying from 3 to 5 grammes (46.3 to 77.2 grains). (*Therap. Monats.*, Vol. XIV, p. 199).

Roentgen Rays (X-Rays) and the discussion throughout their wide field of application has not lost any interest during the past year. In fact the developments have been so astonishing and rapid in some quarters that it is difficult to follow them up. It will be quite out of the question to enumerate here all the comments of the past year, therefore it will only be advisable to do little else than

classify the prominent references so that those who are particularly interested in this line of study may make use of these expressions of opinion.

A short general run over the ground for the past year may be obtained by referring to an article written by Dr. Eduard Schiff of Vienna, Austria, on "The Therapeutical Value of the X-Rays in Medicine." (*Brit. Med. Journ.,* Vol. I for 1900, p. 1082).

A very complete symposium on the work accomplished up to date has been given in a special number of *The Philadelphia Medical Journal* (Vol. 5, pages 1 to 76 inclusive). Every one interested in this topic should possess this particular copy.

There have been many improvements in the form of apparatus, and probably all those who are particularly interested know where to find such.

Prof. John Trowbridge of Harvard University has continued to work with these Rays and in his latest investigations so manages the electric current used in Ray examinations as to obtain a greatly improved photograph of the parts of the body, particularly the bones. Prof. Trowbridge has contributed an article on the "Latest Developments with the X-Rays" in the *Popular Science Monthly* (Vol. LVI, p. 659).

Dr. Julius Wolff of Berlin, Germany, has published an interesting article on "The Demonstration of Bone Structure by Roentgen-Ray Pictures." (*Berlin. klin. Wochensch.,* Vol. XXXVII, pages 381 and 414).

Dr. Francis H. Williams of Boston, Mass., is still interested in this subject and describes now how these Rays can be made use of in the examinations of the abdomen as a supplement to the usual methods. (*Boston Med. and Surg. Journ.,* Vol. CXLII, p. 23).

Dr. Charles Lester Leonard of Philadelphia. Pa., has written on the "Recent Progress in the Roentgen-Ray Methods of Diagnosis." (*Journ. Amer. Med. Assoc.,* Vol. XXXV, p. 147).

Dr. J. Rudis-Jicinsky of Cedar Rapids, Iowa, has contributed some "Notes Upon X-Rays and Injuries of the Head." (*N. Y. Med. Journ.,* Vol. LXX, p. 801).

Dr. George H. Rodman of East Sheen, England, has published an account of two cases as "An Example of the Use of the X-Rays in the Examination of Enlarged Metatarso-Phalangeal Joints", giving two clear illustrations (*Brit. Med. Journ.,* Vol. I for 1900, p. 1083).

Dr. Th. Tuffier, Surgeon to the Hôpital Lariboisière, communi-

cated an article to the Paris Surgical Society on December 13th last on the reduction of fractures by the aid of the Radiograph, particularly in relation to the arm and the region of the shoulder. (*La Presse Méd.,* Vol. 8, first half, p. 17).

Dr. E. A. Codman of Boston, Mass., read a paper before the meeting of the Boston Society for Medical Improvement on March 19th last on "A Study of the X-Ray Plates of One Hundred and Forty Cases of Fracture of the Lower End of the Radius." (*Boston Med. and Surg. Journ.,* Vol. CXLIII, p. 305).

At a meeting of the Section of Pathology of the Royal Academy of Medicine in Ireland on February 23d last, "Mr. George J. Goldie demonstrated the usefulness of the X-Rays in dental cases where other methods of diagnosis had failed." (London *Lancet,* Vol. I for 1900, p. 939).

Mr. Prosper H. Marsden of Liverpool, England, has recently written an article for the special purpose of interesting the dental surgeons in the use of these Rays in their profession, for he realizes how little has been done with them in that line of practice. (*Pharm. Journ.,* Vol. X, Fourth Series, p. 531).

Dr. Guido Holzknecht of Vienna, Austria, has made quite a study of the normal relations of the thoracic aorta by means of these Rays. He publishes his results in the form of an article illustrated with 11 satisfactory pictures. (*Wien. klin. Wochensch.,* Vol. XIII, p. 225). He then followed this up by studying the pathological relations in the same region and contributed his results in a second article to be found in the *Wien. klin. Wochensch.,* (Vol. XIII, p. 573).

In diagnosing aneurisms of the aorta, Dr. Gisbert Kirchgaesser of Bonn, Rhenish Prussia, points out after a considerable study that it is not altogether desirable to rely too much on the Roentgen Rays. (*Muench. Med. Wochensch.,* Vol. XLVII, p. 646).

In the same line of observation Arthur W. Goodspeed, Ph.D. of the University of Pennsylvania calls attention to the fact that experience is quite an essential factor in order to make use of satisfactory radiography. (*Univ. Med. Mag.,* Vol. XIII, p. 346).

Dr. Charles Lester Leonard of Philadelphia, Pa., calls attention to "The Limitations and Value of Fluoroscopic Examinations." (*N. Y. Med. Journ.,* Vol. LXXI, p. 17).

Dr. Carl Beck of New York City in emphasizing the great value of these Rays, particularly in relation to fractures, calls attention

to "a grave possible error" in an article illustrated with four distinctive cuts. (*N. Y. Med. Journ.*, Vol. LXXI, p. 5).

Later Dr. Beck writes again and calls attention to the "Errors Caused by the False Interpretation of the Roentgen Rays, and Their Medico-Legal Aspects." (N. Y. *Med. Record,* Vol. 58, p. 281).

In a recent discussion which took place in the Paris Surgical Society, Prof. Lucas-Championnière of Paris, France, pointed out the unreliability of the X-Rays in cases of fracture, particularly when the examination is undertaken by ignorant and incapable men. (*Bull. et Mém. de la Soc. de Chirurg.*, Vol. XXV, p. 978).

Dr. Edward A. Tracy of South Boston, Mass., calls attention to "The Fallacies of X-Ray Pictures." (*Phila. Med. Journ.*, Vol. 5, p. 134).

The valuable "Report of the Committee of the American Surgical Association on the Medico-Legal Relations of the X-Rays" was read by Dr. J. William White of Philadelphia, Pa., at the meeting in May last. (*Amer. Journ. Med. Sciences,* Vol. CXX, p. 7).

Drs. T. Mellor Tyson and William S. Newcomet of Philadelphia, Pa., call attention to the "Practical Use of Radiograph and Fluoroscope in Diseases of the Lungs." (*Journ. Amer. Med. Assoc.*, Vol. XXXIV, p. 67).

Dr. Francis H. Williams of Boston, Mass., contributes an article on "The Value of X-Ray Examinations in the Less Frequent Diseases of the Chest Illustrated by Their Use in Those Cases where Aneurism is Present or Suspected." (*Boston Med. and Surg. Journ.*, Vol. CXLII, p. 85).

Dr. Williams also contributes a "Note on X-Ray Examinations of the Lungs." (*Boston Med. and Surg. Journ.*, Vol. CXLII, p. 555). Again he has something to say on "X-Ray Examinations for Life Insurance Companies." (*Boston Med. and Surg. Journ.*, Vol. CXLI, p. 659).

Dr. Carl Beck of New York City contributed an article to the New York County Medical Association at its meeting on October 16th last "On the Detection of Calculi in the Liver and Gall Bladder." (*N. Y. Med. Journ.*, Vol. LXXI, p. 73).

Dr. Charles Lester Leonard of Philadelphia, Pa., contributes an article on "The Technique of the Positive and Negative Diagnosis of Ureteral and Renal Calculi by the Aid of the Roentgen Rays" relating fifty-nine cases. (*Annals of Surgery,* Vol. XXXI, p. 163).

Dr. John MacIntyre of Glasgow, Scotland, has made a special

study of these Rays in diseases of the nose, throat and surrounding organs. In making an urgent plea for the systematic use of these Rays as a means of diagnosing, he emphasizes the fact that they can be only used as an aid to such diagnosis even though in some cases confirmation could not be attained otherwise than by their use. He believes that not only fractures and other injuries of the bony parts could be thus readily detected, but the position of any foreign bodies throughout the nasal cavities accurately determined.

Dr. Victor Blum of Vienna, Austria, has put on record a case of his in which an œsophageal diverticulum was diagnosed successfully by means of the X-Rays. (*Wien. klin. Wochensch.,* Vol. XIII, p. 256).

Dr. Wm. Allen Pusey of Chicago, Ills., has made a study of the "Roentgen Rays in the Treatment of Skin Diseases and for the Removal of Hair." (*Chicago Med. Recorder,* Vol. XVIII, p. 279).

Dr. James Startin of England has done some successful work in the "Destruction of Superfluous Hair by the Roentgen Rays." (London *Lancet,* Vol. I for 1900, p. 654).

Dr. Neville Wood of Elvaston-place, London, S. W., England, has worked in the same line. (London *Lancet,* Vol. I for 1900, p. 231).

Dr. Robert Ernest Scholefield of Blackheath, London, S. E., England, has contributed an article on the "Treatment of Lupus by the X-Rays" with seven illustrative cuts. (*Brit. Med. Journ.,* Vol. I for 1900, p. 1083).

Drs. R. Hahn and Albers-Schönberg of Hamburg, Germany, have made a study of "The Treatment of Lupus and Skin Diseases by the X-Rays." (*Muench. Med. Wochensch.,* Vol. XLVII, p. 284).

Mr. J. F. Hall-Edwards of Birmingham, England, contributes a paper "On the Physiological and Therapeutic Effects of the Roentgen Rays; The Treatment of Lupus," giving two fine full-page plates. (*Edinburgh Med. Journ.,* Vol. VII new, p. 139).

The results of Prof. Finsen's observations have been followed up closely throughout the past year in most every part of the world. In this immediate neighborhood probably one of the first to have an apparatus built on the principle of Prof. Finsen's was Dr. George G. Hopkins of Brooklyn who exhibited a Finsen tube at the meeting of The Kings County Medical Association held on Tuesday evening November 14th last.

Dr. Stephen Mackenzie of London, England, paid a visit to the

Finsen Institute in Copenhagen, and after returning home prevailed upon the authorities in the London Hospital to fit up a department with all the necessary appliances. An account of his visit will be found in the *British Journal of Dermatology* (Vol. XI, p. 427).

Nearly every well-equipped modern hospital throughout the civilized nations has an X-Ray room, but few as yet have a room for Finsen's "Light Treatment."

The Dowager Empress of Russia became so much interested in this line of treatment that she founded an Institute in St. Petersburg.

Dr. L. Stembo of Wilna, Russia, speaks highly of the pain-soothing effect of the Roentgen Rays. He claims to have cured 21 out of 28 cases of severe neuralgia, usually after three sittings of from three to ten minutes in length. (*Die Therapie der Gegenwart,* Vol. 41, p. 250).

The controversy on the cause of X-Ray dermatitis has become quite active in some quarters, and Dr. Philip Mills Jones of San Francisco, Cal., propounds a few questions. (*Phila. Med. Journ.,* Vol. 5, p. 187).

Dr. Patrick Cassidy of Norwich, Conn., publishes a "Report of a Severe X-Ray Injury." (N. Y. *Med. Record,* Vol. 57, p. 180).

Dr. Thomas L. Butler of Louisville, Ky., makes "Some Remarks on X-Ray 'Burns' with Report of Cases Seen." (*Amer. Pract. and News,* Vol. XXIX, p. 368).

Dr. Walter B. Metcalf of Chicago, Ills., also reports on "X-Ray Burns." (*Phila. Med. Journ.,* Vol. 4, p. 1100).

Salipyrin (reported to be a true Salicylate of Antipyrin) is still receiving the attention of the profession, although little commented upon. It is chiefly used by the gynecologists.

Salol (Phenyl Salicylate)—officinal—has lost none of its prominence during the past year. On the contrary it has been pressed into notice in a somewhat new field.

Dr. Charles Begg of Bridge of Allan, Scotland, called attention to the use of Salol in small-pox as being most striking in his experience. (*Brit. Med. Journ.,* Vol. I for 1900, p. 16).

He then read a paper relating his clinical experience with Salol in the treatment of small-pox in China at the meeting of the Edinburgh Medico-Chirurgical Society on January 17th last. (*Brit. Med. Journ.,* Vol. I for 1900, p. 512).

Drs. John Biernacki and P. Napier Jones (who worked in Dagenham Hospital) have contributed an article in the same line as Dr. Beggs. Over a score of cases were observed and are now reported on.

"All but 8 of these, however, were greatly modified by vaccination, and, although they did well under salol, reference to them is omitted because such a result was almost certain apart from treatment. In one instance a patient complained of slight irritation, while in another the salol produced marked depression. The history of the 8 remaining cases is given in outline, only the salient facts being mentioned. For convenience in following the development of the rash the duration of the disease is generally calculated from the time of its appearance instead of from the day of onset." These observers conclude as follows: "On the whole, the statement is justified that salol affords a means of treating small-pox superior to the methods in vogue." (*Brit. Med. Journ.*, Vol. I for 1900, p. 1337).

Dr. Begg immediately acknowledged having read this testimony in a note expressing his satisfaction at a confirmation of his own observations as made in China. (*Brit. Med. Journ.*, Vol. II for 1900, p. 127).

Dr. W. E. Fothergill of Manchester, England, and Mr. John Penny have made use of petroleum with Salol in the treatment of infantile diarrhea, thus avoiding the use of opium and astringents. (*Med. Chronicle*, Vol. 3, p. 17).

Dr. Edward F. Nunez of Santiago, Cuba, contributes an article on "The Treatment of Yellow Fever by the Use of Potassium Bitartrate and Salol." (*Phila. Med. Journ.*, Vol. 4, p. 935).

Dr. Sluyts of Antwerp, Belgium, in carrying on his experimental researches has discovered Salol to be an excellent urinary antiseptic. (*Centralblatt für Chirurg.*, Vol. 27, p. 99).

At a meeting of the Central Medical Society of the North of France on November 10th last, Dr. Combemale reported a case of scarlatiniform eruption after the use of Salol. The eruption appeared on the day following the administration of only 1 gramme (15.4 grains) of Salol. (*Gaz. hebdom. de Méd. et de Chirurg.*, Vol. 47, p. 1126).

Salophen (Acetyl-Para-Amido-Salol) needs no additional testimony to bring it to any increased attention in the medical profession. It has become such a universal agent that little direct com-

ment is now to be found in the medical literature. A careful and impartial summary of all the clinical evidence up to the present will accord it the first place as an antirheumatic, antineuralgic and intestinal antiseptic in the hands of many practitioners.

Dr. Edward C. Hill of Denver, Colo., in "A Study of Salophen" speaks of it as above. He has made use of it in several hundred cases. (*Denver Medical Times,* Vol. XIX, p. 254).

In England, Dr. T. Poyntz Wright of London reiterates the experience of English practitioners in an article "On the Therapeutic Value of Salophen." He believes it to be a most efficient substitute for the salicylates. (*Med. Press and Circular,* Vol. LXIX, new series, p. 83).

Sanatogen (Sodium and the Casein Glycerino-Phosphate prepared from Milk Casein) although little commented upon throughout the year is undoubtedly used successfully in a great variety of affections, and has been given more attention during the past year than in the year previous.

Dr. Eduard Rybiczka of Vienna, Austria, has contributed his "Therapeutic Studies with Sanatogen", meeting with success almost universally. (*Wien. klin. Wochensch.,* Vol. XIII, p. 209).

Sanose (the albuminous preparation containing 80 per cent. Casein and 20 per cent. Albumose, which is not a chemical combination but rather a mechanical mixture), although little commented upon during the past year is undoubtedly largely used with satisfactory results.

Sapodermin is the name which has been given to an albuminate of mercury which has come to the front lately. It has not received much general attention as yet, but Dr. George J. Bucknall of San Francisco, Cal., has made use of it successfully in the treatment of parasitic and fungoid diseases. He describes it as follows:

"Sapodermin is a soap in which the bichloride of mercury is incorporated with triple refined stearin and glycerin. The bichloride is therefore changed into an albuminate of mercury, which is highly active as an antiseptic, destructive to all forms of parasites, fungoid and bacterial growths, yet leaving the skin in a soft, velvety, and pliable condition. There has been no absorption so far as I have been able to judge, and its action is so thorough that I consider it worthy of extensive employment." (*N. Y. Med. Journ.,* Vol. LXXI, p. 253).

Somatose—the tonic and nutrient—has lost little of its prominence during the past year. Of course enterprising manufacturers and their representatives are very energetic in keeping this agent before the profession, and therefore most practitioners are well supplied with an abundant evidence of its efficiency. It would thus be superfluous to repeat here what had been already repeated so many times, and the only article which is note-worthy, outside of what has been widely distributed by the above mentioned means, is one on "The Assimilation and Elimination of the Iron of Iron Somatose in the Normal Organism" by Dr. W. Nathan of Elberfield, Rhenish Prussia. He carried on a series of experiments with mice and his results are interesting reading. His article is illustrated with five cuts of the villi of the intestinal tract. (*Deut. Med. Wochensch.*, Vol. XXVI, p. 132).

Strontium, particularly in the form of the Bromide, still engages the attention of many practitioners. It has long been known that Potassium Bromide has been almost universally resorted to in the treatment of epilepsy, but it has also been recognized that as large doses were necessary a patient rarely escaped the danger of bromism. Therefore when Prof. J. V. Laborde, a French observer and others recommended the Strontium Bromide it was hailed with much satisfaction owing to the fact that as it was far better tolerated, the dose could be rapidly increased and the general condition of the patient was better maintained. As an additional illustration of the preference for this Bromide over and above what was given here last year, the experience of only one observer is of any particular value.

Dr. N. Cullinan of "Pontymister, Mon.," writes as follows:

"Various drugs are employed in the treatment of this disease and of them the most commonly used are the bromides in some form or other, each practitioner having his own particular formula. The one I find to act most surely and effectually is the bromide of strontium given in variable doses to suit the age and condition of the patient in combination with syrup of orange-peel and infusion of calumba, and if no irritability of the stomach exists I add 10 grains of borax to each dose. A good result is generally found to ensue in a short time. An aperient—a blue pill followed by a Seidlitz powder—acts beneficially. The bromide in this form is well borne by the stomach and may be continued for an indefinite period without affecting the mental condition or producing that intense depression

so often caused by the potassium salt. The dose I usually give is one drachm for an adult four times a day after a light meal and proportionate doses for children according to their age."

He then relates two illustrative cases and concludes as follows:

"Altogether I have treated 11 cases in this way with the drug and the results are satisfactory. The points which I consider to be of essential importance in the course of treatment of this affection are plain good food in moderate quantities, regular and sufficient exercise, total abstinence from alcoholic drinks, plenty of sleep, avoidance of mental worry or excitement—in fact, the leading by the patient of a consistent life.

My experience of the various bromides is that the preparation with strontium is far more effectual in the treatment of epilepsy than is that with potassium, sodium, or ammonium. Its sedative action is well marked, causing but slight, if any, disturbances of the gastric functions and appearing to act as a tonic to the nervous system generally. It does not impair the mind of the patient or produce anæmia; while, on the other hand, the external evidences of improved blood-supply are well marked. On the whole it tends to produce a healthier tone of mind and body. The addition to each dose of the salt of 10 grains of borax appears to act beneficially, but has the disadvantage, if continued for a time, of causing a low form of gastritis with flatulence which is very distressing to the patient. Otherwise I believe it to be a good adjunct in the treatment." (London *Lancet,* Vol. II for 1899, p. 958).

Sulphonal (Di-Ethyl-Sulphon-Di-Methyl-Methane) calls for no attention here to emphasize its usefulness. A few comments in relation to unfortunate results only will be mentioned.

Dr. Augustus H. Bampton of "Ilkley-in-Wharfdale," England, calls attention to the "Toxic Cumulative Effect of Sulphonal and Trional." (*Brit. Med. Journ.,* Vol. II for 1899, p. 1249).

Dr. R. Percy Smith of "Bethlem Royal Hospital", England, reports "A Case in which 300 Grains (about 19.5 grammes) of Sulphonal were taken in two doses." He states: "It is worthy of note that in this case the drug was not obtained in the form of a proprietary article, but in the form a standard British Pharmacopœia preparation without a prescription." (*Brit. Med. Journ.,* Vol. I for 1900, p. 136).

Drs. A. E. Taylor and J. Sailer have published an interesting case illustrating the same "rare condition resulting fatally, from

the habit of taking Sulphonal." A digest of the case will be found in the London *Lancet* (Vol. II for 1900, p. 269).

Dr. Amelia Zeigler of Portland, Oregon, publishes the "Report of a Case of Sulphonal Poisoning" in which as nearly as can be estimated 125 grains (about 8½ grammes) were taken at one dose. (*Med. Sentinel*, Vol. VIII, p. 161).

Tannalbin (a compound of Tannin and Albumin) is still kept prominently before the profession by the enterprising agents of this compound. Undoubtedly much is used with apparently good results.

Tannigen (Di-Acetyl-Tannin)—the odorless and tasteless form of Tannin, insoluble in water and acids but readily soluble in alkaline solutions—has called out few comments during the past year.

Dr. Karl Manasse of Wurtemburg, Germany, claims to have obtained excellent results from its use in the treatment of acute intestinal catarrh. He recites eighteen cases. (*Therap. Monats.*, Vol. XIV, p. 27).

Dr. Charles M. Clark of Chicago, Ills., relates his "Experience with Tannigen" in which he expresses his belief that it is worthy of a more extended investigation by the profession. (*Ther. Gaz.*, Vol. XXIV, p. 372).

Tannocol (the combination of equal parts of Tannin and Gelatin)—the new intestinal astringent mentioned here last year—has received practically no attention in the current medical literature of the year, except possibly repetitions of previous notes.

Tannoform (the condensation product of Tannin and Formaldehyde) is still prominently before the profession, but has called out little direct comment during the past year.

Tannopin (Hexa-Methylene-Tetramine-Tannin)—the condensation product containing 87 per cent. of Tannin and 13 per cent. of Urotropin (Urotropin-Tannin)—has not received much attention in the current literature of the past year.

Dr. Carl Tittel of Vienna, Austria, reports some excellent results in infantile intestinal affections, and considers it far superior to any other of the more recent astringents.

Dr. Eugen Doernberger of Munich, Bavaria, gives like testimony and states that the only disadvantage standing against it is its expensiveness. He takes pains to tabulate his successful cases. (*Muench. Med. Wochensch.*, Vol. XLVII, p. 464).

Terpinol (produced by the action of dilute sulphuric acid on Oil of Turpentine) is only mentioned here to call attention to the observations of Dr. F. G. Janowsky of Kiew, Russia, in relation to its marked efficiency in checking the hemorrhage in pulmonary tuberculosis. He administered it in doses of three drops at frequent intervals. If the hemorrhage is checked after a period of twelve hours the dose is reduced to two drops every two hours, or three drops every three hours. In his experience hemoptysis when due to congestion is not controlled by this agent (*Klin.-Therap. Wochensch.,* Vol. VII, p. 230).

Thiocol (Potassium Sulpho-Guaiacolate, containing 60 per cent. of Guaiacol) was a comparatively new compound when alluded to here last year. It has now received more attention, and reports of its use have been made from various quarters.

Dr. J. W. Frieser of Vienna, Austria, relates his experience in the treatment of pulmonary tuberculosis and catarrhal affections of the air passages. He admits that although sufficient time has not yet elapsed to show how much the improvement gained is due to this agent, he claims that surely a dose of from 1 to 1.5 grammes (15.4 to 23.2 grains) given three times daily increases the strength of the patient with extreme rapidity and without either upsetting the digestion or exhibiting other unpleasant symptoms, even when administered for a lengthy period. He prescribes it in the form of a solution in syrup of orange which goes by the proprietary name of "Sirolin" (*Therap. Monats.,* Vol. XIII, p. 651).

Dr. Fritz Oelberg of Vienna, Austria, not only agrees to the above observations but is led to believe that it is the most satisfactory agent yet offered for the treatment of pulmonary tuberculosis. His cases numbered twenty-eight, including children and adults. (*Wien. Medizin Presse,* Vol. XLI, p. 394).

Dr. John Moir of Edinburgh, Scotland, states that up to the present time he had had the opportunity of making use of this agent in nine cases of pulmonary tuberculosis with excellent results. All of his cases were among the poorer classes where they were surrounded by unhygienic influences, and therefore the improvement shown was very marked. (*The Therapist,* Vol. X, p. 87).

Dr. Ad. Fasano of Naples, Italy, reports very striking results from the use of this agent in tubercular laryngitis. He publishes his results in an article "On the Treatment of Tuberculosis of the Larynx." His cases were fourteen in all—11 secondary and 3 pri-

mary. The ulcers in all his cases healed in less than a month. He employed insufflations of a powder made according to the following formula:

Thiocol	0.10 to 0.15 gramme	(1½ to 2¼ grains)
Cocaine Hydrochlorate	0.40 "	(6½ ")
Boric Acid	1.00 "	(15.4 ")

In addition he administered small doses of the agent internally. (*Klin.-Therap. Wochensch.*, Vol. VII, p. 706).

Thiol (synthetic Ichthyol), although very largely used, has received little direct comment in the current literature of the year.

Thiosinamin (Allyl-Sulpho-Carbamide) has received practically no attention in the literature of the year past.

Thyroid Extract (Thyro-Iodin) has probably not absorbed quite so much attention during the past year as in the year previous, although it is still surely a very prominent agent before the medical profession.

Dr. Charles E. Hirsh of New York City in "A Clinical Contribution to Thyroid Therapy" states that: "Although not quite ten years have elapsed since the introduction of the thyroid gland as a therapeutic agent this treatment has been utilized in a large variety of diseases." He goes over the ground in an interesting way and calls attention to the fact that the conflicting testimony as to the value of this treatment is evidently due in large measure to the variation in the preparation employed. (*Med. News,* Vol. LXXVI, p. 294).

Since this time last year, Dr. Edwin Klebs of Chicago, Ills., has made a report to the Tuberculosis Commission in Munich, Bavaria, on the results of his trials and studies in the use of this Extract in the treatment of tuberculosis. A short digest will be found in the *Berlin. klin. Wochensch.* (Vol. XXXVI, p. 1100).

Dr. Max Porges of Marienbad, Bohemia, after a somewhat extended clinical experience, reports that although this Extract is often found of value, it is unsuitable in the treatment of those who are corpulent. (*Prager Med. Wochensch.*, Vol. XXV, p. 61).

Favorable reports seem to be increasing in regard to this Extract when given in the treatment of delayed union of fractures. Sufficient study has not yet been made in this line to draw any decided conclusions, but the testimony now increasing will undoubtedly enable surgeons to draw very definite conclusions later. Dr. E.

Potherat reported at a meeting of the Paris Surgical Society on November 29th last, two cases of imperfect consolidation of fractures treated and cured by the administration of Thyroidin. In some few of the cases this line of treatment completely failed, but in the majority it produced prompt and striking results. (*Bull. et Mém. de la Soc. de Chirurg. de Paris*, Vol. XXV, p. 896).

Dr. Francis W. Murray of New York City reports on "Thyroid Medication in the Treatment of Delayed Union of Fractures", in which he reviews the literature and reports a case. He acknowledges that the result was not completely satisfactory, but gradual improvement was noticed after beginning this form of treatment. He therefore gives considerable credit to the Extract, particularly as little sign of progress was being made before prescribing it. (*Annals of Surgery*, Vol. XXXI, first half, p. 695).

Dr. Richard R. Leeper of Dublin, Ireland, reports three "Cases Complicated with Mental Disorder Treated by Thyroid Extract." He concludes as follows:

"The administration of thyroid extract owes its remedial results to its direct stimulation of the cortex and the increased metabolism thereby induced among its elements. The rise of temperature is, however, not the most constant symptom of reaction. To the increased pulse-rate and quickened circulation must presumably be attributed most of the good effects of the treatment.

If conditions of mental exaltation and depression are due to alterations in the cerebral circulation, then in thyroid substance we possess a remedy capable of influencing mental symptoms in no small way. Its usefulness in melancholia has been widely proved, and its action in reducing blood pressure must not be lost sight of in this affection. With an increase of our knowledge of the functions and mode of action of the secretions of the ductless glands, will be found a solution to many of the problems of psychiatry." (*Brit. Med. Journ.*, Vol. I for 1900, p. 194).

Drs. William F. Drewry and J. M. Henderson of Petersburg, Va., have made a "Clinical Study of Thyroid Extract." Their cases were eighty-eight in number and were insane patients in the Central State Hospital at Petersburg. They were selected cases as fairly representing the whole number of inmates in the hospital, and included several types of insanity. They came to the conclusion that this Extract is very limited in its usefulness in any form of insanity. They would only recommend its being still further placed on trial

after every other rational line of treatment had failed. (*Virginia Med. Semi-Monthly,* Vol. V, p. 174).

Dr. A. Flourens of Bordeaux, France, has published a monograph on "Thyroid Medication", giving sixteen excellent reproductions from photographs.

Trional (Di-Ethyl-Sulphon-Methyl-Ethyl-Methane) continues to be pushed forward as a reliable substitute for sulphonal, and meets with some success from limited quarters. Several efficient formulas have been recommended for its administration, most of which contain oil of sweet almonds and some agreeable flavoring water. Poisoning cases are still being recorded but rarely result fatally.

Dr. Warren Coleman of New York City contributes an article on "Acute Trional Intoxication." (*Med. News,* Vol. LXXVII, p. 129).

Dr. Augustus H. Bampton of "Ilkley-in-Wharfdale," England, calls attention to the "Toxic Cumulative Effect of Sulphonal and Trional." (*Brit. Med. Journ.*, Vol. II for 1899, p. 1249).

Tropon (a substitute for natural albumin, made from two parts of albumin derived from a vegetable source and one part of albumin derived from an animal source) is still kept prominently before the profession by the enterprising manufacturers and agents. As it contains about 90 per cent. of pure albumin it is looked to as being of some value in the sick room when added to soups and other articles of diet.

Dr. A. Lichtenfeld of Berlin, Germany, has written an article "On Tropon" which may be interesting to those who would like to read his testimony in behalf of this agent. (*Berlin. klin. Wochensch.*, Vol. XXXVI, p. 918).

Tuberculin (Parataloid) is being pretty thoroughly discussed, and it is to be hoped with much good effect. Two editorials on the Tuberculin Test are well worth repeating here:

"The present antituberculosis agitation seems likely to bring up some questions of medical casuistry, one of which is: Is it justifiable in all cases to use, as a diagnostic method, any measure that may arouse to pernicious activity a latent or quiescent morbid condition? Can we use the tuberculin test with a free hand until we are sure that the results may not be disastrous in certain cases? According to a recent advocate, this possibility is a recommendation rather than an objection. 'The patient with tuberculosis active or passive,' he says, 'is living over a veritable sleeping Vesuvius apt to

become active at any time and produce the most fatal results. The test is most valuable which finds the disease earliest.' But people do live many years with latent or encysted foci of the disease, suffering nothing from it and spreading no contagion, and may even live out their natural term of life happily unconscious of the 'sleeping Vesuvius' which, undisturbed, continues to sleep. Is it not the true wisdom in such a case to 'let the sleeping dog lie?' In his recently published and highly commended work on tuberculosis, Dr. S. A. Knopf commits himself decidedly against this test. He says that while it may do nothing but reveal a latent tuberculosis in 999 cases, in the thousandth it may cause an unexpected and rapidly fatal generalization of the disease. Evidently others do not share his conservatism, for the tuberculin test is being largely used and is strongly recommended, notwithstanding the fact that death has occurred even within two days after the injection. How many latent cases have been revived into activity is unknown—there are no records. It has not only been used in doubtful cases, but in those not suspected of the disease, and in a considerable number who have reacted but have not been certainly proven tuberculous. The question is: Is this matter of a positive diagnosis so important in all cases that a risk should be taken? Would it not be better to trust to other signs in dubious cases, and is there any justification in subjecting, let us say, children with only enlarged glands or with adenoid growths, to such a test, until prolonged observation has shown that there is not even a remote chance of danger to life from its employment? Any actual curative effect of the injection, at least of the stronger tuberculin which is alone recommended for diagnostic use, is generally discredited at the present time, so the users have not that for their justification. We offer these as suggestions, but admit a preference for the conservative standpoint of Dr. Knopf." (*Journ. Amer. Med. Assoc.*, Vol. XXXIII, p. 1367).

"A recent occurrence in an eastern state has been made a text for some anti serumtherapeutists. A veterinary surgeon, in using the tuberculin test on a calf, accidentally pricked himself and developed tuberculosis, which caused his death six months later. It is quite possible, as has been suggested, that he had already unconsciously contracted the disease and the involuntary inoculation only revealed it, but it is also possible that it awakened it into the excessive activity that produced the rapidly progressing disease. This

latter possibility, while it is practically denied by some authorities, is nevertheless one that deserves serious consideration, and the conservative position of Dr. Knopf on the subject of the tuberculin test in the human subject is, on the whole, the safest to follow. When a man has only latent tuberculosis—some old practically isolated focus—and is in apparent normal health, it may be well that there is no advantage in stirring it up, if by so doing any risk is taken. He is not, in that condition, a public danger and may never be—his ignorance is bliss to him and it is folly to make him wise. There are other diagnostic methods that meet all needed requirements and are beyond the suspicion of any danger to the individual, though less rapid and more laborious for the diagnostician. The suggestion, credited to a distinguished New York authority, that the individual resistance in this case was probably already unconsciously weakened, does not materially affect the case; if a diagnostic method can produce such effects on a weakened system, it had better not be used. The case, if correctly reported, furnishes a strong argument against any general application of the tuberculin test for diagnostic purposes on human subjects. It is well enough for cattle, but while generally harmless in man, there are at least one or two other cases on record of troublesome results from its use." (*Journ. Amer. Med. Assoc.,* Vol. XXXIV, p. 1567).

Further experimental evidence regarding the value of Tuberculin as a test for tuberculosis has been accumulated by the Technical Instruction Committee of the Cheshire County (England) Council. Their object was to form a decision for themselves upon the following points:

"1. To test the reliability or otherwise of tuberculin as a means of diagnosis for tuberculosis in cattle. 2. To see in what percentage the milk of those reacting contained tubercle bacilli. 3. To estimate the direct loss that would be incurred by a farmer in clearing his herd of all infected animals. 4. To see if the appearance and manipulation of the udder could be relied upon as indicating the presence of tuberculous milk. 5. To observe the effect of regular and systematic injections of tuberculin particularly in regard to the future reactions and as to whether any curative property was shown; also as to whether the injection of tuberculin would propagate the disease in animals not already tuberculous. The testing was done by Mr. Laithwood, F.R.C.V.S., chief veterinary inspector to the county of Cheshire, the post-mortem examinations

being made by the same gentleman assisted by Mr. King, chief veterinary inspector to the corporation of Manchester, and Mr. Storrar, veterinary inspector to the city of Chester. Professor Delépine of Owens College undertook the microscopical examination and analyses of the milk of all reacting animals and of portions of the carcase where doubt existed. Two herds, one at the Dairy Institute, Worleston, consisting of 52 cows and two pedigree shorthorn bulls, and the other at the Agricultural School, Holmes Chapel, consisting of 16 cows and one pedigree shorthorn bull (two years and nine months old), were tested. The tuberculin was prepared by Prof. McFadyean of the Royal Veterinary College. As the result 50 animals were declared free from tuberculosis, 17 were declared infected, and four doubtful. The udders of those that reacted were carefully examined, only one being found indurated; examinations of the milk of these were made by Professor Delépine and tubercle bacilli were detected in one instance only. Two out of the three bulls were found to be tuberculous, the oldest one being badly affected. Ten of the animals were slaughtered the result in every case verifying the conclusions drawn from the reaction. Nine cows were isolated and submitted to repeated injections of tuberculin at certain intervals, the cattle being afterwards slaughtered and examined. With reference to these the conclusion arrived at was 'that continuous injections of tuberculin at short periods of time will cause reaction to cease in an animal that has previously been shown to be tuberculous.' It was pointed out that on this account tuberculin might be put to dishonest uses and that therefore stringent restrictions ought to be placed upon its sale, only duly accredited persons being allowed to purchase it. As regards the 'curative' property of tuberculin it was considered that none of the experiments gave encouraging evidence. Although the experiments traversed ground which is now fairly well trodden they are of great value in confirming what has already been done to prove the diagnostic reliability of tuberculin and in bringing the position of modern knowledge under the eyes of the Cheshire agricultural community." (London *Lancet,* Vol. I for 1900, p. 400).

At the symposium on Serumtherapy before the New York County Medical Association on February 19th last, Dr. E. A. DeSchweinitz of Washington, D. C., contributed an article on "Tuberculins and Their Use." He concludes as follows:

"It seems to me, therefore, that the results obtained with the old

tuberculin and T. R., and a careful study of the poisons of the tuberculosis germ, indicate that in incipient stages, the disease may perhaps be arrested and immunity secured by injecting the products of the bacilli freed from the necrotic principle, or by treating the patient with a serum which will neutralize the necrotic poison and a subsequent use of the products of the bacilli free from the necrotizing agent. A solution of these poisons free from the necrotic principle may be obtained from *attenuated cultures.*

In any method of treatment it must always be remembered that we can at present hope to neutralize only certain of the poisons of tuberculosis germs, and that the natural immunity and resistance of the animal cell must be relied on for assistance. Therefore the best of nutrition in addition to scientific medication is absolutely necessary." (*Journ. Amer. Med. Assoc.,* Vol. XXXIV, p. 898).

Dr. B. Fränkel of Berlin, Germany, has written an article on "Tuberculin and the Early Diagnosis of Tuberculosis." He speaks of its great value in cases of suspected tuberculosis. (*Berlin. klin. Wochensch.,* Vol. XXXVII, p. 255).

Dr. Charles Denison, of Denver, Colo., writes on "The Tuberculin Test, and the Need of a More Complete Diagnosis of Tuberculosis." (*Journ. Amer. Med. Assoc.,* Vol. XXXIV, p. 20).

Dr. T. McCall Anderson of Glasgow, Scotland, delivered "An Address on the Value of Tuberculin in Diagnosis and Treatment" before the Medical Graduates' College and Polyclinic on Feb. 9th last in which he related the details of five of his cases. (London *Lancet,* Vol. I for 1900, p. 1703).

Dr. J. M. Anders of Philadelphia, Pa., writes on "The Value of the Tuberculin Test in the Diagnosis of Pulmonary Tuberculosis." (*N. Y. Med. Journ.,* Vol. LXXI, p. 994).

Dr. Veranus A. Moore of Ithaca, N. Y., has contributed an article on "The Preparation of Tuberculin, its Value as a Diagnostic Agent, and Remarks on the Human and Bovine Tubercle Bacilli." (*Albany Med. Annals,* Vol. XXI, p. 321).

In the service of Dr. W. Murrell at Westminster Hospital (London) a limited experience has been obtained with the use of "Tuberculin R" in the treatment of pulmonary tuberculosis. He reports as follows:

"It is even more important to publish unsuccessful cases than to record those in which improvement has resulted, and especially is

this so in connexion with new methods of treatment. Ten years have elapsed since the introduction of Koch's tuberculin, and yet it has not attained to a recognised position in the therapeutics of pulmonary phthisis. It appears to be of very little use in mixed infections or in advanced cases, and the striking beneficial results detailed by Professor McCall Anderson in his lecture are certainly exceptional. Professor Anderson gives his patients large doses of cod-liver oil (three ounces a day), and this may account in part for the difference. The reaction produced by Koch's original tuberculin was certainly of some diagnostic value, but with the new tuberculin there is very slight reaction and therefore its use in diagnosis is less."

He goes on to relate the details of three cases, and draws the following conclusions:

"My experience of the treatment of phthisis with tuberculin R has been so limited compared with that of Professor McCall Anderson that it is with some hesitation that I venture to call attention to these cases. My experience would probably have been larger had the results been more favorable. It may be that if cases were carefully selected and only patients in a very early stage treated by this method better results would be secured. Possibly, too, the number of injections was too small, for I believe that in a successful case published by Professor McCall Anderson 47 injections were given in four months. The maximum dose of the new tuberculin is said to be 20 milligrammes, but that is a very large quantity and I have not ventured beyond five milligrammes. The irritation produced at the seat of infection is often a source of trouble and inconvenience to the patient. The expense is a serious consideration and in hospital practice a physician hesitates to recommend his house committee to sanction the employment of a remedy which runs up to 17*s.* a dose. I endeavoured to get it made in England on more reasonable terms, but was told that although the formula was published the exact details were not known. I have no wish to speak unfavourably of tuberculin R and my limited experience would not justify me in doing so, but I am positive that in these particular cases I could have obtained far better results with the formic aldehyde treatment, the details of which I have already published." (London *Lancet*, Vol. II for 1900, p. 105).

Professors Combemale and Mouton of Lille, France, in writing on "Artificial Serum as a Means of Early Diagnosis of Pulmonary

Tuberculosis", stated that they have entirely abandoned the use of Tuberculin as a diagnostic agent. They make use of a saline solution made according to the following formula:

Sodium Chloride . . . . . 7 grammes (108 grains)
Sodium Phosphate. . . . . 1 " (15.4 ")
Sterilized Distilled Water . . 1 litre (about 33 fluidounces)

20 Cc. (324.6 minims) of this solution are injected into the flank and the temperature in the axilla is observed every hour. (*Gaz. hebdom. de Méd. et de Chirurg.,* Vol. 47, p. 75).

Dr. P. G. Unna of Hamburg, Germany, recommends local applications of Tuberculin in the treatment of lupus vulgaris. He applies it in the form of soap containing from 5 to 20 per cent. of Tuberculin, and makes use of this application as introductory to further treatment. (*Sem. Méd.,* Vol. 19, p. 344).

Urosin (a combination of Lithium and Quinic Acid—the chief organic acid of Cinchona Bark) has not been commented upon directly in the current medical literature of the past year.

Urotropin (Hexa-Methylene-Tetramin)—formed by the union of Formaldehyde and Ammonia—continues to be a very prominent article before the profession.

At a meeting of the Leeds and West Riding (England) Medico-Chirurgical Society on March 2d last, Mr. P. J. Cammidge described in detail a number of bacteriological and chemical experiments carried on for the purpose of determining the manner of the excretion of Urotropin by the urine, and the cause of its antiseptic properties. (*Brit. Med. Journ.,* Vol. I for 1900, p. 641).

Dr. H. E. Drake-Brockman of the British Indian Medical Service contributes some "Remarks on the Value of Urotropin and its Practical Application as a Urinary Antiseptic." He states:

"In conclusion, I feel sure that there is a very wide field of usefulness in the future for the employment of urotropin. It has hardly, I think, received sufficient notice hitherto from the profession in England, but I am confident that its claims will be readily taken into account when it comes to be more generally known. In the hope of such a result I am glad to be able to add my testimony to its worth as a valuable therapeutic agent for combating a troublesome class of cases." (London *Lancet,* Vol. I for 1900, p. 1876).

Dr. J. M. Thompson of Boston, Mass., writes on "The Value of

Urotropin in the Treatment of Certain Forms of Genito-Urinary Disease." He summarizes his experience and observations in brief as follows:

"(1) A urinary sterilizer, antiseptic and acidifier—prompt and reliable in action,—moderate in dose, which, if adhered to, renders it both non-toxic and non-irritating to all parts of the animal economy.

(2) In virtue for its particular affinity for the urine, into which it passes unchanged, and where it parts with formaldehyde, it is apparent that its action in genito-urinary lesions is likely to be complete and certain.

(3) Its decisive and lasting effect, and especially its comparative singleness of action—which last is a most desirable property—should give it a place in the list of medicinal specifics.

(4) From the observations reported thus far, urotropin has appeared to be most frequently indicated in chronic disease, where it has produced exceptionally good results.

(5) In the writer's personal experience the diuretic action of the drug was not marked enough to render it deserving of claim to such a virtue." (*Boston Med. and Surg. Journ.*, Vol. CXLI, p. 492).

At the Congress of American Physicians and Surgeons held in Washington, D. C., in May last, Dr. Edward L. Keyes, Jr., of New York City related his experience with Urotropin based on five cases. He introduced his remarks with the following accepted axioms:

"1. The effects of urotropin are almost entirely confined to the urinary passages.

2. These effects are due, in part at least, to the liberation of formaldehyd in the urine, and

3. These effects are, heightened acidity, marked antiseptic properties, and variable irritation of the neck of the bladder."

. . . . . .

After relating his cases, he closed as follows:

"To sum up the conclusions suggested by this modest array of cases, it may be advanced as a basis from which to discuss the virtues of the drug that:

1. Urotropin seems to be almost a specific in the treatment of some cases of acute catarrhal pyelitis, uncomplicated.

2. To prove effective it may have to be administered in high doses until the urine is practically clear of bacteria, after which a smaller dose may suffice.

3. In judging the effects of the drug, the centrifuge and microscope should be employed.

4. The dose must not be sufficient to cause pollakiuria and dysuria by irritation of the neck of the bladder.

5. The possibility of such an irritation cannot be overlooked, even when very small doses are employed.

6. Urotropin is extremely serviceable as a prophylactic of the various forms of urinary septicemia and urethral chill.

7. Its routine employment both before and after operations on the urinary passages is indicated.

8. The urine containing urotropin occasionally has an escharotic effect on wounds, which may constitute a contraindication to its employment." (*Phila. Med. Journ.,* Vol. 6, p. 606).

Dr. A. Nicolaïer of Göttingen, Prussia, has continued his experiments clinically with this agent. He made use of animals in establishing the methods of determining the presence of this agent. (*Zeitsch. für klin. Medicin,* Vol. 38, p. 350).

Dr. Gerald Dalton of London, England, publishes the results of his use of this agent in five cases of posterior urethritis, after having failed with other agents. (*The Therapist,* Vol. IX, p. 259).

Ursal (the combination of urea with salicylic acid)—recommended last year in the treatment of gout and rheumatism—has not been heard of in the current medical literature of the past year.

Validol (Menthol Valerianate) was simply alluded to here last year both under the head of Menthol and under its own head.

Dr. Ant. Giuseppe Cipriani of Berlin, Germany, reports his experience in the use of this agent to correct the anorexia and vomiting accompanying pulmonary tuberculosis. The thirty per cent. of pure Menthol in the combination seems to act most favorably as a stomachic and carminative. His dose varied from 15 to 20 drops given on sugar, and he carried on his experiments upon himself and family. He met with considerable success in doses of even 10 drops given three times a day after meals. It also appeared to relieve the cough and expectoration noticeable in so many cases. (*Allgemeine Med. Central-Zeitung,* Vol. 68, p. 899).

Dr. M. Vertun of Berlin, Germany, lends his confirmation of Dr. Cipriani's results when he reports "On 'Validol,' a New Menthol Preparation." He speaks of the peculiar odor noticed in the urine after its administration. It had the odor much resembling brierwood. (*Berlin. klin. Wochensch.,* Vol. XXXVI, p. 727).

Weights and Measures by the **Metric System** seem to be no nearer general adoption, as far as visible progress goes, than when this Government definitely authorized the use of such. There are often, of course, influences necessarily hidden or unnoticed by the general public which go largely to further particular objects which may have great weight. This is apparently the case in relation to the introduction of the Metric System. One indication at least of this is seen in the somewhat frank support given by the United States Treasury recently, and is due not only to the extended colonial interests but to the Exposition at Paris. In the report of the Treasury, the following occurs:

"The intense commercial rivalry of nations warns us to leave nothing undone which might further our own interests, and there can be no doubt that the introduction of the metric system to which this country stands pledged since the meeting of the International American Conference in 1890, would greatly facilitate international commercial transactions. Without doubt, Great Britain and Russia would follow the initiative of this country in this matter, and thus what a few decades ago would have been considered an unattainable ideal—namely, a system of weights and measures common at least to all Western nations—would be reached."

It was hoped that the Bill presented at the last Session of Congress to definitely secure the adoption of the Metric System in the United States would have been passed, and Secretary Gage appeared in behalf of the Bill before the House Committee on Coinage, Weights and Measures, but evidently the press of other matters side-tracked it. It provided for the use of this System after January, 1901 in all Departments of the Government except in the survey of public lands. It still further provided that on the following January (1902) the Metric System should be the legal standard of the United States.

Dr. J. M. Rubinow of New York City wrote to the Editor of *The Philadelphia Medical Journal* (Vol. 5, p. 367) as follows:

"Having read your editorial considering the introduction of the metric system into medical prescribing and being fully in sympathy with it (in fact using this system exclusively), I beg to offer a suggestion as to an eminently practical way of acquiring the metric habit. It may have been pointed out before, but has been "discovered" by me independently.

A two-ounce mixture is probably the most common prescription

and will surely be acceptable to all. Two ounces are 60.0 (approximately) in the metric system. A teaspoonful is the usual dose. We have 15 to 16 doses in a two-ounce mixture. One gram (10) is equal to 15 to 16 grains. It follows therefore that every gram of the drug in the mixture will stand for one grain in the dose. As for instance:

℞.—Ammon. chlor. 2.0
Tinct. op. camph. 4.0
Sirupa senagæ 6.0
Sirupa ipecac. 6.0
Aqua q. s. 60.0

Mix. One teaspoonful t. i. d.

This will give 2 gr. of ammon. chlor., 4 gr. tinc. op. camp., etc., etc., per dose. Remembering this simple rule any physician, even if totally unacquainted with the metric system will be able to use it, and to get used to it. Putting 60.0 or ad 60.0 next to aqua he prescribes as many grams, as many grains he wants to give in a single dose. In fact if a practitioner has all his therapeutic ideas formed on the old basis, this will be the easier way still, as it does away with all calculations and at a glance indicates the doses prescribed. After a while he can try a four-ounce prescription, doubling the number of grams, and a one-ounce one, dividing them in halves. Even the one-ounce prescription will remain the most useful and simple one.

I hope this simple suggestion will prove of value to the younger colleagues, who are still open to argument."

This note called out the following confirmation from Dr. Henry Barton Jacobs of Baltimore, Md.:

"I was interested in reading Dr. Rubinow's letter in your issue of February 17 in regard to 'an eminently practical way of acquiring the metric habit,' and I wish to testify to its value in class-room work. Students almost invariably remember doses in the English system, and it is somewhat difficult to encourage them to adopt the metric system. The method of which Dr. Rubinow speaks (first suggested by Dr. Eli H. Long, in the *Medical News*, of Philadelphia, March 25, 1893, in an article on 'Aids to the Adoption of the Metric System in Prescription Writing,' and incorporated as a rule in Mann's little Handbook of Prescription Writing), makes it so simple for them to utilize their doses in the old system, and at the same time write in the metric system, that it appeals to them at

once. Unfortunately, not all our students continue to use the metric system after leaving the school; this probably is explained by the fact that the older practitioners, with whom they become associated, both in the hospitals and outside, are in the habit of using the old method; but I am encouraged to persist in teaching the French method, because I find that a certain small but increasing percentage of students are appreciative of its value, and desirous of employing in their use of drugs the same weights and measures they have become accustomed to use in their chemical and physiological work. In illustration of the absurdity of depending upon two systems, I often quote the nurse who recorded on the same sheet and in adjacent lines that the patient took 4 oz. of beef tea, and passed 100 cc. of urine. But after all, the effort to secure the general adoption of the metric system is uphill work, yet I feel sure it will come eventually if those who teach materia medica and therapeutics will stand together and untiringly persist in the good cause." (*Phila. Med. Journ.*, Vol. 5, p. 547).

The English will undoubtedly be the last in the line of progress. One writer now is appalled at the cost of replacing measures and how many workmen and others will have to be instructed, and concludes that the ultimate benefits of the change proposed would be of little value when considering the loss during the transition.

In a report recently issued by the British Board of Trade, it is stated that for the purpose of explaining the principles of the Metric system in schools, the Department has issued orders for the preparation of a set of educational models and is pushing forward its investigations in the line of ascertaining how far this System might be officially adopted in contracts. This surely is the proper mode of proceeding and will ultimately result favorably.

The Canadian Government appear to be quite ready to adopt the System when England and the United States point the way. The Canadian Manufacturers' Association has taken up the subject with energy, and have drawn forth a reply from the Minister of Inland Revenue, the Hon. Sir Henri Joly de Lotbiniere, as follows:

"I duly received your letter dated the 10th instant, enclosing the report of the sub-committee of the Executive Committee of the Canadian Manufacturers' Association, to which was referred the question of the metric system of weights and measures, and I am very grateful for the trouble the association has taken to study the question so carefully.

I am pleased to find that your Committee duly appreciates the superior convenience of a decimal system of weights and measures. Your Committee alludes to the expense of changing the entire standard of weights and measures. There is no doubt that it will be considerable, especially for measures of bulk and capacity, for measuring liquids. As for solids, especially for grain, the habit is becoming more and more general of measuring by weight instead of bulk. As for measures of weight, for all beam scales, it will only require the effacing of the present figures and the substituting of new ones to meet the metric weights. It is well to remember that the difference in weight between a kilogram and two pounds is so slight that the old weights could be used with the addition of a lead plug and the stamping of the denomination by our inspectors; this might obviate the necessity of purchasing additional metric weights for such scales, which scales would not otherwise require to be remodelled.

But where your Committee mistakes completely the intention of the Government is in thinking that it is intended to make the adoption of the metric system compulsory in advance of the steps to that effect which will likely be taken before long by England and the United States. Our present intention is to make the system widely understood by teaching it in our schools and by submitting its details to the business community, so that when it has become practically adopted in the two countries with which we deal most largely, England and the United States, we shall be prepared to welcome it instead of having to adopt it under compulsion. I have done my best to make this clearly understood, and I hope there may be no further doubt on the subject." (*Canadian Pharm. Journ.*, Vol. XXXIII, p. 256).

Xeroform (Tri-Brom-Phenol Bismuth)—one of the substitutes for Iodoform—has received practically no attention in the current medical literature of the past year.

Xinol is a short name given to a new agent made up of 1 part of Zinc Acetate to 4 parts of Albumin Naphtho-Sulphonate. It is recommended in the treatment of gonorrhea given in an aqueous solution in the proportion of 1.5 grammes to 3.0 grammes (23.2 to 46.3 grains) to 1 litre (about 33 fluidounces). (*Nouveau Montpellier Méd.*, Vol. IX, p. 640). There have been no definite clinical reports noticed as yet.